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The influence of new farmer live streamer characteristics on purchase intention: the roles of parasocial interaction and regional cultural differences

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Introduction: Agricultural live streaming has emerged as a vital channel for rural development, yet limited research examines how new farmer live streamers' characteristics influence consumer behavior. Guided by the Stimulus–Organism–Response (S–O–R) framework and parasocial interaction theory, this study investigates how the characteristics of new farmer live streamers shape consumers' purchase intention in agricultural e-commerce.

Methods: Five key streamer characteristics—authenticity, social responsibility, trustworthiness, affinity, and interactivity—were identified through surveys, interviews, and text analyses. Data from 441 valid responses were analyzed using structural equation modeling to test the proposed relationships.

Results: The findings reveal that authenticity, social responsibility, trustworthiness, and interactivity positively affect purchase intention, whereas affinity shows no significant impact. Parasocial interaction mediates the effects of authenticity, trustworthiness, affinity, and interactivity on purchase intention, but not social responsibility. Additionally, regional cultural differences negatively moderates the relationship between parasocial interaction and purchase intention.

Discussion: These findings provide actionable implications for stakeholders: governments, agricultural enterprises, and new farmer streamers should cultivate essential streamer characteristics, strengthen parasocial connections, and adapt engagement strategies to regional cultural contexts to enhance the effectiveness and sustainability of agricultural live streaming.

KEYWORDS

new farmer streamer, parasocial interaction, purchase intention, regional cultural differences, live streaming

1 Introduction

Since the launch of China's "Digital Countryside Strategy" in 2018, integrating digital economy principles into rural development has markedly accelerated. One of the most notable manifestations of this integration is agricultural live streaming e-commerce, which has reshaped traditional agricultural distribution systems and produced substantial economic and social benefits (Dong et al., 2022; Ju et al., 2025). As rural residents—including traditional

farmers, returning entrepreneurs, and cross-sector professionals—become more engaged in live streaming marketing of agricultural products, new forms of rural e-commerce, such as outdoor live streaming from farms and production sites, have rapidly emerged (Duan et al., 2023).

Rural operators who adopt digital technologies in agricultural production, sales, and logistics—while demonstrating digital literacy, entrepreneurial thinking, and market awareness—are commonly referred to as “new farmers” (Duan et al., 2023; Guo and Yu, 2024; Liu, 2024). As digitally empowered agricultural entrepreneurs, these new farmers are increasingly emerging as the backbone of agricultural live streaming e-commerce. Through live streaming, they effectively promote, sell, and distribute agricultural products, overcome geographic constraints, improve logistics efficiency, and develop new sales models and supply chains—thus contributing to rural economic development (Yuan and Zhang, 2021).

However, driven by the pursuit of traffic and streaming incentives, numerous farmers and e-commerce streamers have entered the live streaming market by imitating others, resulting in a pronounced “herd effect.” Many of these streamers lack professional training and a clear sense of role identity, which leads to severe content homogenization. This not only diminishes consumers’ purchase intention but also triggers destructive price competition, thereby jeopardizing the sustainable development of rural live streaming e-commerce. Meanwhile, existing studies have demonstrated that live streamer characteristics are vital in shaping marketing effectiveness (Li and Peng, 2021; Guo et al., 2022). Therefore, an in-depth investigation into the key characteristics of new farmer live streamers—such as professionalism, trustworthiness, and persuasiveness—constitutes a significant research agenda.

Although prior research has explored the characteristics of internet celebrities and professional streamers and their impact on consumer behavior (Li and Peng, 2021; Meng et al., 2021; Li et al., 2022; Zhang et al., 2024), systematic investigation into the traits of new farmer live streamers remains limited. Drawing on the Stimulus–Organism–Response (S–O–R) framework and parasocial interaction theory, this study investigates how five core traits—authenticity, social responsibility, trustworthiness, affinity, and interactivity—influence purchase intention, and how regional cultural differences moderate these relationships. Beyond the well-established streamer–parasocial interaction–purchase intention pathway, this study identifies two novel mechanisms. First, it highlights the socially embedded traits of new farmer streamers—particularly authenticity and social responsibility—which differ from those emphasized in mainstream e-commerce and reveal how rural identity and moral legitimacy reshape parasocial bonds. Second, it introduces regional cultural differences as a contextual boundary condition moderating the link between parasocial interaction and purchase intention, thereby revealing how intracultural heterogeneity shapes parasocial effects. Based on trait extraction (Study 1) and empirical testing (Study 2), this study provides fresh insights into agricultural e-commerce live streaming.

This study makes three main theoretical contributions. First, it focuses on the emerging group of new farmer live streamers, systematically identifies their core characteristics, and thereby broadens the research scope of live streaming streamers in e-commerce (Meng et al., 2021; He et al., 2022; Li et al., 2022; Zhang

et al., 2024). Second, it develops a theoretical model that integrates the S–O–R framework and parasocial interaction theory to investigate the mediating role of parasocial interaction between streamer characteristics and purchase intention, thereby enriching the theoretical foundation of both e-commerce live streaming and parasocial interaction (Deng et al., 2023; Lu et al., 2023). Third, by identifying regional cultural differences as a boundary condition moderating the effect of parasocial interaction on purchase intention, the study expands the research lens on regional culture in e-commerce live streaming and deepens theoretical understanding from a cross-regional promotion perspective (Cho et al., 2010; Hofstede et al., 2010; Macnab et al., 2010; Kaasa et al., 2014; Minkov et al., 2023).

2 Theoretical background and literature review

2.1 S–O–R theory

Developed by Mehrabian and Russell (1974), the Stimulus–Organism–Response (S–O–R) framework posits that external stimuli (S) evoke internal emotional or cognitive responses (O), which subsequently drive behavioral outcomes (R), such as approach or avoidance. This framework has become foundational in consumer behavior research, particularly for analyzing decision-making in e-commerce live streaming (Kang, 2021; Li and Peng, 2021; He et al., 2022). Within the S–O–R framework, prior studies have shown that streamer characteristics—such as attractiveness, expertise, trustworthiness and interactivity—serve as stimuli (Li et al., 2025; Serrano-Malebrán et al., 2025). Parasocial interaction, emotional connection, and empathy function as emotional or cognitive responses (Xiang et al., 2016; Xu et al., 2024; Chu and Chu, 2025), while purchase, usage and engagement intention represent behavioral outcomes (Tran and Uehara, 2023; Yang et al., 2025).

2.2 E-commerce streamer

With the rapid growth of live streaming e-commerce, streamers have emerged as central marketing actors, encompassing celebrities, influencers, professionals, farmers, and entrepreneurs (Meng et al., 2021; Li et al., 2022; Zhang et al., 2024). As digital influencers, they serve simultaneously as product spokespersons, sales agents, and real-time companions, delivering detailed product information and fostering relational stickiness through interactive and entertaining engagements (Zhang S. et al., 2022; Yun et al., 2023). Scholars interpret these effects through the S–O–R model, perceived value theory, elaboration likelihood model, and emotional contagion theory (Chen, 2022; Guo et al., 2022; Lu et al., 2023; Li et al., 2024). Empirically, Guo et al. (2022) demonstrated that utilitarian and hedonic values mediate the effects of beauty, warmth, expertise, humor, and passion on purchase intention. Li et al. (2024) classified streamer traits—including similarity, attractiveness, popularity, professionalism, and interactivity—and argue that positive emotions enhance emotional trust and drive impulse buying. Similarly, Ma et al. (2023) found that trustworthiness, interactivity, and self-disclosure promote parasocial relationship and further stimulate impulse purchase.

2.3 New farmer

As social media and digital technologies advance, channels for selling agricultural products have diversified, social and live-streaming e-commerce have become key platforms. Prior research shows that consumers' purchase intention in agricultural live streaming is shaped by platform functionality, streamer traits, product quality, service levels, and interaction (Zheng et al., 2023b; Tan, 2024; Dong et al., 2025). Against this backdrop, "new farmers" have become a pivotal group driving rural revitalization and agricultural live streaming. This group is variously conceptualized as "beginning farmers" (Rissing, 2016), "new agroecological farmers" (Laforge and McLachlan, 2018), and "new generation" or "young farmers" (Milone and Ventura, 2019).

Unlike standard e-commerce live streaming, which centers on product promotion and entertainment, new farmer live streaming is distinct along three dimensions: identity, communicative framing, and context. In identity terms, new-farmer streamers are digitally empowered rural entrepreneurs—often returning college students, overseas returnees, or local residents engaged in production—rather than professional influencers or celebrities (Zeng and Guo, 2016; Guo and Yu, 2024; Liu, 2024). Their dual roles as producers and promoters strengthen perceived authenticity and credibility. In communicative framing, they foreground narratives of rural revitalization, ecological sustainability, and agricultural heritage, positioning themselves as "rural spokespersons" rather than purely commercial sellers (Dong et al., 2022; Zheng et al., 2023b; Ju et al., 2025). Context further differentiates them: streams typically occur in rural outdoor settings or at production sites, showcasing authentic farming processes and local cultures, which heightens emotional resonance and fosters interaction and purchase intention (Wang et al., 2024; Jiang and Li, 2025). These distinctions position new-farmer streaming as a marketing channel and a sociocultural practice, markedly distinct from mainstream e-commerce live streaming.

Despite growing interest, the literature still emphasizes conceptualization, classification, and qualitative insights (Luo et al., 2024), with limited empirical testing. Although studies examine economic impacts (Duan et al., 2023) and entrepreneurial challenges (Tian, 2023), a coherent theoretical model explaining how new-farmer streamer traits drive purchase behavior remains lacking.

2.4 Parasocial interaction

Parasocial Interaction (PSI) theory, first proposed by Horton and Richard Wohl (1956), explains the "quasi-interpersonal relationships" that consumers develop with media figures. PSI describes a one-sided, face-to-face-like interaction where audiences perceive intimacy and companionship with media figures, despite the lack of actual reciprocity. With the rise of social media platforms such as Weibo, Douyin, Kuaishou, and Twitter, PSI has been extended to new digital contexts and is now widely used to examine interactions between influencers and followers. Live streaming platforms, in particular, amplify PSI through real-time mechanisms—such as likes, comments, and danmu (real-time comments)—that enhance users' sense of presence and perceived relational closeness (Deng and Jiang, 2023).

PSI is shaped by multiple antecedents, including media figure traits (e.g., attractiveness, consistency), content attributes (e.g., language style, self-disclosure), platform affordances (e.g., interactivity,

visualization), and user psychology (Sokolova and Kefi, 2020; Deng et al., 2023; Lu et al., 2023). These factors reduce psychological distance while simultaneously fostering trust, brand identification, and purchase behavior. Prior research highlights PSI's critical role in shaping cognition, emotion, and behavior: it enhances trust and attachment (Hu et al., 2017; Shao et al., 2024), strengthens brand attitude and purchase intention (Li and Wang, 2023), and varies by type—mentor-oriented or companion-oriented (Liu et al., 2024). In summary, PSI offers a robust theoretical lens for understanding the psychological mechanisms through which new farmer streamer characteristics affect consumers' purchase intention in live streaming e-commerce.

2.5 Regional cultural differences

Research on cultural differences has traditionally focused on cross-national value disparities and their implications for international economics and trade (Hsu and Nguyen, 2023; Khan et al., 2024). However, cultural variation also exists within countries, reflected in regional differences across geographic and social groups (Kaasa et al., 2014). These differences, rooted in geography, production modes, lifestyles, and traditions, shape unique cognitive and behavioral patterns (Malhotra and McCort, 2001; Macnab et al., 2010). Accordingly, this study defines regional cultural differences as variations in regional dialects, customs, lifestyles, and values.

Regional cultural diversity is a global phenomenon, and prior studies have documented intracultural differences in Europe, Russia, Brazil, the United States, and China (Cho et al., 2010; Hofstede et al., 2010; Macnab et al., 2010; Kaasa et al., 2014; Minkov et al., 2023). In China, these variations are particularly pronounced. For example, Cho et al. (2010) found that consumer values and clothing preferences differ among residents of Beijing, Guangzhou, and Shanghai, whereas Frank et al. (2014) identified regional disparities in reliance on perceived quality, brand image, and personal recognition. In live streaming e-commerce, He et al. (2022) showed that local and non-local consumers differ in evaluating price, authenticity, and interaction friendliness.

In summary, regional cultural differences shape consumer judgments in conventional markets and emerging contexts like live streaming e-commerce. However, few studies have systematically examined how these differences influence purchase intention, especially in the context of live streaming of new farmers.

3 Study 1 extracting the characteristics of new farmer streamers

3.1 Proposing the characteristics of new farmer streamers

To examine how new farmer streamers' personal characteristics influence the effectiveness of live streaming sales, Study 1 employed a multi-method exploratory design combining survey responses and targeted interviews. In the first phase, a structured questionnaire was distributed via social media platforms to Chinese university students, a demographic known for frequent engagement with live-streaming

e-commerce and extensive social networks. The survey began by introducing the concepts of “new farmers” and “agricultural live streaming,” followed by comparative prompts contrasting typical e-commerce live streaming with new farmer streamers. Respondents were then asked to list at least five distinctive streamer characteristics freely. To enhance sample diversity, participants were encouraged to invite friends and family members who had experience watching rural live streaming to complete the questionnaire collaboratively. After rigorous screening to eliminate invalid or duplicate responses, 342 valid questionnaires were retained, yielding approximately 20,000 words of rich textual data.

The second phase of the study employed targeted in-depth interviews to ensure a more comprehensive and context-sensitive extraction of unique traits. A purposive sample of 23 participants was selected based on their comparative experience with conventional e-commerce live streaming and new farmer live streaming. Interviews were designed to explore perceptions along six key dimensions: scenario setting, role positioning, tone style, emotional expression, community embeddedness, and value identity. The interviews generated 915 min of audio recordings, offering nuanced qualitative insights. Drawing on both data sources—the open-ended textual

responses and the transcribed interview content—the research team conducted a systematic text analysis involving two main stages:

(1) Word frequency analysis.

Gooseeker was employed to analyze word frequency, extracting relevant terms and calculating their frequencies. After text importation, preprocessing was performed to remove English words, numbers, URLs, and meaningless single characters. Only nouns, adjectives, and verbs were retained. Irrelevant terms, including “live streaming,” “streamer,” and “product,” were manually excluded. Additionally, key terms with significant relevance to the study—such as “down-to-earth,” “positive energy,” and “responsiveness”—that were not automatically identified were manually included. Ultimately, 72 high-frequency words with occurrences of 10 or more were identified, as shown in [Table 1](#).

(2) Coding and categorization.

Following the word frequency analysis, the high-frequency words were systematically coded and categorized based on their original textual contexts and pertinent literature on e-commerce streamer characteristics.

TABLE 1 Screening results of high-frequency words.

No	High-frequency words	Word frequency	No	High-frequency words	Word frequency	No	High-frequency words	Word frequency
1	Humor	96	25	Image	29	49	Authenticity	13
2	Understanding	93	26	Problem	28	50	Communication	13
3	Real	89	27	Concern	26	51	Close to life	13
4	Uniqueness	83	28	Novelty	25	52	Language expression	12
5	Sincerity	78	29	Active	23	53	Familiar	12
6	Introduce	72	30	Culture	23	54	Decent	12
7	Wit	67	31	Kind	22	55	Earnest	12
8	Affinity	63	32	Trust	21	56	Physical appearance	12
9	Competence	56	33	Natural	21	57	Integrity	12
10	Enthusiasm	53	34	Plentiful	20	58	Show	12
11	Unsophisticated	50	35	Physical attractiveness	19	59	Danmu (real-time comments)	12
12	Plain	47	36	Detailed	18	60	Eloquent	11
13	Interaction	46	37	Development	16	61	Propagandize	11
14	Attract	45	38	Generous	16	62	Responsiveness	11
15	Interesting	43	39	Interactivity	16	63	Safeguard	11
16	Down to earth	40	40	Simple	15	64	Sufficient	11
17	Simple minded	39	41	Economy	14	65	Answer	11
18	Language	38	42	Drive	14	66	Innovation	11
19	Explain	36	43	Goodness	14	67	Positive energy	11
20	Display	35	44	Sense of responsibility	14	68	Clear	11
21	Style	34	45	Promotion	14	69	Eloquence	11
22	Personality	32	46	Patience	13	70	Transparency	10
23	Expertise	31	47	Guarantee	13	71	Traceability	10
24	Society	30	48	Professional	13	72	Dialect	10

This process involved a team of three coders—doctoral students in marketing—who conducted an initial calibration exercise to align coding criteria and then independently coded the data. Inter-coder agreement was assessed using Cohen's Kappa ($\kappa = 0.83$), with discrepancies resolved through iterative discussions until consensus was reached. The ten resulting categories—expertise, affinity, humor, uniqueness, authenticity, interactivity, physical attractiveness, social responsibility, passion, and trustworthiness—emerged through an inductive approach, informed by emergent themes from the data, supplemented by deductive insights from existing literature (Meng et al., 2021; Li et al., 2022; Zhang et al., 2024). These categories provide a preliminary yet robust summary of the most frequently perceived characteristics of new farmer streamers. Detailed coding results, ranked by frequency, are presented in Table 2.

3.2 Extracting and determining the characteristics of new farmer streamers

This study conducted a quantitative survey following the prior exploratory analysis to ensure that the extracted streamer characteristics accurately reflect consumer concerns in agricultural e-commerce live streaming and further validate the selected characteristics' appropriateness. Specifically, a structured questionnaire was administered to consumers who had watched new farmer streamers and purchased agricultural products during live streams. The questionnaire included ten characteristic dimensions, and respondents rated their importance using a five-point Likert scale (1 = Not important at all, 5 = Very important). A total of 197 valid responses were obtained.

(1) Sample information.

Among the valid respondents, 54.82% were female and 45.18% were male. Regarding age distribution, 53.30% of participants were aged 26–35, while 25.38% were aged 18–25. In terms of educational background, 74.11% held a bachelor's degree, and 15.74% had a master's degree or above. With respect to occupation, 47.21% were employed in private enterprises, 16.24% were students, and 13.20% worked in state-owned enterprises. Concerning platform preferences (multiple selections), 96.95% reported watching new farmers' live streams on Douyin, while 43.15% used Kuaishou. This distribution

aligns with the mainstream platforms favored by new farmer streamers, highlighting the sample's representativeness.

(2) Evaluation of new farmer streamer characteristics.

Following prior studies that typically select two to five key characteristics for in-depth analysis of live streamer effects on consumer behavior (Zheng et al., 2023a; Li et al., 2024), this study adopts a similar approach. Based on the average rankings in Table 3, the top five characteristics—authenticity, social responsibility, trustworthiness, affinity, and interactivity—were selected as the core characteristics for further empirical analysis.

Notably, the characteristics identified in this study differ substantially from those typically associated with internet celebrities or professional e-commerce streamers. While previous research has emphasized characteristics linked to consumerism-oriented performance, such as popularity, attractiveness, interactivity, and professionalism (Xue et al., 2020; Li and Peng, 2021; Qiu et al., 2021; Guo et al., 2022), this study highlights two distinctive characteristics that better reflect the identity of new farmer streamers: affinity and social responsibility. Affinity reflects the emotional bond between streamers and consumers, whereas social responsibility underscores their role in “supporting agriculture” and contributing to rural revitalization. These characteristics enhance new farmer streamers' social identity while reinforcing their communicative influence and moral legitimacy as “rural spokespersons.” Therefore, the selection of variables in this study incorporates the cultural and social embeddedness of new farmer streamers, aiming to more precisely capture how their characteristics influence consumer psychology and purchase intention.

4 Study 2 exploring the influence of new farmer streamer characteristics on purchase intention

4.1 The influence of new farmer streamer characteristics on purchase intention

(1) Authenticity and purchase intention.

TABLE 2 Classification results of high-frequency words.

Ranking	Characteristics	High-frequency words
1	Expertise	Understanding, introduce, competence, language, explain, display, expertise, plentiful, detailed, promotion, professional, patience, show, earnest, language expression, eloquent, propagandize, familiar, sufficient, clear, eloquence
2	Affinity	Affinity, down to earth, kind, natural, generous, goodness, close to life unsophisticated, plain, simpleminded, simple
3	Humor	Humor, wit, interesting
4	Uniqueness	Uniqueness, style, personality, culture, novelty, innovation, dialect
5	Authenticity	Real, sincerity, authenticity, transparency
6	Interactivity	Interaction, problem, interactivity, communication, answer, danmu (real-time comments), responsiveness
7	Physical attractiveness	Attract, image, physical attractiveness, physical appearance, decent
8	Social responsibility	Society, concern, development, drive, sense of responsibility, economy
9	Enthusiasm	Enthusiasm, active, positive energy
10	Trustworthiness	Trust, guarantee, integrity, safeguard, traceability

TABLE 3 Statistical analysis of the characteristics of new farmer streamer.

Ranking	Characteristics	Min	Max	Mean	Std
1	Authenticity	3	5	4.75	0.456
2	Social responsibility	1	5	4.58	0.623
3	Trustworthiness	3	5	4.54	0.548
4	Affinity	3	5	4.39	0.509
5	Interactivity	2	5	4.29	0.672
6	Uniqueness	1	5	4.12	0.815
7	Expertise	1	5	3.97	0.950
8	Enthusiasm	1	5	3.62	0.921
9	Humor	2	5	3.51	0.983
10	Physical attractiveness	1	5	2.66	1.011

Authenticity refers to an individual’s subjective perception of the degree of realism in their encounters (Beverland et al., 2008). In this study, the authenticity of new farmer streamers is defined as consumers’ overall perception of their sincerity and genuineness. Compared to other e-commerce streamers, new farmer streamers typically broadcast from rural settings such as fields, production sites, or farmland. By showcasing the real growth environments of agricultural products and scenes of rural life and production, they create a “primitive” live streaming atmosphere. This primitive style not only enhances the perceived authenticity of the agricultural scenes but also reflects the streamer’s rural identity—such as simple clothing and regional dialects—making it easier for consumers to associate them with the image of a “real farmer.”

Authenticity plays a vital role in live streaming marketing. Prior studies have shown that streamer authenticity reduces consumers’ perceived product risk and enhances trust, thereby increasing purchase intention (He et al., 2022). Liu and Sun (2024) also found that authenticity enhances purchase intention in tourism e-commerce live streaming by improving flow experience and perceived trust. Based on the above analysis, this study posits that the authenticity of new farmer streamers positively influences consumers’ purchase intention and proposes the following hypothesis:

H1a: Authenticity positively influences the purchase intention of new farmer live streaming consumers.

(2) Social responsibility and purchase intention.

This study draws on Martínez et al. (2013) and Boğan et al. (2021) to measure new farmer streamers across three dimensions: social, economic, and environmental social responsibility. In this context, social responsibility refers to the willingness and actions of new farmer streamers to actively assume responsibilities in rural areas by promoting sustainable development in social, economic, and environmental domains. Specifically, they contribute to local employment and economic growth through e-commerce live streaming, share stories of agricultural products and rural life, and emphasize environmental protection, thereby cultivating an image of social responsibility.

Previous studies have demonstrated that corporate social responsibility (CSR) practices are closely associated with consumers’

purchase intention (Fatma and Rahman, 2016). For instance, based on cue utilization theory, Huang et al. (2023) argued that consumers view CSR as an important cue in decision-making. Their findings confirmed that perceptions of CSR in economic, environmental, and ethical dimensions enhance consumer trust and increase repeat purchase intention. Accordingly, this study proposes that the social responsibility exhibited by new farmer streamers during e-commerce live streaming positively influences consumer purchase intention, leading to the following hypothesis:

H1b: Social responsibility positively influences the purchase intention of new farmer live streaming consumers.

(3) Trustworthiness and purchase intention.

Trustworthiness refers to the degree to which an individual is perceived as trustworthy, reliable, and honest, and it serves as a key component of source credibility (Todd and Melancon, 2017). Numerous studies have demonstrated that trustworthiness influences consumers’ cognitive and emotional responses, shaping their purchase intention and decision-making behavior (He et al., 2022). Furthermore, Park and Lin (2020) found that alignment between influencers and the products they endorse enhances perceived trustworthiness, significantly increasing consumers’ purchase intention.

In e-commerce live streaming, new farmer streamers often sell agricultural products from authentic rural settings and offer accurate, reliable product information. This enables consumers to perceive a strong connection between the streamer, rural life, and agricultural products, enhancing the streamer’s perceived trustworthiness. This trust, in turn, increases the likelihood of consumers purchasing the recommended products. Therefore, this study proposes the following hypothesis:

H1c: Trustworthiness positively influences the purchase intention of new farmer live streaming consumers.

(4) Affinity and purchase intention.

Affinity refers to new farmer streamers’ friendliness, approachability, and warmth during e-commerce live streaming (Zhang S. et al., 2022). Since most new farmer streamers come from grassroots backgrounds, their content is often more relatable to the general public than traditional celebrities or internet influencers. According to Yuan C. L. et al. (2021), affinity is reflected in the content shared by influencers and in the similarity of their life experiences to those of consumers. Such similarity enhances their views’ credibility and persuasive power, and the resulting trust increases consumers’ willingness to purchase recommended products. Therefore, this study posits that the affinity demonstrated by new farmer streamers positively influences the purchase intention of live streaming consumers and proposes the following hypothesis:

H1d: Affinity positively influences the purchase intention of new farmer live streaming consumers.

(5) Interactivity and purchase intention.

E-commerce live streaming facilitates real-time interaction and information exchange between sellers and consumers, reducing uncertainty and risk during the shopping process and enhancing consumer engagement on social e-commerce platforms (Guo et al., 2022; Xue et al., 2020). In the context of new farmer live streaming, interactivity is reflected in timely responses to consumer questions, feedback based on personal experience, and engagement with consumers' needs and opinions. Existing research has confirmed that e-commerce streamers' interactivity significantly enhances consumers' purchase intention. For instance, Maojie (2023) found that streamers' interactivity, popularity, and professionalism jointly enhanced consumers' willingness to pay a food premium. Li et al. (2024) noted that high interactivity from streamers can elicit pleasurable emotions, which in turn foster impulsive buying behavior. Therefore, this study proposes the following hypothesis:

H1e: Interactivity positively influences the purchase intention of new farmer live streaming consumers.

4.2 The influence of new farmer streamer characteristics on parasocial interaction

(1) Authenticity and parasocial interaction.

Prior studies have shown that when social media bloggers share authentic product information and personal experiences, consumers are more likely to acquire valuable decision-making insights, thereby enhancing trust and perceived value (Lu et al., 2024). Furthermore, Yousaf (2022) noted that the authenticity and experiential value conveyed through social media videos can foster parasocial interaction. Therefore, this study posits that the authenticity demonstrated by new farmer streamers during e-commerce live streaming positively influences consumers' parasocial interaction experiences and proposes the following hypothesis:

H2a: Authenticity positively influences parasocial interaction.

(2) Social responsibility and parasocial interaction.

Previous research has indicated that when individuals perceive prosocial behavior as driven by genuine altruistic motives, they are more likely to form positive attitudes and provide favorable evaluations (Berman and Silver, 2022). Vohra and Davies (2020) further argued that portraying a socially responsible corporate image can improve investors' perceptions of the company's reputation and likability, leading to greater trust and support. In e-commerce live streaming, new farmer streamers are often perceived as embodying strong social responsibility, such as supporting farmers' income, promoting rural development, and advocating environmental protection. Consequently, they are more likely to receive positive consumer engagement, such as likes, comments, and interactions, gaining greater trust. Based on the above, this study posits that the social responsibility exhibited by new farmer streamers fosters consumers' emotional identification

and trust, thereby enhancing parasocial interaction, and proposes the following hypothesis:

H2b: Social responsibility positively influences parasocial interaction.

(3) Trustworthiness and parasocial interaction.

Research on social media influencers in e-commerce live streaming shows that trustworthiness and interactivity are crucial for establishing parasocial interaction (Ma et al., 2023). Greater trustworthiness activates consumer participation, enhancing their parasocial interaction experience (Sakib et al., 2020). In live commerce, new farmer streamers are viewed as honest and trustworthy because of their knowledge of agricultural products and product quality assurance, encouraging consumers to form interactive relationships. Thus, this study posits that when consumers perceive new farmer streamers as trustworthy, they are more likely to establish parasocial interaction, leading to the following hypothesis:

H2c: Trustworthiness positively influences parasocial interaction.

(4) Affinity and parasocial interaction.

During agricultural live streams, new farmer streamers frequently use local dialects or rural idioms, addressing consumers as "family" or "friends" to reduce social distance. They occasionally demonstrate daily labor in the fields to strengthen expressions of affinity. Studies have shown that affinity fosters a warm, harmonious live streaming atmosphere, builds trust and emotional bonds with consumers, and encourages interaction and communication (Chen and Wu, 2024). Long et al. (2024) argued that e-commerce streamers' friendly image and the cozy atmosphere of their live rooms foster communication and emotional connection with consumers, reflecting the parasocial interaction characteristics of streamers as "companions." Therefore, this study proposes the following hypothesis:

H2d: Affinity positively influences parasocial interaction.

(5) Interactivity and parasocial interaction.

To boost agricultural product sales, new farmer streamers closely monitor comments, likes, and sales feedback during live streaming. They promptly adjust their expressions and gestures, actively respond to consumers' opinions and needs, and guide consumers to participate in live room interactions. When consumers feel acknowledged and recognized by the streamer, they are likelier to develop a sense of parasocial interaction (Dibble et al., 2016; Long et al., 2024). Furthermore, streamers with higher interactivity are more likely to stimulate consumer engagement in discussions, expressing opinions, and sharing purchase experiences. From the perspective of interactive marketing, Lin and Lee (2024) highlighted that increased awareness of participation in live streaming significantly enhances consumers' sense of social and emotional presence. Tsai et al. (2021) also emphasized that higher perceived social presence during interactions

strengthens parasocial interaction, improving consumer engagement and satisfaction. Thus, this study suggests that the interactivity of new farmer streamers positively influences consumers' parasocial interaction experiences, leading to the following hypothesis:

H2e: Interactivity positively influences parasocial interaction.

4.3 Parasocial interaction and purchase intention

Research indicates parasocial interaction positively influences online purchase intention (Sokolova and Kefi, 2020; Shao et al., 2024). Parasocial interactions between media users and figures enhance user satisfaction and word-of-mouth effects (Kim and Kim, 2017). Additionally, parasocial interaction evokes vicarious experiences, reduces perceived risk, and increases purchase intention (Lee and Lee, 2022).

Nadroo et al. (2024) observed that parasocial interaction triggers a 'domino effect,' spurring positive herd behavior and electronic word-of-mouth, ultimately boosting online purchase intention. In live streaming e-commerce, Shen et al. (2022) found that consumers' perception of parasocial interaction with streamers boosts emotional engagement, significantly increasing purchase intention. Liu et al. (2024) confirmed that parasocial interaction strengthens trust in e-commerce streamers, further promoting purchase intention.

Building on these findings, this study posits that consumers' perception of parasocial interaction fosters deep emotional bonds with new farmer streamers, stimulating purchase intention for their recommended agricultural products. Consumers are also more likely to share knowledge and experiences about agricultural products during live streaming, providing valuable insights for other consumers and boosting their confidence in purchasing. Therefore, the following hypothesis is proposed:

H3: Parasocial interaction positively influences the purchase intention of new farmer live streaming consumers.

4.4 The mediating role of parasocial interaction

In studies on e-commerce platforms—particularly in live streaming contexts—parasocial interaction frequently serves as a mediator to explain how consumer purchase intention are influenced (Yuan C. et al., 2021; Huang and Mohamad, 2025). For example, Agnihotri et al. (2023) explored how social media influencer authenticity affects consumer purchasing behavior, revealing that parasocial interaction mediates the link between authenticity attributes (sincerity, genuine recommendations, and visibility) and purchasing behavior. Hsu (2020) found that, in social media contexts, parasocial interaction mediates the effects of bloggers' attitudinal similarity and physical attractiveness on consumers' sense of belonging, flow experience, purchase impulse, and addictive behavior. Moreover, social responsibility—encompassing moral and environmental concerns—significantly influences parasocial interaction, which in turn positively affects

consumers' purchase intention (Al-Haddad et al., 2022; Yang et al., 2025). Based on the above literature, the following hypotheses are formulated:

H4a: Parasocial interaction mediates the relationship between authenticity and the purchase intention of new farmer live streaming consumers.

H4b: Parasocial interaction mediates the relationship between social responsibility and the purchase intention of new farmer live streaming consumers.

According to the Stimulus–Organism–Response (S–O–R) framework, the traits of new farmer streamers serve as external stimuli (S), including attractiveness, professionalism, and similarity. These stimuli elicit internal psychological responses (O), such as cognitive and emotional reactions and parasocial interactions, which subsequently shape consumer behavior (R), including purchase intention and acceptance (Sokolova and Kefi, 2020; Xiang et al., 2016; Xu et al., 2024). Yuan C. et al. (2021) also found that the interactivity and trustworthiness of entrepreneurial endorsers foster parasocial relationship with consumers, which significantly influence repurchase intention. Liao et al. (2022) demonstrated that interactive communication styles enhance consumer immersion and parasocial interaction, promoting purchasing behavior. In addition, the sense of affinity developed through information shared by live streamers fosters prosocial relationship, increasing consumers' willingness to keep watching the streamer's content, engage with promoted products, and ultimately make purchases (Ko, 2024). Based on these findings, the following hypotheses are presented:

H4c: Parasocial interaction mediates the relationship between trustworthiness and the purchase intention of new farmer live streaming consumers.

H4d: Parasocial interaction mediates the relationship between affinity and the purchase intention of new farmer live streaming consumers.

H4e: Parasocial interaction mediates the relationship between interactivity and the purchase intention of new farmer live streaming consumers.

4.5 The moderating role of regional cultural differences

Regional culture is characterized by the formation of groups sharing common characteristics such as language, beliefs, arts, morals, customs, lifestyles, and values. Individuals influenced by regional cultures often display behaviors and characteristics closely tied to local customs, values, interpersonal relationships, and geography, distinguishing them from individuals in other regions (Hofstede et al., 2010; Kaasa et al., 2014). DiMaggio (1997) argued that culture shapes interpersonal interactions and communication. The "similarity-attraction" effect, driven by cultural similarity, positively influences

communication and cooperation in interpersonal interactions. Conversely, cultural differences lead individuals to categorize culturally similar people as the “in-group” and those with different cultures as the “out-group.” Consequently, individuals tend to allocate more resources and positive evaluations to in-group members—referred to as “in-group favoritism”—while offering fewer resources and more negative evaluations to out-group members, resulting in “out-group discrimination” (Tajfel, 1982).

In e-commerce live streaming, new farmer streamers often broadcast from rural outdoor or agricultural production settings, showcasing the natural environment, growth conditions, and real-time states of agricultural products. This allows consumers to compare the similarities and differences between the streamer’s rural region and their environment. Additionally, consumers also observe implicit elements, such as dialects, customs, lifestyles, and values, through the streamers’ features and performances. When the consumer’s regional culture differs from the streamer’s, they may perceive significant cultural differences. A study on dialect-based live streaming found that when the dialect used by agricultural streamers differs significantly from that of consumers, communication, and information transmission are hindered, and the dialect negatively affects agricultural product purchase behavior (Yang et al., 2024). Therefore, this study suggests that when consumers perceive significant regional cultural differences, the positive effect of parasocial interaction

on purchase intention may be diminished. Thus, the following hypothesis is proposed:

H5: Regional cultural differences negatively moderate the relationship between parasocial interaction and the purchase intention of new farmer live streaming consumers.

Figure 1 illustrates the research model.

5 Methods

5.1 Measurement

The construct measurements in this study were adapted and slightly modified from established scales to meet our research requirements (see Table 4). All constructs were measured using scales adapted from prior studies and optimized for the context of new farmer live streaming. Authenticity was assessed using four items suggested by Moulard et al. (2015) and Lu et al. (2024). Social responsibility was measured using six items from Boğan et al. (2021). Trustworthiness was assessed using three items from He et al. (2022). Affinity was assessed using four items from Chen and Wu (2024). Interactivity was assessed using a three-item scale based on Ohanian (1991) and Zhang M. et al. (2022). Parasocial

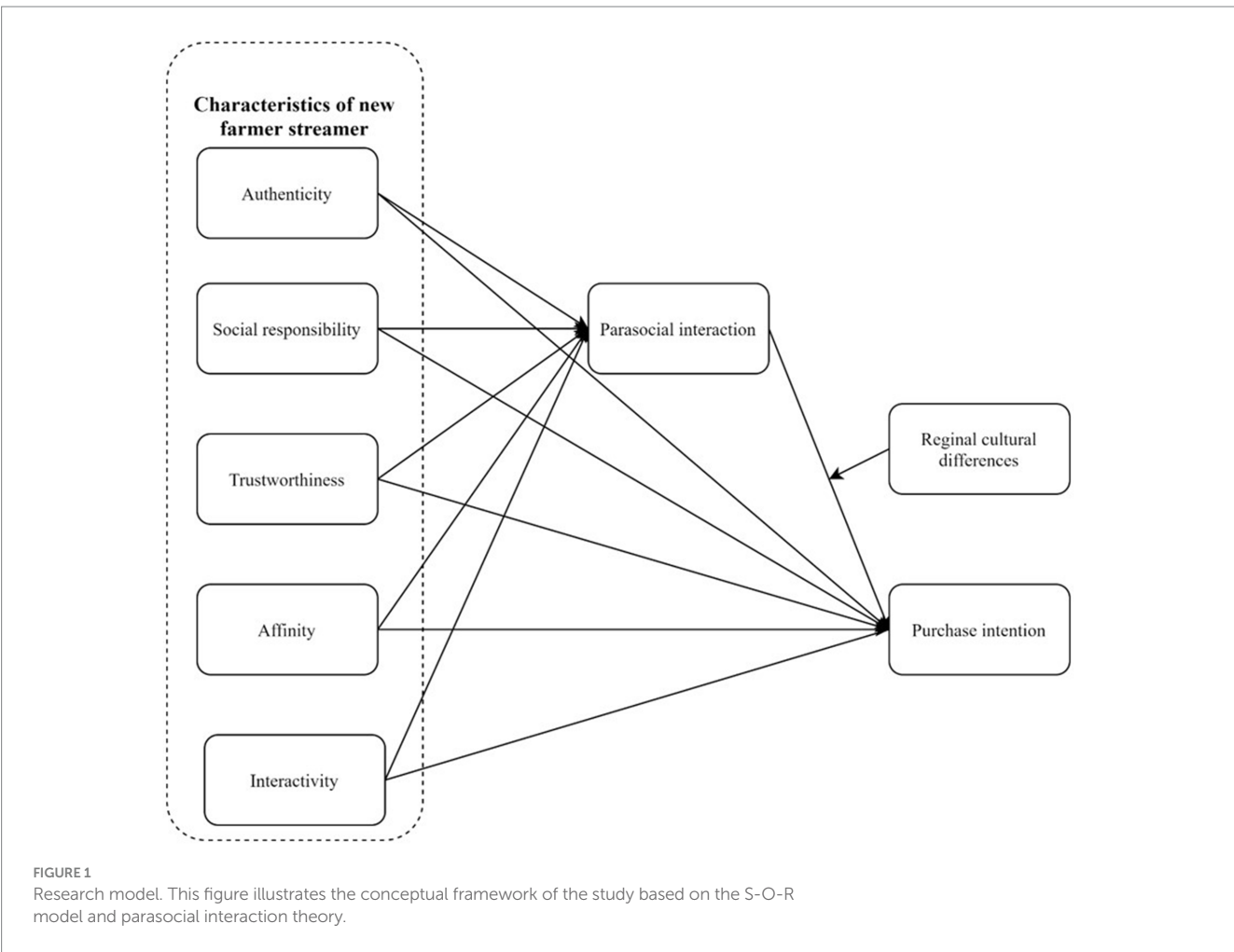


TABLE 4 Results for the measurement model ($N = 441$).

Items	SFL	CA	CR	AVE
Authenticity		0.837	0.839	0.566
AU1: The new farmer streamer's behavior and speech appear honest.	0.771			
AU2: I can feel the sincerity of the new farmer streamer.	0.671			
AU3: The new farmer streamer's recommendations are authentic.	0.744			
AU4: The content of the new farmer live streams appears to be real to me.	0.817			
Social responsibility		0.903	0.904	0.613
SR1: The new farmer streamer contributes to the local rural community that goes beyond generating profit.	0.774			
SR2: The new farmer streamer promotes and preserves traditional rural culture through live streams.	0.740			
SR3: The new farmer streamer actively promotes local agricultural products and encourages viewers to buy them.	0.819			
SR4: The new farmer streamer creates e-commerce job opportunities for local residents through live streams.	0.828			
SR5: The new farmer streamer actively engages in rural environmental governance and protection.	0.676			
SR6: The new farmer streamer is committed to providing eco-friendly agricultural products or services.	0.847			
Trustworthiness		0.906	0.907	0.764
TR1: The content of the new farmer live streams is trustworthy.	0.876			
TR2: The agricultural products recommended by the new farmer streamer are reliable.	0.872			
TR3: I trust the new farmer streamer I watch.	0.874			
Affinity		0.905	0.907	0.709
AF1: The new farmer streamer speaks to viewers in a friendly manner.	0.820			
AF2: The atmosphere of the new farmer live streams is relaxed and pleasant.	0.809			
AF3: The new farmer streamer is approachable and easy to talk to.	0.850			
AF4: The new farmer streamer answers viewers' questions patiently.	0.887			
Interactivity		0.864	0.871	0.694
IN1: I engage in meaningful interactions with the new farmer streamer I watch.	0.771			
IN2: I can participate effectively in the live stream's activities of the new farmer streamer.	0.927			
IN3: The live stream's content of the new farmer streamer captures my interest.	0.792			
Parasocial interaction		0.902	0.903	0.651
PSI1: While watching live streams, the new farmer streamer feels like a familiar friend.	0.825			
PSI2: While watching live streams, it feels as if the new farmer streamer is accompanying me.	0.801			
PSI3: While watching live streams, I feel as though I am part of the experience.	0.808			
PSI4: I look forward to watching the new farmer streamer's future live streams.	0.830			
PSI5: I would like to meet the new farmer streamer in person.	0.768			
Purchase intention		0.870	0.870	0.691
PI1: I am very likely to consider purchasing the agricultural products recommended by the new farmer streamer.	0.855			
PI2: I am willing to purchase the agricultural products recommended by the new farmer streamer.	0.827			
PI3: I would recommend the agricultural products endorsed by the new farmer streamer to others.	0.811			
Regional cultural differences		0.901	0.904	0.760
RCD1: The culture of the rural area where the new farmer streamer is located (e.g., dialect, customs, lifestyle, and values) differs significantly from the culture I am familiar with.	0.938			
RCD2: The local culture of the area where the new farmer streamer is based is quite distinct from that of my own region.	0.817			
RCD3: The culture of the rural area where the new farmer streamer is located is highly distinctive.	0.855			

SFL, Standardized factor loadings; CA, Cronbach's alpha; CR, Composite reliability; AVE, Average variance extracted.

interaction was assessed using five items from [Dibble et al. \(2016\)](#) and [Deng et al. \(2023\)](#). Purchase intention was assessed using three items from [Pavlou \(2003\)](#). Regional cultural differences were

assessed using three items from [Torelli et al. \(2017\)](#). All items were rated on a seven-point Likert scale, ranging from 1 ('Strongly Disagree') to 7 ('Strongly Agree').

5.2 Data collection and sample characteristics

To ensure the reliability and validity of the questionnaire items and to minimize cultural differences, two linguists and two marketing experts conducted a back-translation of the survey. The questionnaire was administered online via [Credamo.com](https://credamo.com), a Chinese survey platform. This study was conducted in accordance with institutional and national research ethics standards and with the principles of the Declaration of Helsinki. Ethical review and approval were not required, as the research only involved an anonymous online survey about participants' perceptions of new farmer live streaming and did not include any medical or physiological interventions. The first section of the questionnaire provided a detailed description of the study purpose and procedures, together with an online informed consent form. Participants were informed that their participation was voluntary and that their responses would remain completely confidential and anonymous.

After rigorous data screening, incomplete questionnaires and responses that failed to meet the study's criteria or incorrectly answered control questions were excluded. This quality control process resulted in 441 valid responses, which were retained for further statistical analysis. The demographic characteristics of the respondents are presented in [Table 5](#).

6 Data analysis and results

6.1 Common method bias

This study employed a questionnaire survey to collect data, with all variables measured based on respondents' subjective perceptions, potentially causing common method bias. To mitigate this issue, the survey was conducted anonymously, and respondents were assured that their information would remain confidential. Additionally, Harman's single-factor test was conducted to assess the presence of common method bias. The test results revealed that eight factors with eigenvalues greater than one were extracted without rotation, with the first factor explaining 38.683% of the variance—below the critical threshold of 40%. These results indicate that common method bias is not a major concern in this study and is unlikely to affect the validity of subsequent findings substantially.

6.2 Measurement model

Confirmatory factor analysis was conducted on the 31 measurement items using AMOS 26.0 with the pooled sample ($N = 441$). The measurement model exhibited acceptable goodness-of-fit indices: $\chi^2/df = 1.676$, CFI = 0.970, TLI = 0.965, RMSEA = 0.039. These goodness-of-fit indices exceeded recommended thresholds ([Anderson and Gerbing, 1988](#)), indicating a good model fit. Additionally, all constructs had average variance extracted (AVE) values exceeding 0.50, and factor loadings for all items were greater than 0.60 (see [Table 4](#)). Discriminant validity was confirmed, as the inter-construct correlations did not exceed the square root of each construct's AVE (see [Table 6](#)). Thus, the validity

TABLE 5 Descriptive statistical analysis of samples.

Item	Category	N (441)	Percentage
Gender	Male	201	45.58%
	Female	240	54.42%
Age	<18	9	2.04%
	18–25	140	31.75%
	26–35	200	45.35%
	36–45	70	15.87%
	>45	22	4.99%
Education	High school or below	22	4.99%
	Junior college	37	8.39%
	Bachelor	322	73.02%
	Master or above	60	13.60%
Occupation	Student	92	20.86%
	State-owned enterprises	57	12.93%
	Public institutions	39	8.84%
	Civil servants	10	2.27%
	Private enterprises	209	47.39%
	Foreign-funded enterprises	21	4.76%
	Others	13	2.95%
Average monthly earnings	<3,000	95	21.54%
	3,000–6,000	75	17.01%
	6,001–9,000	124	28.12%
	9,001–12,000	78	17.69%
	>12,000	69	15.64%
Time for watching the e-commerce live streams	<1 year	31	7.03%
	1–2 year	150	34.01%
	3–4 year	157	35.60%
	>4 year	103	23.36%

and reliability of the instrument were established through convergent validity, discriminant validity, and composite reliability assessments.

6.3 Structural model

This study establishes a structural equation model, incorporating authenticity, social responsibility, trustworthiness, affinity, and interactivity as independent variables, parasocial interaction as the mediator, and purchase intention as the dependent variable. The overall model fit was assessed using AMOS 26.0. Eight fit indices (χ^2/df , RMSEA, GFI, NFI, IFI, RFI, TLI, and CFI) were employed to evaluate the structural model fit. The χ^2/df value is 1.705, below the recommended threshold of 3; the RMSEA value is 0.040, lower than the cutoff of 0.05. Additionally, the values of GFI, NFI, IFI, RFI, TLI, and CFI all surpass 0.90. These results suggest that the model fit indices meet

TABLE 6 Distinction validity results.

Variable	AU	SR	TR	AF	IN	PSI	PI	RCD
AU	0.753							
SR	0.449**	0.783						
TR	0.422**	0.446**	0.874					
AF	0.499**	0.533**	0.491**	0.842				
IN	0.291**	0.368**	0.306**	0.398**	0.833			
PSI	0.454**	0.416**	0.460**	0.497**	0.401**	0.807		
PI	0.504**	0.515**	0.524**	0.525**	0.469**	0.523**	0.831	
RCD	0.322**	0.391**	0.292**	0.336**	0.303**	0.500**	0.414**	0.871

AU, Authenticity; SR, Social responsibility; TR, Trustworthiness; AF, Affinity; IN, Interactivity; PSI, Parasocial interaction; PI, Purchase intention; RCD, Reginal cultural differences. The bolded font on the table's diagonal represents AVE's square root value. ** $p < 0.01$.

TABLE 7 Path coefficient test.

Path	Estimate	S.E.	C.R.	p
AU $\rightarrow$ PI	0.188***	0.065	3.357	***
SR $\rightarrow$ PI	0.183***	0.050	3.476	***
TR $\rightarrow$ PI	0.217***	0.047	4.194	***
AF $\rightarrow$ PI	0.077	0.053	1.311	0.190
IN $\rightarrow$ PI	0.198***	0.047	4.250	***
AU $\rightarrow$ PS	0.201***	0.068	3.358	***
SR $\rightarrow$ PS	0.073	0.053	1.280	0.200
TR $\rightarrow$ PS	0.217***	0.049	3.942	***
AF $\rightarrow$ PS	0.191**	0.057	3.009	**
IN $\rightarrow$ PS	0.186***	0.049	3.755	***
PR $\rightarrow$ PI	0.170***	0.055	3.153	**

AU, Authenticity; SR, Social responsibility; TR, Trustworthiness; AF, Affinity; IN, Interactivity; PSI, Parasocial interaction; PI, Purchase intention; RCD, Reginal cultural differences. ** $p < 0.01$, *** $p < 0.001$.

recommended standards, indicating a good overall fit for the structural equation model.

The results of the path analysis are presented in Table 7 and Figure 2. The analysis indicates that authenticity ($\beta = 0.188$, $p < 0.001$), social responsibility ($\beta = 0.183$, $p < 0.001$), trustworthiness ($\beta = 0.217$, $p < 0.001$), and interactivity ($\beta = 0.198$, $p < 0.001$) significantly and positively influence consumers' purchase intention; however, affinity ($\beta = 0.077$, $p > 0.05$) does not. Thus, hypotheses H1a, H1b, H1c, and H1e are supported, while H1d is not. Regarding the impact on parasocial interaction, authenticity ($\beta = 0.201$, $p < 0.001$), trustworthiness ($\beta = 0.217$, $p < 0.001$), affinity ($\beta = 0.191$, $p < 0.01$), and interactivity ($\beta = 0.186$, $p < 0.001$) exhibit significant positive effects; however, social responsibility ($\beta = 0.073$, $p > 0.05$) does not. Consequently, hypotheses H2a, H2c, H2d, and H2e are supported, whereas H2b is not. Furthermore, parasocial interaction ($\beta = 0.170$, $p < 0.01$) significantly and positively affects purchase intention, confirming hypothesis H3.

6.4 Mediation effect analysis

Following the direct effects analysis, this study employed the Bootstrap method with 5,000 resamples at a 95% confidence level

in AMOS 26.0 to examine the mediating effect of parasocial interaction. A mediation effect is considered statistically significant if the 95% confidence interval does not include zero. The results in Table 8 indicate that parasocial interaction mediates the relationships between authenticity, trustworthiness, affinity, interactivity, and purchase intention; however, it does not mediate the relationship between social responsibility and purchase intention. Thus, hypotheses H4a, H4c, H4d, and H4e are supported, while H4b is not.

6.5 Moderation effect analysis

To examine the moderating role of regional cultural differences, this study employed the PROCESS macro in SPSS 26.0. The interaction term between parasocial interaction and regional cultural differences was analyzed (see Table 9). The interaction coefficient was -0.077 , with a 95% confidence interval of $(-0.139, -0.016)$, excluding zero, indicating a significant moderating effect. Additionally, a simple slope plot (Figure 3) was created to visualize the moderation effect. As shown in the figure, when consumers perceive a high regional cultural difference, the positive effect of parasocial interaction on purchase intention is weaker. Conversely, the effect is more potent when consumers perceive a low regional cultural difference. This confirms that regional cultural differences negatively moderate the relationship between parasocial interaction and purchase intention, supporting Hypothesis H5. Based on the questionnaire survey and empirical analysis results, the detailed outcomes of all hypothesis tests are presented in Table 10.

7 Discussion

7.1 Discussion of key findings

Drawing on the Stimulus-Organism-Response (S-O-R) theory and parasocial interaction theory, this study constructs a theoretical model to explore how the characteristics of new farmer streamers influence consumers' purchase intention within the context of new farmer live streaming.

- (1) Characteristics of new farmer streamers positively influence purchase intention.

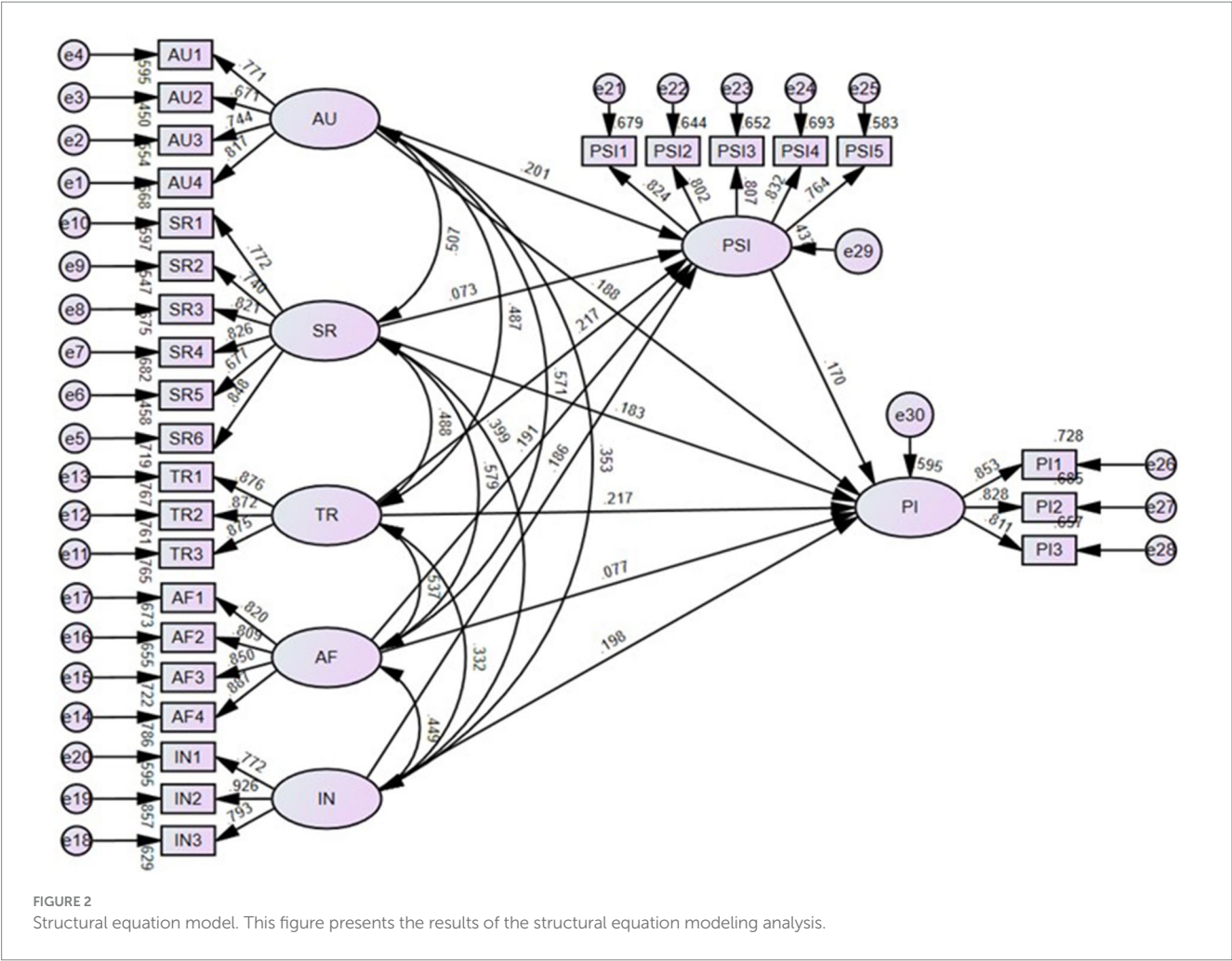


TABLE 8 Tests of mediating effects of parasocial interaction.

Path	Effect size	S.E.	LLCI	ULCI	p
AU → PS → PI	0.034	0.017	0.009	0.080	0.006
SR → PS → PI	0.012	0.014	−0.007	0.051	0.209
TR → PS → PI	0.037	0.019	0.009	0.088	0.005
AF → PS → PI	0.032	0.020	0.005	0.090	0.010
IN → PS → PI	0.032	0.017	0.007	0.077	0.007

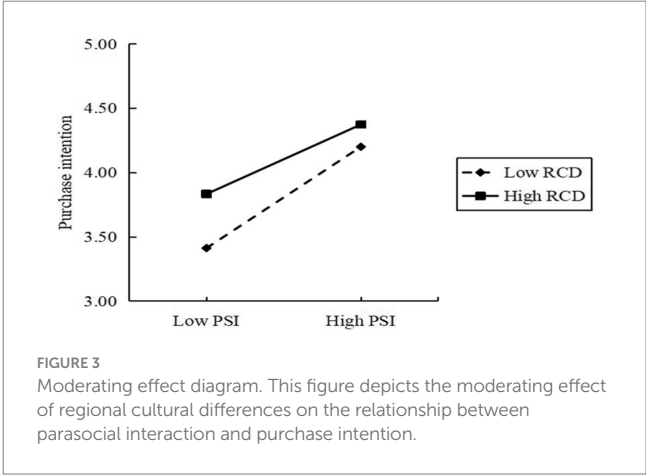
AU, Authenticity; SR, Social responsibility; TR, Trustworthiness; AF, Affinity; IN, Interactivity; PSI, Parasocial interaction; PI, Purchase intention; RCD, Regional cultural differences.

TABLE 9 Analysis of moderating effect.

Variable	Coeff	S.E.	t	LLCI	ULCI	p
PSI	0.382	0.045	8.521	0.294	0.470	0.000
RCD	0.161	0.042	3.790	0.076	0.244	0.000
PSI*RCD	−0.077	0.031	−2.468	−0.139	−0.016	0.014

PSI, Parasocial interaction; RCD, Regional cultural differences.

Empirical results indicate that authenticity, social responsibility, trustworthiness, and interactivity significantly and positively affect consumers' purchase intention, whereas affinity does not exert a



significant influence. This finding contradicts previous studies that report a positive association between the affinity of salespeople or streamers and consumers' purchase intention (Bateman and Valentine, 2015; He et al., 2022). The insignificance of affinity may be attributed to consumers perceiving it as a strategic sales maneuver rather than a sincere interaction, particularly when streamers frequently use formulaic expressions such as "my dears" or "my family." Furthermore, real-world incidents—such as the "poverty marketing" employed by a live-streaming team during the

TABLE 10 Summary of results of hypothesis testing.

Hypothesis		Results
H1a	Authenticity positively influences the purchase intention of new farmer live streaming consumers.	Supported
H1b	Social responsibility positively influences the purchase intention of new farmer live streaming consumers.	Supported
H1c	Trustworthiness positively influences the purchase intention of new farmer live streaming consumers.	Supported
H1d	Affinity positively influences the purchase intention of new farmer live streaming consumers.	Not supported
H1e	Interactivity positively influences the purchase intention of new farmer live streaming consumers.	Supported
H2a	Authenticity positively influences parasocial interaction.	Supported
H2b	Social responsibility positively influences parasocial interaction.	Not supported
H2c	Trustworthiness positively influences parasocial interaction.	Supported
H2d	Affinity positively influences parasocial interaction.	Supported
H2e	Interactivity positively influences parasocial interaction.	Supported
H3	Parasocial interaction positively influences the purchase intention of new farmer live streaming consumers.	Supported
H4a	Parasocial interaction mediates the relationship between authenticity and the purchase intention of new farmer live streaming consumers.	Supported
H4b	Parasocial interaction mediates the relationship between social responsibility and the purchase intention of new farmer live streaming consumers.	Not supported
H4c	Parasocial interaction mediates the relationship between trustworthiness and the purchase intention of new farmer live streaming consumers.	Supported
H4d	Parasocial interaction mediates the relationship between affinity and the purchase intention of new farmer live streaming consumers.	Supported
H4e	Parasocial interaction mediates the relationship between interactivity and the purchase intention of new farmer live streaming consumers.	Supported
H5	Regional cultural differences negatively moderate the relationship between parasocial interaction and the purchase intention of new farmer live streaming consumers.	Supported

Liangshan Qubu incident—have eroded consumers' trust in emotional appeals and diminished their appreciation of the entertainment value (Liu and Zheng, 2024; Zou and Fu, 2024), thereby dampening their purchasing behavior to a certain extent.

(2) Characteristics of new farmer streamers positively influence parasocial interaction.

This study confirms the presence of parasocial interaction between streamers and consumers in live streaming contexts, aligning with the findings of Hu et al. (2017) and Lin and Lee (2024). It further reveals that authenticity, trustworthiness, affinity, and interactivity significantly enhance consumers' parasocial interaction, whereas social responsibility exerts no significant influence.

In this study, the social responsibility of new farmer streamers resembles the corporate ethical responsibility examined by Al-Haddad et al. (2022). However, their findings suggest that ethical responsibility enhances consumer engagement, which seems to contradict the results of the present study. In reality, consumer engagement on social media—such as liking, commenting, and other interactive behaviors—is not equivalent to parasocial interaction. Although such behaviors reflect positive evaluations and interaction (Pongpaew et al., 2017), they do not capture the emotional closeness or perceived companionship with the streamer that defines parasocial interaction (Dibble et al., 2016). Moreover, in e-commerce live streaming, parasocial interaction is primarily driven by emotional expression and real-time interaction (Dibble et al., 2016; Liao et al., 2022). By contrast, social responsibility is a cognitively processed characteristic that may not be readily perceived during short live streaming sessions, thereby limiting its impact on parasocial interaction. Therefore, this study concludes that while the social responsibility of new farmer streamers may facilitate purchase intention, it does not function as a precursor to parasocial interaction.

(3) Parasocial interaction positively influences purchase intention.

The analysis reveals that parasocial interaction significantly impacts purchase intention. As Deng et al. (2023) argue, parasocial interaction is a key driver of consumer decision-making. On the one hand, it fosters an emotional bond between consumers and streamers, creating a live streaming environment akin to conversing with a friend. This reduces psychological distance and enhances willingness to accept product recommendations. On the other hand, parasocial interaction encourages consumers to share product information and purchase experiences, facilitating collective knowledge sharing, reducing information asymmetry, and boosting confidence and purchase intention.

(4) Parasocial interaction mediates the relationship between new farmer streamer characteristics and purchase intention.

The mediation analysis reveals that authenticity, trustworthiness, affinity, and interactivity significantly influence purchase intention through parasocial interaction, while the indirect effect of social responsibility is insignificant. This may be because consumers perceive social responsibility as more cognitively than emotionally driven, contrasting with the emotional mechanism emphasized in parasocial interaction. Previous studies in the context of social media have also shown that parasocial interaction or engagement does not significantly mediate the relationship between social responsibility (economic and philanthropic) and purchase intention (Al-Haddad et al., 2022; Kim et al., 2020). Therefore, social responsibility does not establish a significant mediating pathway through parasocial interaction to purchase intention.

(5) Regional cultural difference moderates the relationship between parasocial interaction and purchase intention.

The moderation analysis shows that regional cultural differences negatively moderate the relationship between parasocial interaction and purchase intention. This finding aligns with Li et al. (2020), who found that cultural differences affect consumers' willingness to purchase. Specifically, highly perceived regional cultural differences—such as dialects, customs, or lifestyles—may cause consumers to perceive new farmer streamers as out-group members, which generates a sense of distance or skepticism. Even with high levels of parasocial interaction, this may not lead to stronger purchase intention, as consumers become more rational and cautious. Conversely, low cultural differences enhance consumers' identification with the streamer as an in-group member, amplifying the positive effect of parasocial interaction on purchase intention.

In conclusion, this study identifies three underlying mechanisms of new farmer live streaming beyond the canonical streamer–parasocial interaction–purchase pathway. First, identity-embedded stimuli: new-farmer traits—authenticity, trustworthiness, interactivity, and affinity—serve as producer-identity cues that foster parasocial interaction, subsequently enhancing purchase intention. Second, a cognition-driven bypass: social responsibility increases purchase intention without necessarily enhancing parasocial interaction, indicating an ethics-based cue-to-choice pathway parallel to relational bonding. Third, a contextual boundary: regional cultural differences weaken the relationship between parasocial interaction and purchase intention, suggesting that relational capital depends on perceived in-group and out-group distances (e.g., dialect, customs). Collectively, these mechanisms clarify when and how cues rooted in rural identity and culture activate relational versus cognitive pathways, thereby extending S-O-R explanations of live commerce to identity- and culture-sensitive processes.

7.2 Theoretical contributions

This study makes several significant contributions to the literature. First, it focuses on the emerging group of “new farmer streamers,” thus broadening the scope of research in e-commerce live streaming. While previous studies have primarily examined internet celebrities and professional streamers (Meng et al., 2021; Li et al., 2022; Zhang et al., 2024), empirical research on new farmer streamers is scarce. The phenomenon of new farmers conducting live streaming in rural outdoor settings or directly at production sites has been largely overlooked. This study addresses this gap by focusing on new farmer streamers and their activities in these contexts, defining key concepts and characteristics while contributing to filling the research void in the existing literature.

Second, this study extends the application of parasocial interaction theory to the context of e-commerce live streaming. Previous research has emphasized that media persona characteristics, content attributes, user psychology, and platform features are key antecedents of parasocial interaction (Deng et al., 2023; Lu et al., 2023). By integrating the S-O-R theory with parasocial interaction theory, this study constructs a theoretical model that reveals the mediating role of parasocial interaction between new farmer streamer characteristics and consumers' purchase intention. This enriches the theoretical framework on streamer behavior and parasocial mechanisms in e-commerce, particularly in the agricultural sector.

Finally, this study innovatively explores the impact of cultural and environmental factors in e-commerce live streaming. While regional

culture is widely recognized as influencing marketing and consumer behavior, its role in live streaming marketing has received limited attention. Based on the premise that local cultural contexts shape regions and individuals, this study examines regional cultural differences as a prominent factor in the live streaming process of new farmer streamers. By identifying regional cultural differences as a boundary condition that moderates the effect of parasocial interaction on purchase intention, this study enhances the theoretical understanding of regional culture in e-commerce live streaming (Cho et al., 2010; Hofstede et al., 2010; Macnab et al., 2010; Kaasa et al., 2014; Minkov et al., 2023).

7.3 Practical implications

Governments and relevant agencies should prioritize competency-based training and targeted guidance for new farmers engaged in live streaming. Training curricula should be anchored in the five identified characteristics—authenticity, social responsibility, trustworthiness, affinity, and interactivity—with particular emphasis on authenticity and social responsibility. Practical modules may cover provenance verification and traceability demonstrations, transparent disclosure and fair-pricing practices, environmental stewardship narratives, compliant advertising and consumer protection, and real-time interaction skills such as Q&A, complaint handling, and crisis response. Implementation can integrate county-level training centers, mentorship programs with exemplary streamers, and certification linked to measurable outcomes (e.g., complaint rates, traceability adoption). Subsidies and incubation funds should be tied to completing these modules and periodic third-party audits.

Practitioners should deliberately design for PSI, given its positive impact on purchase intention. Recommended tactics include structured live Q&A sessions, “producer's diary” storytelling filmed on-site, co-creation tools (e.g., polls, viewer challenges), and micro-community management between live-streaming sessions (e.g., comment replies, follow-up messages). New farmer streamers can embed authenticity cues (e.g., origin labels, process demonstrations) into interactive segments to transform audience attention into trust and attachment. Managers should monitor PSI-related KPIs—such as comment-to-view ratio, median chat dwell time, and repeat-purchase rate—and conduct A/B testing on interaction intensity and tone. Training should caution against over-scripted intimacy or manipulative appeals that may erode credibility; instead, it should prioritize warm, responsive communication and verifiable claims.

Because regional cultural differences weaken the PSI–purchase link, content and interaction should be localized. Audiences should be segmented by region, with language (e.g., dialect subtitles, bilingual captions), examples, festivals, and value frames (e.g., family care, terroir, sustainability) adapted accordingly. Non-local new farmer streamers should be paired with local co-hosts or community leaders. At the same time, region-specific Q&A sessions should be rotated, and shared identities should be emphasized to reduce out-group distance. Bundles (e.g., taste profiles, cooking habits), logistics (e.g., preferred carriers, freshness windows), and timing (e.g., regional peak hours) should be localized. A structured content-localization workflow should be established, and moderation effects should be evaluated by region using simple-slope analyses of conversion KPIs. Partnerships with local cooperatives and agricultural bureaus can enhance cultural alignment and income generation while ensuring compliance.

7.4 Limitations and future research

This study has several limitations and offers opportunities for future research. From one perspective, the methodology employed in this study could be further developed. While questionnaire surveys and text analysis were used to extract the characteristics of new farmer streamers, these methods introduce some degree of subjectivity. Future research could benefit from using data mining techniques such as web scraping and video content analysis to extract objective data, thereby enhancing the reliability and accuracy of findings. Additionally, machine learning algorithms, like artificial neural networks, could be used to build predictive models to quantify the impact of various streamer characteristics on consumers' purchase intention. Methods such as fuzzy-set qualitative comparative analysis could also be employed to uncover more complex causal relationships between streamer characteristics and consumer purchase behaviors.

From another perspective, the scope and content of this research could be further enriched. Although parasocial interaction theory and the S-O-R framework were employed in this study, the role of parasocial interaction as the sole mediator between streamer characteristics and purchase intention could be expanded by introducing other mediators, such as emotional resonance, perceived value, and immersive experiences. This could provide deeper insights into how parasocial interaction influences consumer behavior. Furthermore, future studies could apply alternative theoretical frameworks, such as affective sociology or social identity theory, to explore how streamer characteristics affect consumer perceptions and behavioral intentions. Beyond regional cultural differences, future research could also examine other moderators, such as product type and consumer individual characteristics (e.g., prior experience with agricultural product purchases), to gain a more comprehensive understanding of the live streaming context.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding authors.

Ethics statement

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. Nevertheless, the study was conducted in accordance with ethical research principles. Written informed consent was obtained from all participants before data collection. Participants were informed about the study's purpose, procedures, and their right to withdraw at any time. All data were collected and handled in compliance with data protection regulations.

Author contributions

GC: Funding acquisition, Writing – original draft, Formal analysis, Writing – review & editing, Visualization, Resources, Data

curation, Validation. TB: Formal analysis, Writing – original draft, Methodology, Investigation, Conceptualization, Data curation. WL: Writing – review & editing, Writing – original draft, Data curation, Validation, Visualization. ZiL: Writing – original draft, Visualization, Validation. ZhL: Writing – review & editing, Data curation, Investigation, Software. XZ: Writing – original draft, Supervision, Funding acquisition, Conceptualization, Project administration, Methodology.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

The reviewer JR declared a shared affiliation with the author ZhL to the handling editor at the time of review.

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