Scilight

Ecological Economics and Management
https://www.sciltp.com/journals/eem



Article

Study on the Influence Mechanism of Consumers' Purchase Intention of Pet Products Based on the SOR Theory

Fagang Hu [1,*], Dongmei Zhang [1] and Xuan-Hoa Nghiem [2]

[1] School of Economics and Management, Suzhou University, Suzhou 234000, China
[2] International School, Vietnam National University, Hanoi 100000, Vietnam
* Correspondence: hufg@ahszu.edu.cn; Tel.: +86-557-2871003

How To Cite: Hu, F.; Zhang, D.; Nghiem, X.-H. Study on the Influence Mechanism of Consumers' Purchase Intention of Pet Products Based on the SOR Theory. *Ecological Economics and Management* **2026**, *2*(4), 17. https://doi.org/10.53941/eem.2026.100017

Received: 9 May 2026
Revised: 30 September 2026
Accepted: 10 October 2026
Published: 9 November 2026

Abstract: With the vigorous development of the pet economy, an in-depth investigation into consumers' purchase intention of pet products is crucial to the development of the industry. Based on the SOR (Stimulus-Organism-Response) theory, this paper constructs a research model of consumers' purchase intention of pet products and puts forward the following hypotheses: external stimuli such as product factors positively affect emotional responses; external stimuli such as product factors positively affect cognitive evaluation; and emotional responses and cognitive evaluation positively affect purchase intention respectively. Data were collected through questionnaire design, and empirical analysis was conducted by means of descriptive statistics, confirmatory factor analysis, multiple linear regression and other methods. The empirical results show that marketing activities enhance confidence in consumption decisions, purchase situations improve users' sense of pleasure, product factors strengthen cognitive rationality, marketing activities optimize consumption risk assessment, purchase situations improve the judgment of scheme feasibility, and both consumers' emotions and cognition exert a positive driving effect on purchase intention. This paper enriches the application of the SOR theory in the field of pet product consumption, and provides a scientific basis for enterprises to optimize product design, formulate marketing strategies and enhance consumers' purchase intention.

Keywords: consumer's purchase intentions; pet supplies; emotional factors; brand recognition

1. Introduction

1.1. Research Background

In recent years, the global pet economy has shown a rapid growth trend, and the performance of this market in China is particularly prominent. The scale of China's pet economy market exceeded 300 billion yuan in 2024, and the number of pets is expected to be close to twice that of infants and young children by 2030. According to iiMedia Research, the scale of China's pet economy industry reached 592.8 billion yuan in 2023, and is projected to rise to 1.15 trillion yuan by 2028, with a compound annual growth rate of over 15%. Behind this growth is the promotion of improved economic development on the one hand, and the close connection with changes in social structure on the other. Pets have transformed from the traditional "instrumental role" to emotional family members, driving the upgrading of consumption demand from "basic survival" to "quality life". The consumption of pet products has shown the characteristics of "emotionalization" and "scenarization", and the core logic of pet consumption has shifted from functional demand to emotional value-driven.

Copyright: © 2026 by the authors. This is an open access article under the terms and conditions of the Creative Commons Attribution (CC BY) license (https://creativecommons.org/licenses/by/4.0/).
Publisher's Note: Scilight stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Consumption scenarios also tend to be diversified. In terms of emotionalization, smart collars monitor pets' health data through AI, catering to owners' deep emotional needs for "scientific pet raising". In terms of scenarization, emerging business forms such as pet-friendly hotels and pet grooming services enhance consumption stickiness through scenario-specific design. For example, during the "Double 11" shopping festival in 2024, the transaction volume of smart pet products increased by 105% year-on-year, and that of smart fish tanks rose by 159%.

The rise of the pet economy has boosted the prosperity of the pet products market, making pet products a new consumption hotspot. China's pet industry has entered a stage of rapid development, with the continuous expansion of the pet products market, which is expected to maintain high growth in the coming years. This provides huge market opportunities for pet products enterprises, making it crucial to analyze consumers' purchase intention of pet products from the consumer perspective.

1.2. Literature Review

At present, research on pet products market in China has shown a trend of multi-dimensional exploration, with distinctive characteristics in the dimensions of scale expansion, business format innovation and industry regulation. Liu Xiaoxia (2025) revealed that the scale of the pet products market continues to expand, and consumer demand is transforming toward personalization and high quality [1]; Chen Liqun et al. (2024) emphasized the importance of standard system construction in enhancing consumer trust [2]; Han Liping (2021) pointed out problems existing in the pet products industry, such as small enterprise scale, serious homogenization and fragmented supervision [3]. In terms of market formats, the integration of online and offline pet products has shown a significant trend. From the perspective of managerial economics, Hou Kaixuan (2021) analyzed that with social structural changes such as population aging and late marriage and late childbearing, pet ownership has been rising. The online shopping market for pet products empowered by Internet technology has become a "new blue ocean", whose supply-demand relationship and consumer behavior patterns have reshaped the development pattern of the industry [4]. Offline consumption scenarios are constantly innovating. Huang Sai (2018) observed that shopping malls have deeply integrated pet elements into commercial scenarios by creating experiential consumption spaces such as pet parks and pet-themed restaurants, promoting the upgrading of the "pet economy" models and achieving the coordinated development of online and offline consumption ecosystems [5]. Most of these studies focus on the macro market environment and the current situation of industry development, with insufficient exploration of the psychological mechanisms underlying consumer behavior.

Although the research field of consumer purchase intention has achieved fruitful results, there is a significant gap in specialized research on pet products. Most existing domestic studies focus on other product categories and fail to fully address the particularity of pet product consumption scenarios. Jiao Zhitao (2024) conducted a study on goat milk products and found that various dimensions of perceived value positively affect purchase intention, with consumer attitude playing a mediating role [6]. However, goat milk consumption focuses on nutritional safety, which differs from the decision-making logic of pet products that emphasize both functional and emotional values. From the perspective of technology empowerment, Mao Yiran (2024) explored the impact of the intelligent characteristics of artificial intelligence products on consumers' purchase intention. The study confirmed that the intelligent attributes of AI products indirectly promote purchase intention by enhancing functional value and emotional value [7]. Nevertheless, the technological innovation and high-tech nature of AI products are distinctly different from pet products, which prioritize emotional companionship and adaptation to daily living scenarios, making it difficult to directly apply the research conclusions to pet product consumption. Based on the SOR (Stimulus-Organism-Response) theory, Shen Zelin (2024) studied consumers' purchase intention on e-commerce live streaming platforms and found that factors such as streamer characteristics, product attributes, and sense of presence influence purchase intention by affecting perceived value and perceived risk [8]. Chen Shushu (2024) verified from the perspective of "people, products, and scenarios" in e-commerce live streaming that streamer professionalism, interactivity, and preferential atmosphere in live streaming scenarios can directly and positively affect purchase intention [9]. Such studies focus on the e-commerce live streaming marketing model and highlight the stimulation of instant interaction and promotional atmosphere on impulsive consumption. In contrast, pet product purchase decisions are often accompanied by long-term planning and are more deeply influenced by brand loyalty and product reputation, a characteristic not fully considered in existing research. Zhang Xinxin (2024) revealed in a study on prepared dishes that product attributes influence purchase intention through emotional response and cognitive evaluation [10]. However, decision-making for prepared dishes focuses more on convenience and cost-performance, which is fundamentally different from the emotion-driven consumption model of pet products.

Foreign researchers such as Thi Thuy An Ngo et al. (2025), taking e-commerce as the research scenario, confirmed that the interactivity, novelty and other characteristics of augmented reality (AR) significantly affect purchase intention by improving consumers' perceived pleasure and usefulness [11]. Konale Madhura et al. (2025), focusing on the fashion industry, found that the integration of virtual fitting rooms and social media can indirectly influence purchase decisions by changing consumer behavior [12]. Foreign research on consumer purchase intention is mostly limited to specific industries and technology applications, focusing on technology-driven marketing innovations. It has not yet involved the field of pet products, and lacks systematic exploration of the interaction mechanism between consumer psychology and purchase intention under technology empowerment.

Through the analysis of relevant research at home and abroad, it can be found that studies on consumers' purchase intention have achieved fruitful results, with theoretical and practical breakthroughs in different product fields and research perspectives. Many researchers have conducted in-depth analyses of the influence mechanisms of perceived value, psychological variables, marketing models and other factors on purchase intention in areas such as e-commerce live streaming, intelligent products and prepared dishes, providing diverse perspectives and empirical evidence for understanding consumer behavior. However, most existing studies analyze single product fields or influencing factors in isolation, lacking a systematic discussion on the complex interactive relationship between external stimuli such as product factors, marketing activities and purchase situations, and psychological variables including consumers' emotional responses and cognitive evaluation in the context of pet product consumption. An integrated theoretical framework applicable to the dynamic changes of the pet product market has not yet been formed. Previous studies have explored consumer behavior from the SOR perspective in e-commerce, prepared food, and intelligent products, but few studies integrate product factors, marketing activities, and purchase situations into a unified stimulus framework in the pet product scenario. In addition, existing research rarely reveals the dual mediation mechanism of emotional response and cognitive evaluation in pet consumption.

Against this research gap, this paper makes three major literature contributions. First, this study expands the application boundary of the Stimulus-Organism-Response (SOR) theory into the pet-product consumption domain, constructing a three-dimensional external stimulus system consisting of product factors, marketing activities and purchase situations that fit the emotional and scenario-driven features of pet consumption. Second, this paper empirically verifies the dual mediating paths of emotional response and cognitive evaluation, clarifying the internal psychological mechanism that transforms external pet-product-related information into consumers' final purchase intention. Third, this work complements empirical evidence for emotion-led consumption in the pet economy, and provides actionable theoretical references for subsequent pet-consumer-behavior research. Practically, this study provides ideas and methods for pet product enterprises in brand building, product innovation and channel expansion. This will help enterprises gain an in-depth understanding of consumer behavior and market trends, so as to formulate more precise marketing strategies.

2. Research Model and Research Hypotheses

2.1. Research Model

The consumer market for pet products is characterized by strong emotional motivation and high concern for product safety. The SOR theory, with its logic that "external stimuli induce individual psychological responses and further lead to behaviors", can systematically explain the whole process of consumers from being exposed to product information to making purchase decisions, as shown in Figure 1.

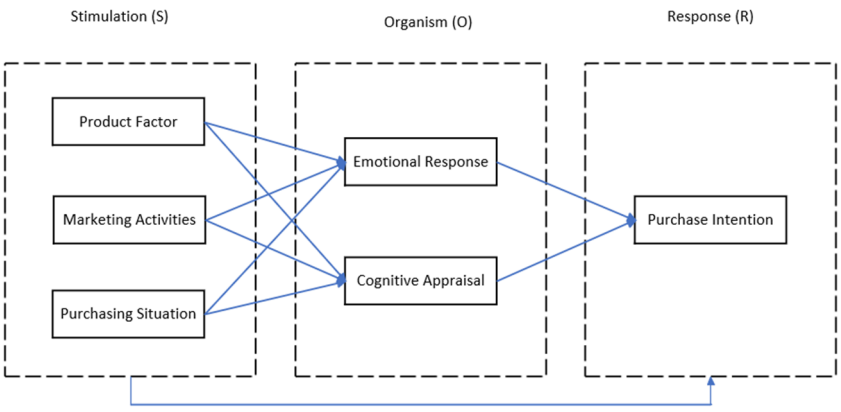


Figure 1. Research model of consumers' willingness to purchase pet products.

In this SOR research model for pet-product purchase intention:

(1) Stimulus (S) represents external environmental stimuli received by consumers, operationalized into three dimensions in this study: product factors, marketing activities, and purchase situations. Product factors cover the safety, appearance and functional innovation of pet supplies; marketing activities include online advertisement, influencer recommendation and promotional campaigns; purchase situations refer to platform interface, store layout, online review atmosphere and social-topic popularity. These three categories of external information act as external inputs that consumers encounter in pet consumption scenarios.
(2) Organism (O) stands for consumers' internal psychological processing state after receiving external stimuli, divided into emotional response and cognitive evaluation. Emotional response reflects subjective affective experience such as pleasure, sense of responsibility and emotional resonance toward pets and pet products. Cognitive evaluation reflects consumers' rational judgment, including assessment of cost-performance, practical functions, brand reputation and usage feasibility of pet products. This organism stage is the critical psychological mediation link between outside information and final purchase behaviors in pet consumption.
(3) Response (R) refers to consumers' behavioral outcome, which in this paper is defined as consumers' purchase intention of pet products, including willingness to buy, trial intention, repurchase intention and recommendation intention.

Under pet-consumption context, consumers are exposed to multi-source external stimulus information (S). Such information will trigger their affective emotional experience and rational cognitive processing (O). After psychological processing, these internal states will further generate pet-product purchase intention as the final response outcome (R). The model constructs the complete logical chain: External Stimuli → Internal Organism (emotional-cognitive psychological responses) → Purchase Intention Response.

2.2. Research Hypotheses

According to SOR theory, external stimuli can trigger individual psychological responses. In pet consumption, product design, safety, and innovation (product factors) provide objective information for consumers. Marketing activities and purchase situations enhance emotional experience. Therefore, external stimuli significantly promote emotional response and cognitive evaluation, which further improve purchase intention.

With the deepening trend of pet anthropomorphism, consumers project their emotions onto the quality of life of their pets. Wu Xue and Mao Shuang (2025) found that the emotional and price persuasion strategies of e-commerce livestreamers significantly boost purchase intention, which indirectly verifies that marketing activities can influence consumers' psychological states through emotional trust [13]; Yang Zimeng and Ren Wei (2024) confirmed that external situational cues such as personalized recommendations in cross-border online shopping can affect purchase intention through perceived value, implying that purchasing situations exert an impact on consumers' emotions [14]; Sun Kai, Liu Luchuan and Liu Chenglin (2022) pointed out that external stimuli including livestreamer characteristics and live room activity significantly influence consumers' emotional experiences [15], further illustrating the effects of marketing activities and purchasing situations on emotional responses; Chen Xiaoyan and Zhang Qing (2023) indicated that the emotional intensity of online comments positively affects purchase intention [16], reflecting that product-related information, as part of product factors, exerts an influence on consumers' emotions.

Based on the above studies, the following hypotheses are proposed:

Hypotheses 1a (H1a). *Product factors positively affect emotional responses*.

Hypotheses 1b (H1b). *Marketing activities positively affect emotional responses*.

Hypotheses 1c (H1c). *Purchasing situations positively affect emotional responses*.

Li Kangle, Yang Yi and Wang Xuan (2024) took the Chinese liquor industry as the research object and found that product factors such as product performance, materials and craftsmanship form quality expectations through consumers' perceived quality, while cues related to marketing activities such as brand image and advertising strengthen quality perception through brand trust, both of which jointly affect consumers' overall evaluation [17]; Zhang Qiyao, Sun Xixiang and Cai Linghui (2016) confirmed that external cues related to marketing activities have a positive impact on consumers' purchase intention of green brands [18]; Xiao Wenlong, Yuan Ye et al. (2024), pointed out that factors such as perceived information credibility influence purchase intention through cognitive involvement and emotional involvement, and that festival atmosphere and interactivity, as factors related to the purchase situation, have a significant positive impact on cognitive involvement [19], indicating that the purchase situation affects cognitive evaluation.

Based on the above research, the following hypotheses are proposed:

Hypotheses 2a (H2a). *Product factors positively affect cognitive evaluation*.

Hypotheses 2b (H2b). *Marketing activities positively affect cognitive evaluation*.

Hypotheses 2c (H2c). *Purchase situation positively affect cognitive evaluation*.

Emotional drive is one of the core characteristics of pet consumption. Consumers develop a deep emotional bond with their pets during the process of pet-raising, and this emotion extends to their decision-making in the selection of pet supplies. Fan Jun et al. (2024) pointed out in their research that both the symbolic and functional moral attributes of products can enhance customers' purchase intention [20].

Pet supplies involve key demands such as pet health and safety, and consumers need to rationally evaluate product value through cognitive assessment during the decision-making process. Research by Liming Zhang (2022) shows that in the context of export cross-border e-commerce, influencing factors related to product price, commodity quality, product characteristics, and merchant service quality will increase potential consumers' risk perception level [21]. This indicates that consumers' cognition of product safety, functional effectiveness, cost-performance ratio and other dimensions directly affects their purchase decisions. Based on the S-O-R theory, cognitive evaluation, as a rational judgment formed after consumers process external information, together with emotional response, constitutes the decision-making basis of purchase intention. Therefore, the following hypotheses are proposed:

Hypotheses 3a (H3a). *Emotional response positively affects purchase intention*.

Hypotheses 3b (H3b). *Cognitive evaluation positively affects purchase intention*.

Yang Xiaojun (2024) found that the product image dimension in the brand image of national tide brands has a significant positive promoting effect on consumers' purchase intention [22], confirming that product factors directly affect purchase decisions. Li Yao (2024) empirically verified that e-commerce brand marketing strategies can significantly improve consumers' purchase intention, and also exert an indirect effect by enhancing consumer participation and perceived value, reflecting the positive driving effect of marketing activities [23]. An empirical study by Zhang Bei, Zhao Chuyao et al. (2022) based on the purchase context of near-expiry food shows that the consumption context has a significant positive impact on purchase intention [24].

In terms of mediating effects, the SOR model constructed by Wei Yuping et al. (2024) shows that marketing activities such as incentives and interactions in livestreaming commerce improve purchase intention by influencing consumers' perceived usefulness [25], verifying the mediating path of cognitive evaluation. Kong Kai and Dong Huan (2024) confirmed that short-video marketing can positively affect consumers' impulsive purchase intention through online immersion, clarifying the mediating role of emotional response between external stimuli and purchase intention [26].

Accordingly, the following hypotheses are proposed:

Hypotheses 4a (H4a). *Product factors positively affect purchase intention*.

Hypotheses 4b (H4b). *Marketing activities positively affect purchase intention*.

Hypotheses 4c (H4c). *Purchase situation positively affects purchase intention*.

Hypotheses 5a (H5a). *Emotional response plays a mediating role between external stimulus factors and purchase intention*.

Hypotheses 5b (H5b). *Cognitive evaluation plays a mediating role between external stimulus factors and purchase intention*.

3. Questionnaire Design and Data Collection

3.1. Design of the Questionnaire

All measurement items were adapted from mature scales and revised according to pet product consumption scenarios to improve relevance. For example, items about material safety, functional innovation, and brand reputation were retained to fit pet product characteristics. All items were evaluated by a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). The questionnaire aims to investigate seven dimensions: consumers' basic personal information, product factors, marketing activities, purchase situation, emotional response, cognitive

evaluation, and purchase intention, so as to assess the influencing factors of consumers' purchase intention of pet supplies, as shown in Table 1.

Table 1. Questionnaire items.

Variable	Code	Measurement Item	Reference Source
Product Factors	7	I am attracted by the appearance and design of pet supplies.	Zeng Lihong and Huang Die (2021) [27]
	8	I believe the material safety of pet supplies is very important.	
	9	I am interested in the functional innovation of pet supplies.	
	10	I prefer to pay attention to pet supplies from well-known brands.	
Marketing Activities	11	I am attracted by advertisements for pet supplies on online platforms.	Xiao Kaihong and Lei Bing (2021) [28]
	12	I learn about pet supplies due to promotional activities.	
	13	My favorability toward pet products increases because of recommendations from pet bloggers or influencers.	
	14	I become interested in pet supplies because of user experiences shared by other pet owners.	
Purchase Situation	15	I prefer to purchase pet supplies on e-commerce platforms with simple and convenient interfaces.	Wang Tingting (2023) [29]
	16	I am more willing to stay in physical pet supply stores because of their spatial layout and display.	
	17	I believe the quantity and quality of user reviews on shopping platforms enhance my trust in pet supplies.	
	18	I pay more attention to pet supplies due to the popularity of related topics on social platforms.	
Emotional Response	19	The deeper my emotional bond with my pet, the higher my standards for choosing pet supplies.	Zhang Yafei (2021) [30]
	20	I feel positive emotions such as pleasure and warmth when seeing pet supplies.	
	21	I feel care and responsibility for my pet when buying pet supplies.	
	22	I have an emotional resonance with a pet supply because of its design.	
Cognitive Appraisal	23	I rationally evaluate the cost-performance ratio of pet supplies.	K.D.L.R. Kapuge (2016) [31]
	24	I have clear criteria for judging the practical functionality of pet supplies.	
	25	I pay attention to the brand reputation and market evaluation of pet supplies.	
	26	I can clearly understand the usage scenarios and methods of different pet supplies.	
Purchase Intention	27	I have a strong willingness to buy high-quality supplies for my pet.	Dodds et al. (1991) [32], Zeithaml (1988) [33]
	28	I plan to buy pet supplies when I find desirable ones.	
	29	I am willing to try newly launched pet supplies.	
	30	I will buy expensive pet supplies as long as they meet my needs.	
	31	I purchase pet supplies regularly.	
	32	I often buy pet supplies through online platforms.	
	33	I increase my purchase volume of pet supplies due to promotional activities.	
	34	I recommend high-quality pet supplies I have used to other pet owners.	

3.2. Data Collection and Measurement

To ensure the reliability of the research design, a pretest was conducted in advance to verify content validity. From 16–25 December 2024, questionnaires were distributed to 55 respondents, and a total of 55 questionnaires were collected. After the preliminary survey, feedback from the respondents was gathered, and corresponding adjustments and revisions were made to the questionnaire based on suggestions from other researchers.

Questionnaires for this study were mainly collected online via Wenjuanxing (Questionnaire Star) for distribution and collection. A convenient sampling method was adopted. Respondents were pet owners who had purchased pet products. The survey covered urban and rural residents in northern and eastern China. A total of 381 questionnaires were collected, and 356 valid samples were obtained after eliminating invalid data, with an effective rate of 93%. The sample structure is balanced in gender, age, pet type, and income, which ensures the representativeness of empirical analysis.

4. Analysis of Consumers' Purchase Intention of Pet Supplies

4.1. Basic Sample Information

Analysis of the basic information from the 356 valid questionnaires collected helps us understand the source, nature and characteristics of the sample, thus facilitating better data analysis and research. The results are shown in Table 2.

Table 2. Basic statistics of sample personal information.

Personal Information	Indicators	Frequency	Percentage (%)
Gender	Male	187	52.53
	Female	169	47.47
Age	Under 18	39	10.96
	19–25 years old	65	18.26
	26–30 years old	85	24.44
	31–40 years old	80	22.47
	41–50 years old	87	23.88
Type of Pet	Dog	108	30.3
	Cat	182	51.1
	Exotic pets	10	2.8
	Various pets	56	15.7
Monthly disposable income	Below 2000 yuan	126	35.4
	2000–3000 yuan	143	40.2
	3000–4000 yuan	71	19.9
	4000–5000 yuan	9	2.5
	Above 5000 yuan	7	2.0
Highest educational attainment	Senior high school or below	117	32.9
	Junior college	173	48.6
	Bachelor's degree	53	14.9
	Master's degree or above	13	3.7
Occupation	Student	40	11.2
	Employee of government or public institution	53	14.9
	Self–employed/freelancer	97	27.2
	Enterprise employee	91	25.6
	Others	75	21.1

As shown in Table 2, a total of 356 valid samples were collected in this survey. Among them, 187 were male, accounting for 52.53%, and 169 were female, accounting for 47.47%. The gender ratio of the sample was close to 1:1, indicating a relatively balanced structure. The age distribution of respondents was diversified, with the 26–30 age group accounting for the highest proportion (24.44%), reflecting that this group had relatively strong attention to and willingness to purchase pet supplies.

In terms of pet type distribution, 182 respondents owned cats, accounting for 51.1%, ranking first; 108 respondents owned dogs, accounting for 30.3%; only 10 respondents kept exotic pets, accounting for 2.8%; and 56 respondents kept multiple types of pets, accounting for 15.7%. The data indicate that cats and dogs are still the mainstream pet types, the exotic pet market is still in the development stage, and the existence of multi-pet households reveals potential demand for comprehensive pet supplies.

The age distribution of respondents was relatively wide, with young people aged 26–30 accounting for the highest proportion at 23.88%. It can be seen that people in this age group paid relatively high attention to pet supplies. In terms of income level, 126 respondents had a monthly disposable income of less than 2000 yuan, accounting for 35.4%, and 143 respondents were in the range of 2000–3000 yuan, accounting for 40.2%. It can be seen that middle- and low-income groups constituted the main respondents, which may be related to the mass positioning of the pet consumption market and the economic characteristics of young pet owners. The educational distribution shows that respondents with junior college degrees accounted for the highest proportion, indicating that this group was highly representative in pet consumption decision-making. In terms of occupational composition, the wide coverage of occupational types provided a data basis for the multi-perspective analysis of pet supply consumption behavior.

4.2. Descriptive Statistical Analysis of the Sample

This study collected 356 valid sample data through questionnaire surveys and conducted a preliminary analysis of each variable using descriptive statistics. The specific data distribution is shown in Table 3.

Table 3. Descriptive statistics of variables.

	Product Factors	Marketing Activities	Purchase Situation	Emotional Response	Cognitive Appraisal	Purchase Intention
Mean	3.3434	3.2746	3.3062	3.3617	3.2886	3.3076
Standard Deviation	0.97786	0.98827	0.99435	0.93070	0.95058	0.95618
Variance	0.956	0.977	0.989	0.866	0.904	0.914
Minimum	1.50	1.00	1.25	1.00	1.00	1.25
Maximum	5.00	5.00	5.00	5.00	5.00	5.00

According to the data in Table 3, the mean values of all variables range from 3.27 to 3.36, which are generally at an above-average level with slight differences between groups, reflecting that the sample has a relatively balanced perception of the importance of each factor. The standard deviations are all close to 1, indicating a uniform data distribution and stable overall performance. There is no significant differentiation in the scores of each factor, which provides a basic description for the in-depth analysis of variable relationships.

4.3. Reliability and Validity Analysis

4.3.1. Reliability Analysis

Although the questionnaire in this study was developed based on several mature scales, targeted adjustments were made to the content and structure of the scales to meet the research needs of purchase intention of pet supplies. Therefore, it is necessary to conduct a reliability test to ensure measurement effectiveness.

The reliability analysis results are shown in Table 4. The Cronbach's α coefficients for all dimensional scales, including product factors and marketing activities, are all above 0.8, higher than the basic standard of 0.6. This indicates excellent internal consistency among the items in each scale, which can stably measure the corresponding variables and accurately reflect the research constructs.

Table 4. Reliability analysis.

Dimension	Number of Items	Cronbach α
Product Factors (S1)	4	0.889
Marketing Activities (S2)	4	0.854
Purchase Situation (S3)	4	0.863
Emotional Response (O1)	4	0.841
Cognitive Appraisal (O2)	4	0.851
Purchase Intention (R)	8	0.876

4.3.2. Validity Analysis

This study adopted the KMO value and Bartlett's test of sphericity to evaluate construct validity. Factor extraction and further analysis can only be carried out when the KMO value and Bartlett's test results indicate that the data are suitable for factor analysis, so as to ensure the construct validity of the scale.

As shown in Table 5, the KMO value is 0.901, which is greater than 0.6, indicating that the research data are highly suitable for factor extraction.

Table 5. KMO and bartlett's test.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.901
Bartlett's Test of Sphericity	Approximate Chi-Square	4549.058
	Degrees of Freedom	276
	Significance	0.000

Exploratory Factor Analysis

This study conducted factor analysis simultaneously with the KMO and Bartlett's test of sphericity using the SPSSAU (Version 26.0) [Online Application Software] platform. The results are shown in Table 6.

As can be seen from Table 6, the factor loading coefficients of the above six factors are all greater than 0.7, which is consistent with expectations, indicating that the items correspond to the factors and have validity. The results of the factor analysis show that the scale used in this study has good construct validity, and each item in the questionnaire can well reflect the meaning of each variable.

Table 6. Analysis results of factor loading coefficients.

Code	Factor Loading Coefficient					
	Factor 1	**Factor 2**	**Factor 3**	**Factor 4**	**Factor 5**	**Factor 6**
CP1	**0.817**	0.147	0.139	0.117	0.129	−0.001
CP2	**0.779**	0.061	0.171	0.049	0.150	0.187
CP3	**0.809**	0.114	0.076	0.175	0.230	0.025
CP4	**0.895**	0.108	0.171	0.081	0.097	0.063
YX1	0.135	0.138	0.185	0.147	**0.769**	0.145
YX2	0.146	0.080	0.082	0.144	**0.793**	0.089
YX3	0.206	0.155	0.153	0.105	**0.762**	0.125
YX4	0.121	0.117	0.159	0.187	**0.770**	0.134
QJ1	0.113	0.138	**0.796**	0.165	0.149	0.068
QJ2	0.147	0.147	**0.787**	0.150	0.126	0.143
QJ3	0.142	0.166	**0.777**	0.069	0.169	0.110
QJ4	0.164	0.128	**0.774**	0.132	0.122	0.166
QG1	0.096	0.105	0.090	0.093	0.150	**0.807**
QG2	0.036	0.163	0.116	0.107	0.149	**0.764**
QG3	0.030	0.112	0.160	0.134	0.080	**0.773**
QG4	0.083	0.135	0.078	0.086	0.070	**0.804**
RZ1	0.113	0.129	0.126	**0.778**	0.192	0.094
RZ2	0.117	0.103	0.106	**0.770**	0.184	0.117
RZ3	0.084	0.208	0.065	**0.780**	0.129	0.107
RZ4	0.092	0.095	0.206	**0.806**	0.063	0.125
GM1	0.137	**0.774**	0.172	0.128	0.120	0.169
GM2	0.124	**0.799**	0.143	0.119	0.103	0.099
GM3	0.055	**0.759**	0.115	0.193	0.123	0.159
GM4	0.119	**0.873**	0.150	0.108	0.135	0.137

According to the selection criterion of being greater than 0.5, the bolded part represents the extracted common factor.

It can be seen from Table 7 that six common factors were extracted following the extraction criterion of eigenvalues greater than 1. The variance explanation rates of the six factors are 33.429%, 9.617%, 7.670%, 7.455%, 6.884%, and 6.365% respectively. The cumulative variance explanation rate after rotation is 71.419%, which exceeds 60%, indicating that the information of research variables can be effectively extracted.

Table 7. Total variance explained.

Code	Eigenvalue			Variance Explained before Rotation			Variance Explained after Rotation		
	Eigenvalue	**Variance Explanation Rate (%)**	**Accumulation (%)**	**Eigenvalue**	**Variance Explanation Rate (%)**	**Accumulation (%)**	**Eigenvalue**	**Variance Explanation Rate (%)**	**Accumulation (%)**
1	8.023	33.429	33.429	8.023	33.429	33.429	3.020	12.583	12.583
2	2.308	9.617	43.046	2.308	9.617	43.046	2.923	12.180	24.763
3	1.841	7.670	50.716	1.841	7.670	50.716	2.843	11.845	36.607
4	1.789	7.455	58.170	1.789	7.455	58.170	2.794	11.644	48.251
5	1.652	6.884	65.054	1.652	6.884	65.054	2.782	11.594	59.845
6	1.528	6.365	71.419	1.528	6.365	71.419	2.778	11.574	71.419
7	0.571	2.380	73.799	-	-	-	-	-	-
8	0.541	2.252	76.051	-	-	-	-	-	-
9	0.502	2.090	78.141	-	-	-	-	-	-
10	0.476	1.981	80.123	-	-	-	-	-	-
11	0.458	1.910	82.032	-	-	-	-	-	-
12	0.450	1.874	83.906	-	-	-	-	-	-
13	0.428	1.784	85.690	-	-	-	-	-	-
14	0.409	1.703	87.392	-	-	-	-	-	-
15	0.382	1.590	88.983	-	-	-	-	-	-
16	0.360	1.501	90.483	-	-	-	-	-	-
17	0.357	1.489	91.972	-	-	-	-	-	-
18	0.346	1.441	93.414	-	-	-	-	-	-
19	0.334	1.391	94.805	-	-	-	-	-	-
20	0.315	1.312	96.117	-	-	-	-	-	-
21	0.297	1.238	97.355	-	-	-	-	-	-
22	0.263	1.098	98.453	-	-	-	-	-	-
23	0.197	0.822	99.275	-	-	-	-	-	-
24	0.174	0.725	100.000	-	-	-	-	-	-

Confirmatory Factor Analysis

To verify the validity and stability of the measurement model, Confirmatory Factor Analysis (CFA) was adopted in this study. Multiple fitness indices were used to test the fitting degree between the model and data, and the specific results are presented in Table 8.

Table 8. Model fit test.

Index	Reference Criteria	Measured Results
CMIN/DF	1–3: Excellent; 3–5: Good	1.092
RMSEA	<0.05: Excellent; <0.08: Good	0.016
IFI	>0.9: Excellent; >0.8: Good	0.995
TLI	>0.9: Excellent; >0.8: Good	0.994
CFI	>0.9: Excellent; >0.8: Good	0.995

As shown in Table 8, the CMIN/DF value is 1.092 and the RMSEA value is 0.016. The values of IFI, TLI and CFI all exceed 0.99. All fitness indices meet the excellent criteria, indicating that the CFA presents a good model fit and high structural validity.

Convergent Validity

To examine the convergence degree of each item corresponding to its latent variable in the scale, this study adopts Confirmatory Factor Analysis (CFA) to strictly test the convergent validity of the scale. The detailed results are presented in Table 9 below.

Table 9. Confirmatory factor analysis test.

Factor (Latent Variable)	Measurement Items (Observed Variables)	Standardized Factor Loading (Std. Estimate)	AVE	CR
Product Factors (S1)	CP1	0.790	0.678	0.893
	CP2	0.754		
	CP3	0.819		
	CP4	0.921		
Marketing Activities (S2)	YX1	0.793	0.594	0.854
	YX2	0.738		
	YX3	0.772		
	YX4	0.778		
Purchase Situation (S3)	QJ1	0.777	0.611	0.863
	QJ2	0.803		
	QJ3	0.768		
	QJ4	0.779		
Emotional Response (O1)	QG1	0.784	0.570	0.841
	QG2	0.748		
	QG3	0.740		
	QG4	0.748		
Cognitive Appraisal (O2)	RZ1	0.778	0.590	0.852
	RZ2	0.753		
	RZ3	0.760		
	GN4	0.780		
Purchase Intention (R)	GM1	0.797	0.650	0.881
	GM2	0.762		
	GM3	0.736		
	GM4	0.919		

The results in Table 9 show that the standardized factor loadings of measurement items corresponding to each latent variable are all above 0.730, indicating a strong correlation between items and latent variables. In terms of AVE values, except for affective reaction (0.570), which is slightly higher than the critical value of 0.5, the AVE values of other latent variables all exceed 0.590, satisfying the convergent validity criterion of AVE > 0.5. This demonstrates that each latent variable can effectively explain most of the variance of its corresponding measurement items.

All CR values are higher than 0.840, far exceeding the recommended threshold of 0.7, which reflects good internal consistency of the scale and stable and reliable measurement results. Overall, the scale presents satisfactory convergent validity and reliability, and is applicable to subsequent research and analysis.

Discriminant Validity

This study tested the discriminant validity of the model by comparing the square root of the average variance extracted (AVE) of each latent variable with the correlation coefficients between latent variables. The specific results are shown in Table 10 below.

Table 10. Results of discriminant validity test.

	Product Factors	Marketing Activities	Purchase Situation	Emotional Response	Cognitive Appraisal	Purchase Intention
Product Factors	0.823					
Marketing Activities	0.415	0.770				
Purchase Situation	0.390	0.421	0.782			
Emotional Response	0.226	0.350	0.346	0.755		
Cognitive Appraisal	0.315	0.414	0.382	0.325	0.768	
Purchase Intention	0.322	0.374	0.413	0.376	0.390	0.806

It can be observed from Table 10 that for the product factor, the square root of AVE is 0.823, which is higher than the maximum absolute value of the correlation coefficient between factors (0.415), indicating satisfactory discriminant validity. For marketing activities, the square root of AVE is 0.770, exceeding the maximum absolute inter-factor correlation coefficient of 0.421, which reflects good discriminant validity. For purchasing situation, the square root of AVE is 0.782 and greater than the maximum absolute correlation coefficient of 0.421, presenting adequate discriminant validity.

In terms of affective response, its square root of AVE is 0.755, higher than the maximum absolute correlation coefficient of 0.376. For cognitive evaluation, the square root of AVE is 0.768, which exceeds the maximum absolute correlation coefficient of 0.414. Regarding purchase intention, the square root of AVE is 0.806, larger than the maximum absolute correlation coefficient of 0.413. Collectively, all dimensions possess sound discriminant validity.

4.4. Analysis on Influencing Factors of Consumers' Purchase Intention for Pet Supplies

4.4.1. Correlation Analysis

This study adopts Pearson correlation coefficients to measure the correlation among variables. The specific data are presented in Table 11.

Table 11. Correlation analysis.

	Product Factors (S1)	Marketing Activities (S2)	Purchase Situation (S3)	Emotional Response (O1)	Cognitive Appraisal (O2)	Purchase Intention (R)
Product Factors (S1)	1					
Marketing Activities (S2)	0.415 **	1				
Purchase Situation (S3)	0.390 **	0.421 **	1			
Emotional Response (O1)	0.226 **	0.350 **	0.346 **	1		
Cognitive Appraisal (O2)	0.315 **	0.414 **	0.382 **	0.325 **	1	
Purchase Intention (R)	0.322 **	0.374 **	0.413 **	0.376 **	0.390 **	1

* $p < 0.05$ ** $p < 0.01$.

Based on the results of the correlation analysis in Table 11 above, product factors show significant correlations with all five indicators, namely marketing activities, purchasing situations, emotional responses, cognitive evaluation, and purchase intention. The corresponding correlation coefficients are 0.415, 0.390, 0.226, 0.315, and 0.322 respectively, all of which are positive. This indicates that product factors are positively correlated with the five variables including marketing activities, purchasing situations, emotional responses, cognitive evaluation, and purchase intention.

4.4.2. Regression Analysis

Analysis of the Effect of External Stimulus Variables on Consumers' Emotional Response Variables

To explore the influencing mechanism of external stimulus variables (including product factors, marketing activities and purchasing situations) on consumers' emotional responses, this study adopts the multiple linear regression analysis method to conduct statistical tests on 356 valid sample data. The research results are presented in Table 12:

Table 12. Analysis of the impact of external stimulus variables on consumers' emotional responses.

	Unstandardized Coefficients		Standardized Coefficients	t	*p*	Collinearity Diagnosis	
	B	Std. Error	Beta			VIF	Tolerance
Constant	1.795	0.200		8.984	0.000 **		
Product Factors	0.036	0.053	0.038	0.687	0.492	1.296	0.771
Marketing Activities	0.223	0.053	0.237	4.218	0.000 **	1.336	0.748
Purchase Situation	0.217	0.052	0.232	4.180	0.000 **	1.304	0.767
R^2				0.171			
Adjusted R^2				0.164			
F			$F(3,352) = 24.277$, $p = 0.000$				
D-W value				1.869			

a Dependent Variable: Emotional Response; * $p < 0.05$ ** $p < 0.01$.

Regression results show that marketing activities and purchase situations significantly promote emotional response ($p < 0.01$), while product factors have no significant effect on emotional response ($p > 0.05$). All three external stimuli significantly improve cognitive evaluation ($p < 0.05$).

The summarized results of the above impact analysis are presented in Table 13.

Table 13. Regression results of external stimulus variables on consumers' emotional responses.

Influence Path	Code	Effect	Coefficient
External Stimulus Variables → Consumers' Emotional Response	H1a	Product factors positively affect emotional responses.	0.036
	H1b	Marketing activities positively influence emotional responses.	0.223
	H1c	Purchase situations positively influence emotional responses.	0.217

Analysis of the Influence of External Stimulus Variables on Consumers' Cognitive Evaluation Variables

To explore the influencing mechanism of external stimulus variables including product factors, marketing activities and purchase situations on consumers' cognitive evaluation, this study adopts the multiple linear regression analysis method to conduct statistical tests on 356 valid sample data. The research results are shown in Table 14:

Table 14. Analysis of the impact of external stimulus variables on consumers' cognitive evaluation.

	Unstandardized Coefficients		Standardized Coefficients	t	*p*	Collinearity Diagnosis	
	B	Std. Error	Beta			VIF	Tolerance
Constant	1.354	0.196		6.902	0.000 **		
Product Factors	0.112	0.052	0.115	2.161	0.031 *	1.296	0.771
Marketing Activities	0.263	0.052	0.273	5.062	0.000 **	1.336	0.748
Purchase Situation	0.212	0.051	0.222	4.167	0.000 **	1.304	0.767
R^2			0.234				
Adjusted R^2			0.227				
F			$F(3,352) = 35.816$, $p = 0.000$				
D-W value			2.005				

a Dependent Variable: Cognitive Appraisal; * $p < 0.05$ ** $p < 0.01$.

It can be seen from Table 14 that the coefficient of determination (R^2) of the model is 0.234, indicating that product factors, marketing activities and purchase situations can explain 23.4% of the variance in cognitive evaluation. The F-test results demonstrate that the model is statistically significant ($F = 35.816$, $p = 0.000 < 0.05$), which indicates that at least one of product factors, marketing activities and purchase situations has a significant effect on cognitive evaluation.

In addition, the collinearity test results show that all VIF values of the model are less than 5, which confirms no multicollinearity. The Durbin-Watson (D-W) value is close to 2, suggesting the absence of autocorrelation and independence of sample data. Therefore, the overall model is well-fitted.

Further empirical analysis shows that: The regression coefficient of product factors is 0.112 ($t = 2.161$, $p = 0.031 < 0.05$), which indicates that product factors exert a significant positive effect on cognitive evaluation.

The regression coefficient of marketing activities is 0.263 ($t = 5.062$, $p = 0.000 < 0.01$), revealing that marketing activities have a significant positive impact on cognitive evaluation.

The regression coefficient of purchase situation is 0.212 ($t = 4.167$, $p = 0.000 < 0.01$), meaning that purchase situation significantly and positively affects cognitive evaluation.

The summarized results of the above influence analysis for this path are presented in Table 15.

Table 15. Results of the influence of external stimulus variables on consumers' cognitive evaluation.

Influence Path	Code	Effect	Coefficient
External Stimulus Variables → Consumers' Cognitive Appraisal	H2a	Product factors positively influence cognitive appraisal.	0.112
	H2b	Marketing activities positively influence cognitive appraisal.	0.263
	H2c	Purchase situations positively influence cognitive appraisal.	0.212

Analysis of the Impact of Consumers' Emotional Response and Cognitive Evaluation on Purchase Intention

To explore the influencing mechanism of consumers' emotional response and cognitive evaluation on purchase intention, this study adopts the multiple linear regression analysis method to conduct statistical tests on 356 valid sample data. The research results are shown in Table 16:

Table 16. Analysis of the impact of consumers' emotional response and cognitive evaluation on purchase intention.

	Unstandardized Coefficients		Standardized Coefficients	t	*p*	Collinearity Diagnosis	
	B	Std. Error	Beta			VIF	Tolerance
Constant	1.355	0.200		6.766	0.000 **		
Emotional Response	0.287	0.051	0.279	5.620	0.000 **	1.118	0.894
Cognitive Appraisal	0.301	0.050	0.299	6.020	0.000 **	1.118	0.894
R^2			0.221				
Adjusted R^2			0.217				
F			$F(2,353) = 50.197$, $p = 0.000$				
D-W value			2.102				

a Dependent Variable: Purchase Intention; * $p < 0.05$ ** $p < 0.01$.

Both emotional response and cognitive evaluation significantly positively affect purchase intention ($p < 0.01$). The summarized results of the above impact analysis are shown in Table 17.

Table 17. Influence results of consumers' emotional response and cognitive evaluation on purchase intention.

Influence Path	Code	Effect	Coefficient
Consumers' Emotional Response and Cognitive Appraisal → Purchase Intention	H3a	Emotional response positively influences purchase intention.	0.287
	H3b	Cognitive appraisal positively influences purchase intention.	0.301

Analysis of the Influence of External Stimulus Variables on Consumers' Purchase Intention

To explore the influencing mechanism of external stimulus variables (including product factors, marketing activities and purchase situations) on consumers' purchase intention, this study adopts multiple linear regression analysis to conduct statistical tests on 356 valid sample data. The research results are shown in Table 18:

Table 18. Analysis of the impact of external stimulus variables on purchase intention.

	Unstandardized Coefficients		Standardized Coefficients	t	*p*	Collinearity Diagnosis	
	B	Std. Error	Beta			VIF	Tolerance
Constant	1.358	0.198		6.875	0.000 **		
Product Factors	0.127	0.052	0.130	2.442	0.015 *	1.296	0.771
Marketing Activities	0.197	0.052	0.204	3.781	0.000 **	1.336	0.748
Purchase Situation	0.266	0.051	0.276	5.179	0.000 **	1.304	0.767
R^2			0.232				
Adjusted R^2			0.226				
F			$F(3,352) = 35.485$, $p = 0.000$				
D-W value			2.111				

a Dependent Variable: Purchase Intention; * $p < 0.05$ ** $p < 0.01$.

As shown in Table 18, the coefficient of determination (R^2) of the model is 0.232, indicating that product factors, marketing activities, and purchase situations can explain 23.2% of the variance in purchase intention. The F-test results confirm the statistical significance of the model (F = 35.485, $p = 0.000 < 0.05$), which demonstrates that at least one of the three external stimulus variables has a significant effect on purchase intention.

In terms of multicollinearity diagnosis, all VIF values are lower than 5, implying no multicollinearity problem. The Durbin-Watson (D-W) value is close to 2, which verifies the absence of serial autocorrelation and independence among sample observations. The overall model achieves a good fitting effect.

Further regression analysis indicates that: The regression coefficient of product factors is 0.127 (t = 2.442, p = 0.015 < 0.05), suggesting that product factors exert a significant positive influence on purchase intention.

The regression coefficient of marketing activities is 0.197 (t = 3.781, p = 0.000 < 0.01), revealing that marketing activities have a significant positive impact on purchase intention.

The regression coefficient of purchase situation is 0.266 (t = 5.179, p = 0.000 < 0.01), which means purchase situation significantly and positively affects purchase intention.

The summarized results of this influence path are presented in Table 19.

Table 19. Results of the influence of external stimulus variables on purchase intention.

Influence Path	Code	Effect	Coefficient
External Stimulus Variables → Purchase Intention	H4a	Product factors positively affect purchase intention.	0.127
	H4b	Marketing activities positively affect purchase intention.	0.197
	H4c	Purchase situations positively affect purchase intention.	0.266

4.4.3. Mediation Effect Test

The Bootstrap sampling method was adopted to test the mediating effect of consumer perception (O) between external stimuli (S) and purchase intention (R). As one of the product coefficient testing methods, the Bootstrap sampling method imposes no restrictions on the sampling distribution of mediating effects and possesses relatively high testing power, making it a widely adopted testing method at present. In this study, the SPSSAU platform was used for empirical testing, with the Bootstrap sampling times set to 5000 and a 95% confidence interval, and the relevant results are presented in Table 20.

Table 20. Summary of mediation effect test results.

Item	c Total Effect	a	b	a * b Mediation Effect Value	a * b (Boot SE)	a * b (z-Value)	a * b (*p*-Value)	a * b (95% BootCI)	c' Direct Effect	Test Conclusion
Product Factors => Emotional Response => Purchase Intention	0.127 *	0.036	0.195 **	0.007	0.011	0.644	0.520	−0.012–0.031	0.100 *	The mediating effect is insignificant
Product Factor => Cognitive Appraisal => Purchase Intention	0.127 *	0.112 *	0.177 **	0.020	0.012	1.596	0.110	0.000–0.048	0.100 *	Partial mediation
Marketing Activities => Emotional Response => Purchase Intention	0.197 **	0.223 **	0.195 **	0.044	0.015	2.872	0.004	0.019–0.077	0.108 *	Partial mediation
Marketing Activities => Cognitive Appraisal => Purchase Intention	0.197 **	0.263 **	0.177 **	0.046	0.019	2.441	0.015	0.015–0.089	0.108 *	Partial mediation
Purchase Situation => Emotional Response => Purchase Intention	0.266 **	0.217 **	0.195 **	0.042	0.015	2.751	0.006	0.018–0.078	0.186 **	Partial mediation
Purchase Situation => Cognitive Appraisal => Purchase Intention	0.266 **	0.212 **	0.177 **	0.038	0.015	2.458	0.014	0.012–0.071	0.186 **	Partial mediation

* p < 0.05 ** p < 0.01.

Mediation tests indicate that cognitive evaluation plays a partial mediating role between product factors and purchase intention, while emotional response and cognitive evaluation both play partial mediating roles in the paths of marketing activities and purchase situations. The results are shown in Table 21.

Table 21. Summary of mediation effect size results.

Item	Test Conclusion	c Total Effect	a * b Mediation Effect Value	c' Direct Effect	Effect Proportion Formula	Effect Ratio
Product Factors => Emotional Response => Purchase Intention	The mediating effect is insignificant	0.127	0.007	0.100		0%
Product Factor => Cognitive Appraisal => Purchase Intention	Partial mediation	0.127	0.020	0.100	a * b / c	15.551%
Marketing Activities => Emotional Response => Purchase Intention	Partial mediation	0.197	0.044	0.108	a * b / c	22.038%
Marketing Activities => Cognitive Appraisal => Purchase Intention	Partial mediation	0.197	0.046	0.108	a * b / c	23.522%
Purchase Situation => Emotional Response => Purchase Intention	Partial mediation	0.266	0.042	0.186	a * b / c	15.945%
Purchase Situation => Cognitive Appraisal => Purchase Intention	Partial mediation	0.266	0.038	0.186	a * b / c	14.136%

Based on the mediating effect test results, the following mediating effect model diagram is drawn in Figures 2–4.

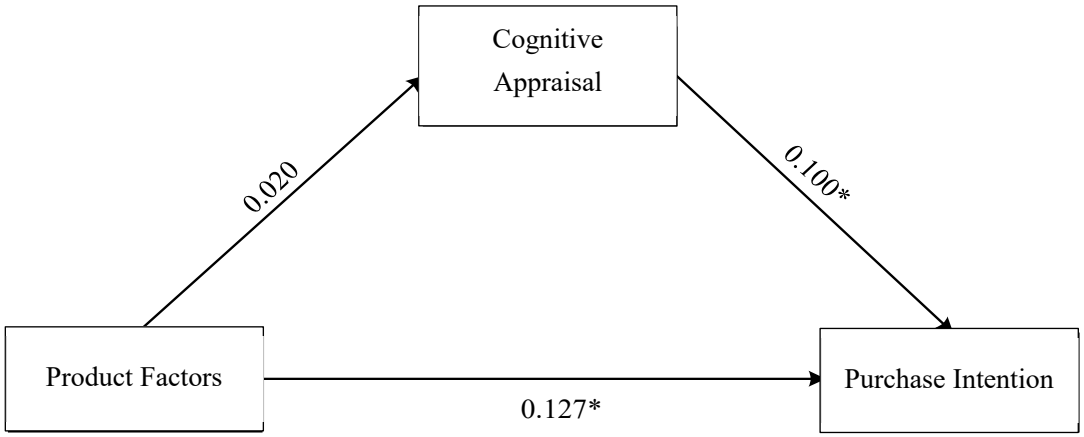


Figure 2. Mediating effect model of cognitive evaluation between product factors and purchase intention * $p < 0.05$ ** $p < 0.01$.

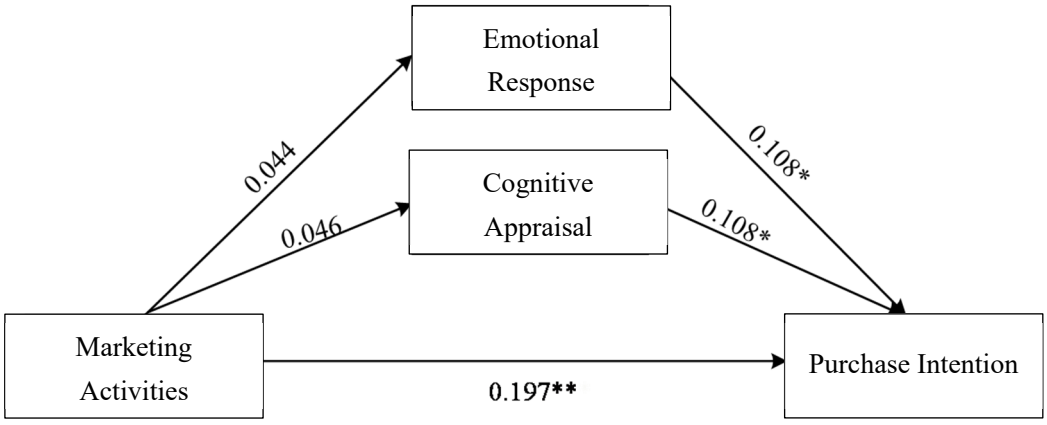


Figure 3. Mediating effect of emotional responses and cognitive evaluations between marketing activities and purchase intentions * $p < 0.05$ ** $p < 0.01$.

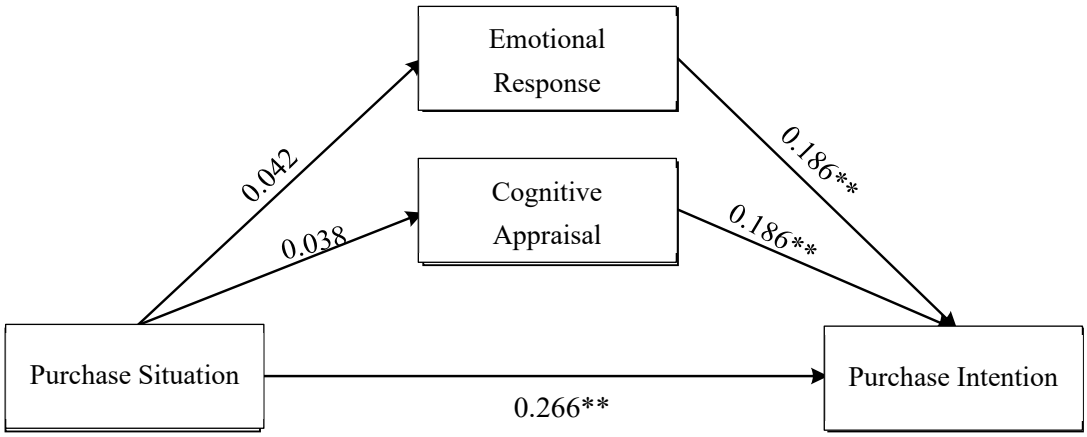


Figure 4. Mediating effect of emotional response and cognitive evaluation between purchase context and purchase intention * $p < 0.05$ ** $p < 0.01$.

4.5. Hypothesis Testing Results

During the above empirical analysis, the article found that one of the hypotheses was not supported by the data and thus did not hold true. This provides valuable reference for subsequent research. The summary of the test results is presented in Table 22.

Table 22. Summary of hypothesis testing results.

Pathway	Code	Content of Hypotheses	Conclusion	Test Basis
External stimulus variables → Consumer emotional response	H1a	Product factors positively affect emotional responses.	Not supported	t = 0.687, p = 0.492 > 0.05
	H1b	Marketing activities positively affect emotional responses.	Supported	t = 4.218, p = 0.000 < 0.01
	H1c	Purchasing situations positively affect emotional responses.	Supported	t = 4.180, p = 0.000 < 0.01
External stimulus variables → Consumer cognitive appraisal	H2a	Product factors positively affect cognitive evaluation.	Supported	t = 2.161, p = 0.031 < 0.05
	H2b	Marketing activities positively affect cognitive evaluation.	Supported	t = 5.062, p = 0.000 < 0.01
	H2c	Purchase situation positively affect cognitive evaluation.	Supported	t = 4.167, p = 0.000 < 0.01
Consumer emotional response and cognitive appraisal → Purchase intention	H3a	Emotional response positively affects purchase intention.	Supported	t = 5.620, p = 0.000 < 0.01
	H3b	Cognitive evaluation positively affects purchase intention.	Supported	t = 6.020, p = 0.000 < 0.01
External stimulus variable → Purchase intention	H4a	Product factors positively affect purchase intention.	Supported	t = 2.442, p = 0.015 < 0.05
	H4b	Marketing activities positively affect purchase intention.	Supported	t = 3.781, p = 0.000 < 0.01
	H4c	Purchase situation positively affects purchase intention.	Supported	t = 5.179, p = 0.000 < 0.01
Mediating effect	H5a	Emotional response plays a mediating role between external stimulus factors and purchase intention.	Partially supported	Both paths a and b are significant; and c is also significant.
	H5b	Cognitive evaluation plays a mediating role between external stimulus factors and purchase intention.	Partially supported	Both paths a and b are significant; and c is also significant.

5. Discussion

Based on the empirical outputs including correlation analysis, multiple regression and Bootstrap mediation tests in Chapter 4, this section interprets the statistical results against Stimulus-Organism-Response (SOR) theoretical framework, research hypotheses, and prior consumer-behavior literature.

First, for external stimuli toward emotional responses: marketing activities and purchase situations significantly and positively predict consumers' emotional responses (H1b, H1c supported), while product factors show no significant effect on emotional response and H1a is rejected. A reasonable explanation is that product-related attributes such as material safety and functional innovation deliver objective rational information, which mainly act on consumers' rational cognitive processing rather than directly arousing subjective positive feelings. In contrast, marketing content from pet influencers, promotional atmosphere, immersive offline store layout and hot social topics can bring immediate situational affective experience for pet owners.

Second, all three external stimuli (product factors, marketing activities, purchase situations) exert significant positive effects on cognitive evaluation (H2a, H2b, H2c supported). Product quality, brand reputation and functional features provide objective cues for consumers to make rational assessments on pet supplies [22]. Meanwhile, marketing campaigns and shopping-situation information help consumers collect reference information for risk assessment and scheme judgment, which improves their cognitive evaluation level.

Third, both emotional response and cognitive evaluation significantly boost purchase intention (H3a, H3b supported). This result validates the core logic of SOR theory in pet consumption: internal organism psychological states including affection and rational cognition jointly drive consumers' behavioral intention [10]. Pet owners invest deep emotional bonds in their companion animals; meanwhile they also attach great importance to pet safety and practical functions, so both sentiment and rational judgment serve as important drivers for pet-product purchasing decisions.

Fourth, product factors, marketing activities and purchase situations have significant direct positive effects on purchase intention (H4a, H4b, H4c supported). Among them, purchase situation obtains the largest regression coefficient, indicating that shopping context exerts the strongest direct influence on pet-product purchase intention. Optimized online-offline shopping environment can directly enhance consumers' trust and shopping willingness beyond product and marketing inputs.

For mediating effects (H5a and H5b partially supported): cognitive evaluation plays partial mediation between product factors and purchase intention, whereas emotional response fails to mediate this path. This further explains that product-attribute information mainly works through rational cognitive channels rather than emotional channels. For marketing activities and purchase situations, both emotional response and cognitive evaluation perform significant partial mediating roles. Marketing and situational inputs can simultaneously activate consumers' affective feelings and rational assessment, and then jointly translate into purchase intention.

Comparing with existing literature on e-commerce live-streaming or prepared-dish consumption [8,10], pet-product consumption presents distinct features. Different from impulsive consumption driven by short-term live-stream atmosphere, pet-product decision-making mixes long-term rational concerns for pet health together with deep pet-related affection. This study confirms that dual psychological paths of emotion and cognition should be considered simultaneously for pet-consumer research.

Nevertheless, some differences exist between hypothesis expectation and statistical output (H1a unsupported). It reminds researchers that not all external stimulus categories can activate both emotion and cognition. Future pet-consumption research should distinguish which stimuli belong to cognition-oriented cues and which belong to emotion-oriented cues.

6. Marketing Suggestions for Pet Supplies

6.1. Strengthen Product Innovation Based on Cognitive Orientation

According to empirical results, product factors significantly improve cognitive evaluation. Enterprises should focus on material safety, functional innovation and brand reputation to meet consumers' rational demands for pet products.

In the fiercely competitive pet supplies market, product design innovation is the key for enterprises to build core competitiveness. Enterprises can optimize product planning from three dimensions: market segmentation, emotional connection and technological integration, so as to gain market competitive advantages. When carrying out diversified product development, enterprises should first conduct in-depth research on consumer demands and build a multi-level product line based on research results. Taking pet food as an example, in addition to innovating conventional flavors and nutritional formulas, enterprises should also develop functional pet food targeting pets at different growth stages and with special health needs. Meanwhile, considering the dietary culture differences in various regions, pet snacks with local characteristics can be designed and launched. In terms of pet toy innovation,

enterprises should break the restrictions of traditional materials and shapes. Adopt bio-degradable materials to conform to the trend of environmental consumption, and develop intelligent toys embedded with AI voice recognition and motion sensing functions to meet pet owners' demands for remote companionship and interactive entertainment. For example, intelligent food-dispensing toys support regular and quantitative feeding, which can effectively relieve pets' separation anxiety. In addition, pet owners can check pets' feeding data in real time through mobile APPs to keep track of their dietary status.

In the design of pet clothing and accessories, enterprises should integrate emotional value into the core of products. It is advisable to establish a consumer emotional demand database. By analyzing the database, enterprises can figure out pet owners' preference for pet anthropomorphism and personalized styling. On this basis, customized pet clothing series can be developed, such as owner-pet matching outfits and themed accessories integrated with popular market elements. Enterprises can connect pet clothing with fashion trends, keep up with popular color trends of the year, apply professional fashion design concepts, and launch limited-edition and co-branded products through cross-border cooperation with renowned designers. This helps increase product added value and brand premium capability. Moreover, enterprises can build a user co-creation platform to allow pet owners to participate in the design of pet clothing, so as to strengthen consumers' emotional identity with the brand and products.

Product innovation requires enterprises to continuously invest in technological R&D and keep a close eye on market trends. Enterprises can set up dedicated product innovation laboratories, and cooperate with universities and scientific research institutions to jointly develop new materials and technologies, realizing the transformation of scientific research achievements into practical products. Big data can be used to analyze pet consumption dynamics on social media, capture consumer hot topics and potential demands, and develop products that fit pets' physiological habits and modern owners' aesthetic preferences. For instance, in view of cats' natural habits of climbing and scratching, multi-functional three-dimensional cat trees integrating entertainment and claw grinding functions can be designed. Such products not only meet the behavioral needs of cats, but also feature minimalist styles that are well integrated into modern home decoration styles.

6.2. Optimize Emotional Marketing Activities

Empirical results show that marketing activities significantly affect emotional responses. It is suggested to carry out emotional marketing by cooperating with pet bloggers, creating pet-themed content and launching life-cycle promotion packages.

The pet supplies market is saturated with information, making it difficult for consumers to maintain attention. To address this, enterprises need to build an omnichannel, multi-level marketing campaign system to accurately deliver product information to consumers. Meanwhile, they must strive to establish emotional resonance with consumers, thereby enhancing brand influence and product conversion rates.

In terms of brand communication strategies, enterprises should integrate traditional and new media to construct a comprehensive communication network. For traditional channels, advertisements can be placed in specialized pet media and lifestyle-focused TV programs, which enhances the brand's professional image. In the new media domain, enterprises should diligently manage platforms such as WeChat Official Accounts, Weibo, and Douyin. By popularizing pet health knowledge and showcasing product usage scenarios, they can establish the brand's authoritative image. For example, regularly release professional content such as Pet Nutrition White Paper and Interpretation of Pet Behavior, interspersed with product usage cases, positioning the brand as an expert consultant for healthy pet living. Enterprises can also leverage the pet influencer economy, collaborating with top pet bloggers and pet celebrities to create content. Through daily pet vlogs and product reviews, brand information can be naturally embedded and disseminated.

When designing promotional activities, enterprises should move beyond simplistic discount models and develop a scenario-based, emotional promotional system. In addition to regular holiday promotions, themed activities can be designed around key milestones in a pet's life, such as "Exclusive Gift Pack for Pet Birthday Month" and "New Pet Arrival Discount Package". Implement a membership growth system with tiered point rewards, where points can be redeemed for value-added services such as pet medical care and photography sessions, thereby increasing user stickiness. For new users, adopt a "first-order trial + social fission" strategy—for instance, offer product vouchers for inviting friends to register. For existing users, launch a "Pet Growth Archive" activity, pushing personalized discounts based on pet age and consumption history to strengthen emotional bonds. Furthermore, enterprises can conduct cross-industry promotions in collaboration with pet hospitals and grooming salons, launching "spend a certain amount and receive free pet care services" campaigns to expand consumption scenarios.

The precise implementation of marketing activities relies on data-driven user insights. Enterprises should establish a consumer behavior analysis system, integrating online and offline consumption data to build user

profiles and consumption prediction models. By analyzing purchase frequency, product preferences, and social data, promotional information can be precisely targeted. Utilize A/B testing to optimize marketing content and delivery strategies, monitor campaign performance in real time, and make dynamic adjustments to improve marketing Input-Output Ratio (ROI).

6.3. Create High-Quality Purchase Situations

Purchase situation has the strongest positive impact on purchase intention. Enterprises should integrate online and offline scenarios, optimize store experience, improve platform interface and build pet consumption communities to enhance shopping pleasure and trust.

The optimization of the consumption environment is crucial for improving consumers' shopping experience and strengthening brand recognition. Enterprises should start from the integration of online and offline channels, the upgrading of scenario experience, and the construction of social ecology to build a full-link immersive consumption environment. In terms of offline scenario construction, enterprises should break through the traditional retail model and create a pet lifestyle space integrating product display, experiential interaction and social sharing functions. The store adopts a modular layout and sets up functional zones such as pet food tasting areas, toy interaction areas and smart product experience areas. By simulating real-life scenarios, consumers can intuitively perceive the actual effect of products. For example, a simulated home environment for pets is built in the smart pet equipment experience area, where consumers can operate smart feeders and monitoring cameras on site to experience the convenience brought by remote control.

In the pet clothing area, AR virtual fitting equipment is equipped. Consumers can scan pet photos with mobile phones to generate virtual fitting effects, which enhances the fun of shopping. The store regularly holds pet behavior training courses and pet social activities, transforming physical stores into a platform for pet cultural exchanges and enhancing consumers' sense of belonging to the brand. The optimization of the online consumption environment needs to focus on user experience details and technological empowerment. E-commerce platforms can adopt lightweight interface design to improve page loading speed, and apply 3D modeling and VR panoramic display technology to present product details. Meanwhile, an intelligent recommendation system can be developed to provide personalized product recommendations according to consumers' historical purchase records and browsing behaviors. In addition, 24-h intelligent customer service can be arranged to quickly respond to consultations and solve pre-sales and after-sales problems by virtue of natural language processing technology. Furthermore, enterprises can build an online pet community where users can share interesting stories about pet life and product usage experiences, forming a UGC content ecosystem and enhancing user interaction and stickiness. Online activities such as "cloud pet raising" can be launched; users can obtain virtual rewards by completing tasks and sharing content, which can be redeemed for physical products to boost user activity. Enterprises should also strengthen the emotional connection between brands and consumers by holding offline themed activities. Regular events such as pet sports meetings, pet parent-child carnivals and public welfare adoption days can be organized to integrate product display into scenario-based experience. For instance, product experience checkpoints can be set up in pet sports meetings, where pets can get rewards by completing tasks with designated toys. In public welfare activities, part of the income from each product sold will be donated to stray animal rescue, conveying the brand's sense of social responsibility. Through on-site interactive marketing and media communication, brand influence can be expanded, turning consumption scenarios into positions for brand cultural communication, and ultimately realizing the positive reinforcement of consumers' cognitive evaluation and purchase intention driven by shopping situations.

7. Conclusions

This paper aims to deeply analyze the influencing mechanism of external stimulus factors such as product factors, marketing activities and purchasing situations on consumers' purchase intention in the consumption scenario of pet supplies, and explore the mediating role of emotional response and cognitive evaluation in this process. The pet supplies market is selected as the research object due to its large consumer group, diverse product categories, and dual attributes of functionality and emotionality.

The core issue to be addressed in this study is how external stimulus factors affect consumers' purchase decisions through psychological variables, which is of great significance for enriching consumer behavior theory and guiding the marketing practice of pet supplies enterprises. This paper mainly adopts the literature analysis method to sort out the theoretical foundation, collects 356 valid sample data through the questionnaire survey method, and conducts empirical analysis on the research model and hypotheses by adopting statistical methods

including multiple linear regression and mediating effect test. These methods effectively support the in-depth discussion on the influencing path of pet supplies consumers' purchase intention.

The research results indicate that product factors, marketing activities and purchasing situations all have a significant positive impact on consumers' purchase intention, among which purchasing situations exert the most prominent influence; consumers' emotional response and cognitive evaluation positively affect purchase intention significantly, and play a critical mediating role between external stimuli and purchase intention.

Although certain research achievements have been obtained, this study still has limitations. In terms of data collection, the research samples are mainly from second-tier and third-tier cities. Although they can reflect the behavioral characteristics of consumers in specific regions, there is room for improvement in the geographical coverage and urban hierarchy diversity of samples, and the sample size needs to be optimized to fully characterize the characteristics of broader groups. Subsequent research can further enhance the universality and representativeness of research conclusions by expanding data collection areas and sample scale.

In addition, the selection of research variables is relatively limited, and potential influencing factors such as the macroeconomic environment and pet owners' breeding experience have not been fully incorporated. In view of the above limitations, future research can expand the sample coverage and conduct multi-region and multi-channel data collection, and incorporate more diversified variables to construct a more perfect theoretical model. Furthermore, it is suggested that future studies can explore the differences in influencing mechanisms among different types of pet supplies and consumption scenarios, as well as the dynamic evolution process of consumer behavior, so as to further broaden the theoretical and practical application foundation of this research.

Author Contributions

D.Z. and F.H.: Conceptualization, investigation, data curation, writing original draft preparation; D.Z.: Methodology; D.Z. and X.-H.N.: Writing review and editing. All authors have read and agreed to the published version of the manuscript.

Funding

This study was supported by the Anhui Provincial Teaching and Research Project (2024jyxm0443); Suzhou Innovative Development of Social Sciences Research Project (2025CX012, 2025CX031); Dual-ability Teaching Team of Suzhou University (2023XJSN02).

Institutional Review Board Statement

Not applicable.

Informed Consent Statement

At the beginning of the questionnaire, we made explanations and commitments regarding the research purpose and the confidentiality of the participants' information. All the participants in the questionnaire survey were aware of the purpose of the research and agreed to have their data used in this study.

Data Availability Statement

The data is available from the corresponding author upon reasonable request.

Acknowledgments

Expressing gratitude to Suzhou University for providing a laboratory for processing the research data.

Conflicts of Interest

The authors declare no conflict of interest.

Use of AI and AI-Assisted Technologies

No AI tools were utilized for this paper.

References

1. Liu, X. Interpretation of Development of Chinese Pet Industry in 2024 (in Chinese). *J. Econ. Anim.* **2025**, *29*, 8–13.

2. Chen, L.; Zhou, J.; Dai, P. Perfecting the Standard System of Pet Supplies to Promote High-Quality Development of Pet Industry (in Chinese). *Chin. Qual. Certif.* **2024**, *10*, 27–29.
3. Han, L. Research on the Problems and Countermeasures of China's Pet Market Development (in Chinese). Master's Thesis, Shanghai University of Finance and Economics, Shanghai, China, 2021. https://doi.org/10.27296/d.cnki.gshcu.2021.000480.
4. Hou, K. Analysis of Online Shopping Market of Pet Supplies in China from the Perspective of Managerial Economics (in Chinese). *Chin. Collect. Econ.* **2021**, *10*, 106–107.
5. Huang, S. New Gameplay of "Pet Economy" in Shopping Malls (in Chinese). *Chin. Work. Dog Ind.* **2018**, *8*, 66–70.
6. Jiao, Z. Research on the Influence of Perceived Value on Consumers' Purchase Intention of Goat Milk Products (in Chinese). Master's Thesis, Northwest A&F University, Yangling, China, 2024.
7. Mao, Y. Research on the Influence of Artificial Intelligence Product Characteristics on Consumers' Purchase Intention from the Perspective of Technology Empowerment (in Chinese). Master's Thesis, Harbin University of Commerce, Harbin, China, 2024.
8. Shen, Z. Research on Influencing Factors of Consumers' Purchase Intention on E-Commerce Live Streaming Platform Based on SOR Theory (in Chinese). Master's Thesis, Guilin University of Technology, Guilin, China, 2024.
9. Chen, S. The Impact of Emotional Marketing on Consumers' Purchase Intention: A Case Study of Jellycat. *Adv. Econ. Manag. Polit. Sci.* **2024**, *83*, 285–291. https://doi.org/10.54254/2754-1169/83/20240763.
10. Zhang, X. Research on Influencing Factors of Consumers' Purchase Intention of Brand a Prepared Dishes Based on SOR Model (in Chinese). Master Thesis, China University of Political Science and Law, Beijing, China, 2024. https://doi.org/10.27656/d.cnki.gzgzu.2024.000078.
11. Ngo, T.T.A.; Tran, T.T.; An, G.K.; et al. Investigating the Influence of Augmented Reality Marketing Application on Consumer Purchase Intentions: A Study in the E-Commerce Sector. *Comput. Hum. Behav. Rep.* **2025**, *18*, 100648. https://doi.org/10.1016/j.chbr.2025.100648.
12. Konale, M.; Panakaje, N.; Parvin, S.M.R.; et al. Exploring the Fusion of Virtual Fitting Rooms and Social Media: A Study on Consumer Behaviour and Purchase Intentions. *J. Fash. Mark. Manag. Int. J.* **2025**, *29*, 728–757. https://doi.org/10.1108/jfmm-05-2024-0195.
13. Wu, X.; Mao, S. The Influence of E-Commerce Anchor Persuasion Strategy on Consumers' Online Purchase Intention—Based on the Perspective of Emotional Trust and Perceived Value (in Chinese). *J. Commer. Econ.* **2025**, *4*, 60–63.
14. Yang, Z.; Ren, W. External Situational Cues of Cross-Border Online Shopping and Consumers' Purchase Intention—Mediated by Perceived Functional Value and Perceived Emotional Value (in Chinese). *J. Commer. Econ.* **2024**, *22*, 74–77.
15. Sun, K.; Liu, L.; Liu, C. Consumers' Impulsive Purchase Intention in Live E-Commerce from an Emotional Perspective (in Chinese). *China Bus. Mark.* **2022**, *36*, 33–42.
16. Chen, X.; Zhang, Q. Research on the Influence of Emotional Intensity of Online Reviews on Consumers' Purchase Intention (in Chinese). *China J. Commer.* **2023**, *20*, 82–85.
17. Li, K.; Yang, Y.; Wang, X. The Formation Mechanism of Consumers' Quality Cognition Influenced by Internal and External Cues: Taking Baijiu Industry as an Example (in Chinese). *J. Macro-Qual. Res.* **2024**, *12*, 116–128.
18. Zhang, Q.; Sun, X.; Cai, L. Research on the Influence of External Cues on Consumers' Green Brand Purchase Intention: The Moderating Effect of Cognitive Style (in Chinese). *J. Bus. Econ. Manag.* **2016**, *11*, 46–59. https://doi.org/10.14134/j.cnki.cn33-1336/f.2016.11.005.
19. Xiao, W.; Yuan, Y.; Shi, P.; et al. Research on Consumers' Purchase Intention of "Double Eleven" Based on Mixed Methods: From Emotional and Cognitive Perspectives (in Chinese). *Manag. Rev.* **2024**, *36*, 161–174.
20. Fan, J.; Bian, T.; Zheng, G. The Impact of Moral Attributes of Corporate Social Innovative Products on Customers' Purchase Intention (in Chinese). *J. Mark. Sci.* **2024**, *4*, 36–53.
21. Zhang, L. Identification and Evaluation of Influencing Factors of Consumers' Risk Perception under the Background of Cross-Border E-Commerce (in Chinese). Master's Thesis, Xidian University, Xi'an, China, 2022.
22. Yang, X. National Trend Brand Image and Consumer Purchase Intention—The Mediating Effect of Brand Identity and the Moderating Effect of Product Involvement (in Chinese). *J. Commer. Econ.* **2024**, *23*, 73–76.
23. Li, Y. Research on E-Commerce Brand Marketing Strategy and Consumer Purchase Intention—Based on the Mediating Role of Consumer Participation and Perceived Value (in Chinese). *J. Commer. Econ.* **2024**, *14*, 55–58.
24. Zhang, B.; Zhao, C.; Lai, H.; et al. Comprehensive Quality, Consumption Situation and Purchase Intention of Near-Expiry Food—Mediation of Price Sensitivity and Moderation of Food Safety Literacy (in Chinese). *J. Guizhou Univ. Financ. Econ.* **2022**, *40*, 36–45.
25. Wei, Y.; Li, J.; Li, M.; et al. Live Streaming Marketing Methods and Consumer Purchase Intention—The Mediating Role of Perceived Usefulness (in Chinese). *Econ. Trade Update* **2024**, *21*, 59–63.
26. Kong, K.; Dong, H. The Influence of Short Video Marketing on Consumers' Impulsive Purchase Intention—Based on the Mediating Role of Online Immersion and Psychological Intention (in Chinese). *J. Commer. Econ.* **2024**, *14*, 59–62.

27. Zeng, L.; Huang, D. What Dominates Online Live Streaming Shopping Intention—A Study on Influencing Factors of Audience Purchase Intention from the Perspective of Persuasion Theory (in Chinese). *News Writ.* **2021**, *7*, 50–57.
28. Xiao, K.; Lei, B. Opinion Leader Traits, Promotional Stimuli and Consumer Purchase Intention in Social E-Commerce—An Investigation Based on WeChat Group Shoppers (in Chinese). *J. Manag.* **2021**, *34*, 99–110.
29. Wang, T. Research on the Influencing Factors of Pet Social Media Influencers on Pet Consumers' Purchase and Interaction Intention (in Chinese). Master's Thesis, Shenzhen University, Shenzhen, China, 2023.
30. Zhang, Y. Research on Influencing Factors of Consumers' Impulsive Purchase Intention in Live Streaming Scenario Based on SOR Model (in Chinese). Master's Thesis, Jilin University, Changchun, China, 2021.
31. Kapuge, K.D.L.R. Determinants of Organic Food Buying Behavior: Special Reference to Organic Food Purchase Intention of Sri Lankan Customers. *Procedia Food Sci.* **2016**, *6*, 303–308. https://doi.org/10.1016/j.profoo.2016.02.060.
32. Dodds, W.B.; Monroe, K.B.; Grewal, D. Effects of Price, Brand, and Store Information on Buyers' Product Evaluations. *J. Mark. Res.* **1991**, *28*, 307–319. https://doi.org/10.1177/002224379102800305.
33. Zeithaml, V.A. Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis of Evidence. *J. Mark.* **1988**, *52*, 2–22. https://doi.org/10.1177/002224298805200302.