

The Mechanism of Consumer Premium Payments in Agricultural Live-Streaming under Dual Emotional Appeals: A Perspective on Warmth and Humour

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ABSTRACT

Against the backdrop of China's transition from poverty alleviation to rural revitalisation, agricultural live-streaming commerce has become an indispensable pathway for sustaining hard-won poverty reduction gains and advancing high-quality rural development. This paper adopts the Elaboration Likelihood Model (ELM) as its fundamental research framework, introduces emotional resonance and perceived entertainment value as mediating variables, and constructs a theoretical model examining the impact of different emotional appeals on consumers' willingness to pay a premium for agricultural support live-streaming. An empirical analysis of the path relationships among these variables is also conducted. The results indicate that consumers' perceived warmth and humour appeals both have a significant positive impact on willingness to pay a premium. Emotional resonance transmits the effect of perceived warmth on consumers' propensity to pay above-market prices, whereas perceived entertainment accounts for the indirect link between perceived humour and consumers' inclination toward premium-priced purchasing. Finally, based on the research findings, recommendations are provided for optimising emotional strategies in agricultural live-streaming.

KEYWORDS

Agricultural Livestreaming; Warmth Appeal; Humour Appeal; Willingness To Pay a Premium; Elaboration Likelihood Model.

1. INTRODUCTION

In recent years, live-streaming e-commerce platforms have flooded into the rural market, with agricultural product live-streaming becoming a vital channel for promoting the upward flow of agricultural products and increasing farmers' incomes, serving as a key lever in the rural revitalisation strategy. Whilst aiding the sale of agricultural products, live-streaming for agricultural support has a profound impact on improving the agricultural product distribution system, driving the digitalisation of the agricultural industry, and enhancing the brand value of agricultural products. Following the comprehensive victory in China's poverty alleviation campaign in 2020, poverty reduction efforts have entered a phase of consolidation and expansion. In the process of comprehensively advancing rural revitalisation, live-streaming for farmers holds immense potential for development.

Relevant research indicates that live-streaming e-commerce possesses strong interactivity and appeal, capable of significantly increasing consumer engagement and purchasing intent, thereby playing a vital role in supporting farmers. As a new model of e-commerce-based poverty alleviation, live-streaming for agricultural products is demonstrating increasing economic and social benefits,

becoming a vital channel for the upward flow of agricultural produce. Against the backdrop of the post-poverty-alleviation era, live-streaming for agricultural support continues to have significant potential, benefiting from multiple favourable policies for rural revitalisation as well as opportunities arising from the Chinese consumer market's shift towards diversity, personalisation and high-end products.

However, at the present stage, agricultural livestreaming in China still faces certain issues regarding the application of emotional strategies. Some livestreams rely excessively on 'pity marketing', creating a negative emotional experience for consumers[1]; some streams simply adopt entertainment-style formulas without effectively integrating them with product characteristics. Although a wealth of high-quality agricultural livestreaming content has emerged on major platforms, homogenisation in emotional strategies persists, making it difficult to sustainably increase consumer loyalty and willingness to pay[2]. To achieve the sustainable development of agricultural support livestreaming, it is necessary to rely on market mechanisms, linking emotional strategies with consumer psychology in a more scientific manner to establish a long-term mechanism for the sector's growth. In the new era, consumer demand for livestream content exhibits new characteristics, increasingly tending towards diversification and personalisation, with a growing need for emotional experiences. Agricultural support livestreaming is, in essence, an economic activity bound by emotion; its sustainable development requires a clear understanding of the mechanisms by which different types of emotional appeals influence consumer decision-making.

Regarding the primary factors influencing consumers' willingness to shop via livestreams, a comprehensive analysis indicates that these mainly include host characteristics, content characteristics, and interaction characteristics. With deeper research into emotional marketing, growing attention has been paid to the impact of emotional appeals on consumer behaviour; research has found that feelings of warmth and humour can both significantly and positively influence consumers' purchasing decisions[3-5]. A synthesis of domestic and international research reveals that existing studies have primarily analysed consumer purchase intent from the perspective of comparing broad categories of rational and emotional appeals, with relatively little attention paid to the differentiated effects of various sub-types within emotional appeals (such as warmth-based and humour-based appeals). Due to the complexity and diversity of emotional appeals, the factors previously used to explain the effects of broad emotional categories cannot systematically account for the mechanisms by which different types of emotional appeals influence consumers' intention to pay more. At this critical juncture of comprehensively advancing rural revitalisation, how agricultural live-streaming can better meet consumers' diverse emotional needs, enhance their willingness to pay a premium, and achieve sustainable development has become an urgent issue requiring research and resolution.

This paper aims to conduct an empirical analysis, from the perspective of consumer perception, of the mechanisms through which warm and humorous appeals in agricultural livestreaming influence consumers' tendency to pay a price surcharge. It explores the mediating roles of emotional resonance and perceived entertainment value, thereby providing insights to enhance consumers' willingness to pay a premium and promote the sustainable development of agricultural livestreaming.

2. THEORETICAL FRAMEWORK AND RESEARCH HYPOTHESES

2.1 Theoretical Framework

Recent research on consumer behaviour in live-streaming e-commerce has primarily drawn upon theories such as the Elaboration Likelihood Model (ELM) and the Technology Acceptance Model (TAM)[6,7]. The Elaboration Likelihood Model (ELM), proposed by Petty and Cacioppo (1986), is a classic theory explaining attitude change and persuasion processes. This theory posits that individuals process information via two distinct routes: the central route and the peripheral route[8].

The central route involves a consumer's thorough, systematic processing of the arguments presented, centering on the inherent quality and logical coherence of the information itself; attitudes formed through this cognitive pathway are more durable and resistant to change. The peripheral route refers to an individual's reliance on heuristic cues such as emotional cues, source credibility and situational factors to make judgements, without the need for deep processing of the information content; attitudes formed via the peripheral route are relatively temporary and volatile.

Crucially, these two distinct processing pathways describe modes of cognitive elaboration, rather than intrinsic characteristics of the persuasive message itself. Rational information may be processed via the peripheral route (e.g., trusting an expert recommendation without critical evaluation), whilst emotional information may be processed via the central route (e.g., deeply reflecting on the social significance of a story). Consequently, both warm appeals and humour appeals, as specific forms of emotional appeals, may influence consumer decision-making via either the central or peripheral route[7]. This study adopts a comparative approach to examine the overall impacts of these two emotional appeal strategies, exploring how consumers' perceptions of warmth and humour shape their propensity to pay above-market prices via distinct psychological pathways, without predefining specific processing routes.

Based on the theoretical framework of the Elaboration Likelihood Model (ELM) and incorporating the contextual characteristics of live-streaming for agricultural support, this study presents a contextualised extension of the ELM. Specifically, this study categorises emotional appeal strategies into two dimensions-perceived warmth and perceived humour-and introduces emotional resonance and perceived entertainment value as psychological response mechanisms. As live-streaming for agricultural support possesses both commercial and public welfare attributes, consumers may experience emotional resonance from heart-warming stories or derive pleasure from humorous expressions whilst watching; these two psychological responses may subsequently influence their willingness to pay a premium. Consequently, this study constructs a dual-mediation theoretical model of 'emotional appeal methods – psychological responses – payment premium'. In this model, perceived warmth and perceived humour serve as independent variables, payment premium as the dependent variable, and emotional resonance and perceived entertainment as mediating variables. The theoretical model constructed is shown in Figure 1.

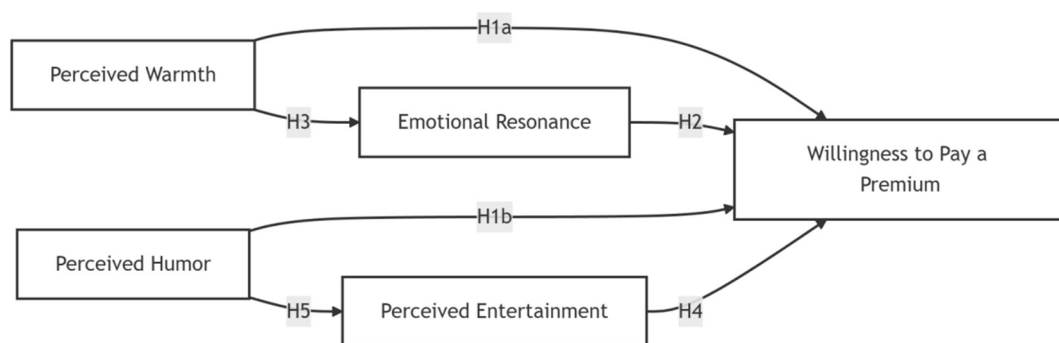


Figure 1. Theoretical Model

2.2 Research Hypotheses

2.2.1 Perceived Warmth and Willingness to Pay a Premium

Warmth-based appeals, by showcasing farmers' hard work, the high quality of agricultural products, and the beauty of rural life, can evoke positive emotional responses in consumers. When consumers perceive the warmth conveyed by live-streaming content, they develop a sense of identification and closeness towards farmers and agricultural products. This emotional connection enhances their

recognition of the value of agricultural products, thereby increasing their willingness to pay a premium[9]. Taken together, the foregoing arguments give rise to the following hypotheses:

H1a: Perceived warmth exerts a favourable impact upon consumers' readiness to pay a premium.

2.2.2 Perceived Humour and Willingness to Pay a Premium

Humour appeals, through witty and amusing language and the creation of a relaxed and pleasant atmosphere, can capture consumers' attention, lower their psychological defences, and increase their acceptance of the live-streaming content. When consumers perceive humour in the live-streaming content, they experience positive emotions; this sense of pleasure can be transformed into a favourable impression of the host and the agricultural products, thereby increasing their willingness to pay a premium. Based on this, the following hypothesis is proposed:

H1b: Perceived humour has a positive effect on consumers' willingness to pay a premium.

2.2.3 The Mediating Role of Emotional Resonance

Emotional resonance, a concept rooted in classic advertising drama research (Stern, 1994)[10], refers to the psychological process whereby an individual, upon perceiving another's emotional state, experiences a similar emotional response[11]. In the context of live-streaming for agricultural support, warm appeals-through the narration of farmers' stories and the depiction of rural landscapes-can evoke emotional resonance in consumers, eliciting emotional responses such as sympathy and empathy. This emotional resonance strengthens the emotional bond between consumers and farmers, making consumers more willing to support farmers and rural development by paying a premium. Therefore, emotional resonance functions as an intervening variable in the link between perceived warmth and consumers' intention to pay a premium. Accordingly, the following research hypotheses are formulated:

H2: Emotional resonance has a significant positive effect on consumers' willingness to pay a premium.

H3: Emotional resonance mediates the relationship between perceived warmth and willingness to pay a premium.

2.2.4 The Mediating Role of Perceived Entertainment

Perceived entertainment refers to the degree of pleasure, fun and enjoyment an individual experiences during the consumption process[12]. Humorous appeals, through light-hearted and witty expressions, provide consumers with a pleasant and entertaining experience. When consumers perceive a high level of entertainment whilst watching live streams supporting farmers, they experience positive emotions and a favourable viewing experience. This experience enhances their positive evaluation of the stream content and agricultural products, thereby increasing their willingness to pay a premium[12]. Consequently, perceived entertainment acts as a mediating mechanism through which perceived humour influences consumers' propensity to pay a price premium. Based on this, the following hypothesis is proposed:

H4: Perceived entertainment has a significant positive effect on consumers' willingness to pay a premium.

H5: Perceived entertainment mediates the relationship between perceived humour and willingness to pay a premium.

3 VARIABLE MEASUREMENT AND DATA COLLECTION

3.1 Measurement of Variables

This paper categorises emotional appeal strategies into two dimensions: perceived warmth and perceived humour. The measurement of perceived warmth draws on the emotional response scale developed by Escalas and Stern (2003), adapted for the context of live-streaming for agricultural support, comprising a total of three items[11]. The measurement of perceived humour draws on the humour perception scale validated by Cline and Kellaris (2007), adapted to the context of live-streaming for agricultural support, comprising a total of three items[4]. The measurement of emotional resonance draws on the Empathy Reaction Scale by Escalas and Stern (2003), comprising a total of four items[11]. The measurement of perceived entertainment value draws on the Perceived Entertainment Value Scale by Moon and Kim (2001), comprising three items[12]. The measurement of willingness to pay draws on the research by Netemeyer et al. (2004) and Zhang Hongxia (2022), comprising three items[13,14]. All variables were measured using a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree).

3.2 Questionnaire Design and Data Collection

Table 1. Basic Statistical Data

Variable	Value	Frequency	Percentage
Gender	Male	110	36.7
	Female	190	63.3
Age	18–25 years	104	34.7
	26–35	94	31.3
	36–45	71	23.7
	46 years and over	31	10.3
Level of education	Secondary school/vocational school or below	36	12.0
	College	20	6.7
	Bachelor's degree	209	69.7
	Postgraduate degree (at Master's level or above)	35	11.6
Monthly disposable income	Less than 2,000 yuan	30	10.0
	2,000–5,000 yuan	79	26.3
	5,000–8,000 yuan	86	28.7
	Over 8,000 yuan	105	35.0
Number of online purchases per month	1–2 times	11	3.7
	3–5 times	86	28.7
	6–10 times	98	32.7
	10 or more times	105	35.0
Frequency of watching agricultural livestreams	Never watched	4	1.3
	Occasionally (1–2 times a month)	173	57.7
	Watch frequently (at least once a week)	123	41.0

Data collection for this study was conducted via a questionnaire. The questionnaire design comprised four sections: the first section covered consumers' basic personal characteristics, including gender, age, educational attainment, monthly disposable income, frequency of online shopping, and frequency of viewing agricultural live-streams; the second section featured live-stream script material,

with a segment designed using ‘Ugly Apples from Daliangshan’ as an example, incorporating elements of warmth and humour; Part Three comprised the measurement items for core variables, including five variables-perceived warmth, perceived humour, emotional resonance, perceived entertainment value, and payment premium-with a total of 16 measurement items; Part Four consisted of attention test questions. The questionnaire was distributed via the Credamo platform, with the formal survey conducted between March and April 2026. Targeted distribution was carried out using the platform’s sample database, supplemented by dissemination through social channels such as WeChat Moments and QQ groups, resulting in a total of 326 completed questionnaires. Following careful screening-excluding samples that failed the attention test, those with entirely consistent or contradictory responses, and those completed in under 90 seconds-300 valid questionnaires were ultimately obtained, yielding a response rate of 92.0%. The ratio of valid samples to measurement items exceeded 10, satisfying the requirement that the sample size be at least five times the number of measurement items.

The distribution of demographic characteristics of the survey sample is shown in **Table 1**. In terms of gender composition, females accounted for 63.3% and males for 36.7%; in terms of age composition, those aged 18–25 accounted for 34.7%, those aged 26–35 for 31.3%, those aged 36–45 for 23.7%, and those aged 46 and over for 10.3%; in terms of educational attainment, 81.3% held a bachelor’s degree or higher; in terms of monthly disposable income, 63.7% earned 5,000 yuan or more; and in terms of the frequency of online shopping per month, 67.7% shopped online six times or more. Overall, the survey sample is reasonably representative.

3.3 Ethics Statement

This study was conducted in strict accordance with the ethical principles of the Declaration of Helsinki. All participants were fully informed of the research purpose, content, and data usage before completing the questionnaire. Participation was entirely voluntary, and participants were explicitly informed that they could withdraw from the study at any time without any negative consequences. All collected data were anonymized and de-identified to protect participants’ privacy, and will only be used for academic research purposes. No personal identifiable information will be disclosed to any third party.

3.4 Live Streaming Script Materials

Taking the ‘Ugly Apples’ from the Greater Liangshan region as an example, this study has designed a live-streaming script for agricultural support that blends elements of warmth and humour. The specific content is as follows:

[Daliangshan Ugly Apples · Live Stream to Support Farmers]

Hello everyone! Today, I’d like to introduce you to a fruit farmer suffering from ‘appearance anxiety’- Old Zhang.

Old Zhang has been growing apples in the Great Liangshan Mountains for 20 years, but his apples... well, they’ve grown a bit hastily. Whilst other apples are red and round, his are misshapen and covered in spots-so ugly that even the bugs won’t touch them. Every time he ships a batch, Old Zhang reminds his customers: “Don’t judge them by their looks; cut one open and you’ll find the flesh is sweet!”

These ‘ugly’ apples grow on mountains at an altitude of 2,500 metres, where there is plenty of sunshine and a significant temperature difference. Though they may not look much to look at, their sugar core is second to none-when cut open, they reveal a translucent, crystal-clear core with a sugar content as high as 18 degrees. Old Zhang says, ‘Apples are just like people; you can’t judge them by their looks alone. Don’t young people in the city always say, “If I’m not good-looking, I’ll make up for it with talent”? Well, my apples are the “talented ones” of the fruit world.’

This year, rainfall has been scarce in the Great Liangshan Mountains. Although the ‘ugly apples’ have become even uglier (and their sugar cores even sweeter), sales have been sluggish, with 30,000 jin still hanging on the trees. Old Zhang is a little worried, but he still reassures his apples: ‘Don’t worry, you may be ugly, but you’re sweet! We don’t rely on looks to make a living; we rely on substance!’

If you’d like to try this ‘powerhouse of the fruit world’ for yourself, please place an order. Every bite of that sugary flesh you take is the sunshine of the Great Liangshan Mountains and Old Zhang’s 20 years of perseverance.

4 DATA ANALYSIS AND RESEARCH FINDINGS

4.1 Reliability and Validity Analysis

This study utilised Cronbach’s α coefficient to test the internal consistency reliability of each scale. It is generally accepted that an α coefficient greater than 0.7 indicates good reliability. The analysis results are shown in **Table 2**.

Table 2. Reliability Analysis Results

Variable	Number of Items	Cronbach’s α
Perceived Warmth (PW)	3	0.906
Perceived Humour (PH)	3	0.891
Emotional Resonance (ER)	4	0.929
Perceived Playfulness (PP)	3	0.904
Payment Premium (PI)	3	0.935

As shown in **Table 2**, the Cronbach’s α coefficients for all variables are above 0.89, all exceeding the critical threshold of 0.7, indicating that each scale possesses excellent internal consistency reliability.

To examine construct validity, the present study utilised a confirmatory factor analytic approach. The standardised factor loadings, average variance extracted (AVE) values, and the square roots of the AVE for each latent variable are presented in **Table 3**. As shown, all item loadings exceed 0.7, and the AVE for every construct surpasses 0.7, thereby establishing adequate convergent validity for the scales. The square roots of the AVEs for each variable are all greater than their correlation coefficients with other variables, indicating that the scales possess good discriminant validity.

Table 3. Results of Confirmatory Factor Analysis

Variable	Number of Items	Range of Factor Loadings	AVE	Root Mean Square Error of Approximation
Perceived Warmth (PW)	3	0.82–0.91	0.79	0.889
Perceived Humour (PH)	3	0.79–0.89	0.76	0.872
Emotional Resonance (ER)	4	0.85–0.93	0.82	0.906
Perceived Playfulness (PP)	3	0.80–0.90	0.77	0.877
Payment Premium (PI)	3	0.86–0.94	0.85	0.922

A Harman's single-factor test was undertaken to evaluate common method bias. As the first factor in the unrotated solution explained only 30.8% of the total variance-well beneath the 40% cut-off-it was concluded that common method bias does not materially affect the present study.

4.2 Descriptive Statistics and Correlation Analysis

The means, standard deviations and ranges of the variables are shown in **Table 4**.

Table 4. Results of Descriptive Statistics and Correlation Analysis

Variable	Mean	Standard Deviation	Minimum	Maximum
Perceived warmth (PW)	4.40	0.65	2.33	5.00
Perceived Humour (PH)	4.42	0.63	2.67	5.00
Emotional Resonance (ER)	4.44	0.61	2.25	5.00
Perceived Entertainment Value (PP)	4.38	0.67	2.33	5.00
Payment Premium (PI)	4.07	0.83	1.33	5.00

As can be seen from **Table 4**, perceived warmth and emotional resonance exhibit a high degree of positive correlation ($r = 0.82$), perceived humour is highly positively correlated with perceived entertainment value ($r = 0.81$), and payment premium is significantly positively correlated with both emotional resonance ($r = 0.74$) and perceived entertainment value ($r = 0.69$), providing preliminary support for subsequent hypothesis testing.

4.3 Main Effect Tests

This paper employs multiple linear regression analysis to examine the direct effects of perceived warmth and perceived humour on payment premiums. With payment premiums as the dependent variable and perceived warmth and perceived humour as independent variables, a regression analysis was conducted; the results are shown in **Table 5**.

Table 5. Results of main effects regression analysis

Independent Variables	Unstandardised coefficient B	Standard Error	Standardised coefficient β	t-value	p-value
Constant	1.14	0.16	-	7.13	<0.001
Perceived Warmth (PW)	0.42	0.05	0.33	8.40	<0.001
Perceived humour (PH)	0.30	0.06	0.23	5.00	<0.001

*Note: $R^2 = 0.51$, adjusted $R^2 = 0.51$, $F(2,297) = 154.6$, $p < 0.001$ *

As shown in **Table 5**, perceived warmth has a significant positive effect on payment premium ($\beta = 0.33$, $p < 0.001$), confirming Hypothesis H1a; perceived humour has a significant positive effect on payment premium ($\beta = 0.23$, $p < 0.001$), confirming Hypothesis H1b.

4.4 Testing for Mediation Effects

This study utilised Hayes's (2018) PROCESS macro (Model 4) to test for mediation, adopting 5,000 bootstrap resamples for the calculation of 95% confidence intervals. We test the mediating role of

emotional resonance between perceived warmth and payment premium (H3), as well as the mediating role of perceived entertainment between perceived humour and payment premium (H5).

4.4.1 Testing the Mediating Effect of Emotional Resonance

The results of the mediation analysis for emotional resonance are shown in Table 6.

Table 6. Results of the mediation effect test for emotional resonance

Effect Type	Effect Size	Boot Standard Error	95% Confidence Interval	Proportion
Total effect	0.42	0.05	[0.32, 0.52]	100%
Direct effect	0.19	0.06	[0.07, 0.31]	45.2%
Indirect effect	0.23	0.03	[0.17, 0.29]	54.8%

As shown in Table 6, the 95% confidence interval for the indirect effect is [0.17, 0.29], which does not include zero, indicating that the mediating effect of emotional resonance is significant; thus, Hypothesis H3 is supported.

4.4.2 Testing the Mediating Effect of Perceived Entertainment Value

The results of the mediation analysis for perceived entertainment are shown in Table 7.

Table 7. Results of the mediation effect test for perceived entertainment

Effect Type	Effect Size	Boot Standard Error	95% Confidence Interval	Proportion
Total effect	0.30	0.06	[0.18, 0.42]	100%
Direct effect	0.11	0.07	[-0.03, 0.25]	36.7%
Indirect effect	0.19	0.03	[0.13, 0.25]	63.3%

As shown in Table 7, the 95% confidence interval for the indirect effect is [0.13, 0.25], which does not include zero, indicating that the mediating effect of perceived entertainment is significant; hypothesis H5 is supported.

4.5 Summary of Hypothesis Testing Results

A summary of the results of all hypothesis tests proposed in this study is shown in Table 8.

Table 8. Summary of Hypothesis Test Results

Hypothesis	Content	Test Results
H1a	Perceived warmth has a positive effect on payment premium	Established
H1B	Perceived humour positively influences willingness to pay	Established
H2	Emotional resonance has a positive impact on payment premiums	H1b
H3	Emotional resonance mediates the relationship between perceived warmth and payment premium	Held
H4	Perceived entertainment value positively influences payment premiums	H1
H5	Perceived entertainment value mediates the relationship between perceived humour and payment premium	Supported

5 CONCLUSION AND DISCUSSION

5.1 Summary of Results

Grounded in the Elaboration Likelihood Model, this study incorporates emotional resonance and perceived entertainment value as mediators and develops a theoretical framework to analyse how distinct emotional appeals shape consumers' propensity to pay a premium in agricultural live-streaming. The hypothesised path relationships are then empirically assessed.

The findings reveal that perceived warmth, perceived humour, emotional resonance and perceived entertainment value all exert significant influences on consumers' inclination to pay a higher price in this context. More precisely, perceived warmth and perceived humour each positively predict premium acceptance. Emotional resonance partially mediates the relationship between perceived warmth and consumers' premium payment willingness, whereas perceived entertainment value partially mediates the path from perceived humour to intentions to pay price premiums.

With respect to effect magnitude, perceived warmth exhibits a comparatively strong direct effect on premium payment willingness ($\beta = 0.33$), of which roughly 54.8% is transmitted through emotional resonance. In contrast, the direct effect of perceived humour on the propensity to pay a premium is weaker ($\beta = 0.23$); however, 63.3% of its total influence is carried via perceived entertainment value.

5.2 Theoretical Discussion

The above results reveal the distinct pathways through which warmth-based and humour-based appeals drive consumers' readiness to pay a price premium in agricultural live-streaming. It is necessary to compare these findings with existing literature to elucidate the theoretical contributions of this study.

Firstly, the direct effect of perceived warmth on premium payment willingness is strong, and emotional resonance plays a significant mediating role in this relationship. This result aligns with prior work on emotional advertising effectiveness. For instance, within cause-related marketing, Bagozzi and Moore (1994) observed that appeals which elicit sympathy and warmth are more apt to trigger altruistic responses [15]. Extending these insights, the current study shows that in farm-support live-streaming, warmth appeals not only directly heighten consumers' willingness to pay more, but also exert an indirect effect by evoking emotional resonance-exemplified by empathy towards farmers and a feeling of connection to the countryside. This supports the ELM proposition that peripheral cues can elicit rather profound emotional processing, and indicates that premium payments in agricultural support settings are not purely economic acts but involve salient moral and emotional dimensions.

Secondly, the direct effect of humour on the intention to pay a premium is relatively weak, with its influence primarily realised through the mediating pathway of perceived entertainment value (accounting for as much as 63.3% of the effect). This departs to some extent from the conclusions of certain conventional advertising investigations. For example, Eisend's (2009) meta-analysis suggests that although humour positively influences attitudes towards advertisements and brands, its direct persuasive impact on purchase intentions tends to be restricted and variable. The present findings offer novel contextual evidence: in agricultural live-streaming, where entertainment and pro-social attributes converge, humour acts primarily as an 'experience enhancer', indirectly facilitating premium payments by crafting a relaxed and pleasant viewing atmosphere, rather than directly exercising powerful persuasion. This also cautions that an over-dependence on humour, at the expense of warm emotional cores, may yield 'ample entertainment yet meagre emotional resonance', thus weakening the actual conversion of consumers' propensity to pay a premium in farm-support contexts.

Moreover, placing warmth and humour appeals side by side in a unified model exposes their disparate mediating mechanisms, which constitutes a meaningful theoretical contribution. Earlier work on emotional appeals and consumer premium payments has predominantly examined the main effects of a single appeal (e.g., nostalgia, warmth or humour), while systematic comparisons remain scarce. This study reveals that the mechanism underlying warmth appeals is more oriented towards ‘emotional identification–deep resonance’, whereas humour appeals are more aligned with ‘experiential gratification–immediate enjoyment’. This offers a valuable complement to the central–peripheral route dichotomy of the ELM. The two appeals respectively strengthen the emotional resonance and entertainment value paths, suggesting that in the multifaceted setting of agricultural live-streaming for social good, consumer attitude formation can engage both affective central processing and experiential peripheral processing concurrently, instead of operating on a single continuum.

In summary, by engaging with the extant literature, this research not only confirms the differentiated impacts of warmth and humour appeals in agricultural live-streaming, but also delineates the boundary conditions under which emotional resonance and perceived entertainment value serve as distinct mediating mechanisms. It thus advances understanding of how emotional appeals shape ethical consumption premiums through different routes, and furnishes fresh empirical evidence for extending the Elaboration Likelihood Model to the domain of digital cause-related marketing.

5.3 Practical Implications

Based on the theoretical analysis and empirical findings, three recommendations are proposed to enhance consumers’ intention to pay a premium for agricultural live-streaming and to promote its sustainable development:

First, focus on warm appeals to strengthen emotional resonance. The research findings indicate that warm appeals significantly influence willingness to pay a premium through emotional resonance. Therefore, the content design of agricultural livestreams should focus on unearthing farmers’ stories, showcasing rural landscapes, and conveying a sense of solidarity with farmers, using authentic and moving narratives to evoke empathy among consumers. For example, footage of farmers’ daily labours and rural natural scenery could be filmed and accompanied by heartwarming background music, allowing consumers to feel that ‘every order is a gesture of support for the farmers’, thereby stimulating their willingness to pay a premium.

Secondly, prioritise humour to boost the perceived entertainment value of live content. Research findings indicate that humour significantly influences willingness to pay a price premium through perceived entertainment value. Consequently, live streams supporting farmers should incorporate light-hearted and humorous elements in moderation, such as the host’s self-deprecating remarks, playful interactions with products, or banter about ‘ugly apples’, enabling consumers to make purchasing decisions within a pleasant atmosphere. However, care must be taken to strike the right balance with humour, avoiding excessive entertainment that dilutes the theme of supporting farmers; humour should serve to evoke emotion rather than overshadow the core message.

Thirdly, a two-pronged approach should be adopted to develop a content strategy that balances emotion and humour. Warmth-based appeals and humour-based appeals are not mutually exclusive but can work in tandem. For consumers encountering agricultural support livestreams for the first time, humour-based appeals can quickly capture attention and lower defences; for deeply engaged consumers, warmth-based appeals can strengthen emotional connections and enhance loyalty. It is recommended that operators of agricultural support livestreams introduce products in a light-hearted and humorous manner at the outset, intersperse the stream with farmers’ stories and the significance of supporting agriculture, and conclude with a heartfelt appeal, thereby achieving a progressive effect of “entertainment-emotion-purpose”.

5.4 Research Limitations and Future Prospects

This study systematically analysed the mechanisms through which different emotional appeals influence consumers' willingness to pay a premium in agricultural livestreaming, from the perspective of emotional appeal segmentation. Empirical data validated the differentiated effects of warm and humorous appeals, and elucidated the mediating pathways of emotional resonance and perceived entertainment value. Key findings indicate that consumer responses to warm appeals are more characterised by deep emotional identification, whilst responses to humorous appeals are more characterised by immediate experiential satisfaction; the combined application of these two appeal methods can endow agricultural products with higher brand value and consumer appeal.

Several limitations of the present study should be acknowledged. Firstly, as this study utilised cross-sectional survey data, it was unable to reflect the dynamic changes in consumers' intention to pay more; future research may consider employing longitudinal data through tracking surveys. Secondly, the sample primarily comprised young consumers from first- and second-tier cities, which may introduce sampling bias; the applicability to third- and fourth-tier cities and older consumer groups remains to be verified. Furthermore, it should be noted that whilst this research is primarily concerned with the effects of emotional appeals on consumers' willingness to pay a price premium, the extent to which confounding marketing factors (including product attributes and platform trust) are controlled for could be substantially enhanced.

Nevertheless, this study has made meaningful contributions to both the theoretical research and practical application of emotional marketing in agricultural livestreaming. It is hoped that future research will further validate and expand upon the findings of this study across a broader consumer base, a longer time span, and more complex marketing contexts, thereby offering more robust theoretical backing and practical direction for the sustainable, high-quality evolution of agricultural live-streaming.

REFERENCES

- [1] Li, Y. J. (2025, September 15). Who is behind emotional marketing? *China Consumer News*, p. 003. [In Chinese.]
- [2] Cui, L. (2026). Consumers' purchase intention of agricultural products in live streaming e-commerce: A Chinese perspective. *British Food Journal*, 128(4), 892–909.
- [3] Aaker, D. A., Stayman, D. M., & Hagerty, M. R. (1986). Warmth in advertising: Measurement, impact, and sequence effects. *Journal of Consumer Research*, 12(4), 365–381.
- [4] Cline, T. W., & Kellaris, J. J. (2007). The influence of humor in advertising on brand perceptions and purchase intentions. *Journal of Advertising*, 36(4), 41–52.
- [5] Eisend, M. (2009). A meta-analysis of humor in advertising. *Journal of the Academy of Marketing Science*, 37(2), 191–203.
- [6] Chen, X., & Zhang, Y. (2024). What drives trust building in live streaming E-commerce? From an elaboration likelihood model perspective. In *Proceedings of the 23rd Wuhan International Conference on E-Business* (pp. 1–10).
- [7] Li, G., Wang, W., & Zhang, S. (2021). The impact of agricultural live streaming on consumers' purchase intention: An empirical study based on the Elaboration Likelihood Model. *Frontiers in Psychology*, 12, 668113.
- [8] Petty, R. E., & Cacioppo, J. T. (1986). *Communication and persuasion: Central and peripheral routes to attitude change*. Springer-Verlag.
- [9] Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value: A means-end model and synthesis of evidence. *Journal of Marketing*, 52(3), 2–22.
- [10] Stern, B. B. (1994). Classical and vignette television advertising dramas: Structural models, formal analysis, and consumer effects. *Journal of Consumer Research*, 20(4), 601–615.
- [11] Escalas, J. E., & Stern, B. B. (2003). Sympathy and empathy: Emotional responses to advertising dramas. *Journal of Consumer Research*, 29(4), 566–578.
- [12] Moon, J. W., & Kim, Y. G. (2001). Extending the TAM for a World-Wide-Web context. *Information & Management*, 38(4), 217–230.

- [13] Netemeyer, R. G., Krishnan, B., Pullig, C., et al. (2004). Developing and validating measures of facets of customer-based brand equity. *Journal of Business Research*, 57(2), 209–224.
- [14] Zhang, H. (2022). A study on consumers' purchase intentions for e-commerce poverty alleviation agricultural products and their influencing factors. *Lanzhou Journal*, (3), 120–130. [In Chinese.]
- [15] Bagozzi, R. P., & Moore, D. J. (1994). Public service advertisements: Emotions and empathy guide prosocial behavior. *Journal of Marketing*, 58(1), 56–70.