

# Research on the Social Media Marketing Promoting Brand Loyalty of Local Chinese Cosmetics

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## Abstract

*The purpose of this study is to explore how social media marketing affects brand loyalty of domestic cosmetics through functional information, entertainment information, interactive information and self-concept. This study adopts quantitative research method, collecting data through questionnaire survey, and using reliability analysis, validity analysis and regression analysis to verify the model. The results show that these four types of information have significant impact on consumers' cognitive trust and emotional trust, and then affect their attitude loyalty and behavior loyalty. Functional information enhances trust by enhancing product recognition; entertainment information enhances emotional connection by increasing brand interest and attractiveness; interactive information enhances participation and belonging by promoting interaction between consumers and brands; and self-concept plays a mediating role between information type and trust. This study provides theoretical basis and practical guidance for the formulation of social media marketing strategy for domestic cosmetics brands.*

**Keywords:** *Social Media Marketing; Local cosmetics; Brand loyalty*

## Introduction

With the widespread popularity of social media, it has become an important means for enterprises to promote brands and enhance consumer loyalty. Especially in the cosmetics industry, brand loyalty is critical to business development. Although domestic cosmetics brands have achieved market growth, brand loyalty is still facing challenges. Therefore, the purpose of this study is to explore how social media marketing affects domestic cosmetics brand loyalty through functional information, entertainment information, interactive information and self-concept, with a view to providing theoretical and practical guidance for brand strategy formulation. Social media platforms provide opportunities for businesses to communicate directly with consumers, influence consumer perceptions and emotions by publishing various types of information, and allow consumers to participate in interactive activities to enhance brand connections. In the cosmetics industry, brand loyalty is influenced by many factors such as product quality, brand image, consumer experience, etc. However, the intensification of market competition and diversification of consumer demand make it difficult for traditional marketing methods to meet demand, and enterprises need to seek new strategies to enhance brand loyalty. Social media marketing provides new marketing ideas for enterprises with its advantages of low cost, fast communication and strong interaction. This study will focus on four types of information in social media marketing: functional information, entertainment information, interactive information and self-concept information.

## Literature Review

### *Social Media Marketing and Brand Loyalty*

Social media marketing, as an emerging marketing method, has received extensive attention and research in recent years. Research shows that social media platforms have a broad user base and are highly interactive, providing businesses with opportunities to communicate directly with consumers. Through social media, businesses can post various types of information, including product feature descriptions, brand stories, user reviews, etc., to influence consumer perceptions and emotions (Smith, 2020). At the same time, social media

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also allows consumers to participate in brand interaction activities such as comments, likes, shares, etc., further strengthening the connection between consumers and brands (Johnson Kim, 2019).

Brand loyalty refers to consumers' preference and repeat purchase behavior towards a certain brand. Research has shown that social media marketing can increase consumer brand loyalty by providing valuable content, enhancing brand image, and building trust (Lee Agarwal, 2020). However, research has also found that negative messages and experiences on social media can damage consumer brand loyalty (Zhang Mao, 2021). Therefore, companies need to carefully manage their brand image and reputation when marketing on social media.

#### Functional Information, Entertainment Information, Interactive Information and the Influence of Self-concept

Functional information mainly focuses on the functions and characteristics of the product, aiming to provide detailed product information to meet the practical needs of consumers. Research has shown that functional information can help consumers better understand the characteristics and advantages of products, thus increasing their willingness to buy (Li Wang, 2018).

Entertainment information focuses on fun and attraction, attracting consumers' attention through humor, creativity and other ways. Research has shown that entertaining messages can increase brand interest and attractiveness, thereby enhancing brand attitudes and behavioral loyalty (Chen Lin, 2019). Interactive messaging emphasizes interaction and engagement with consumers, encouraging them to participate in brand discussions and events. Research has shown that interactive messages can enhance consumers' sense of connection and engagement with brands, thereby increasing their brand loyalty (Park Jin, 2020).

Self-concept involves consumers' perception of their own identity and values. Research has shown that self-concept can influence consumer purchasing decisions and brand preferences. For example, consumers are more likely to develop loyalty to a brand when they believe it is consistent with their self-concept (Kang Huh, 2018). In addition, self-concept can influence brand loyalty by changing consumers' attitudes and behaviors (Kim Ko, 2020).

#### *The Mediating Role of Cognitive Trust and Emotional Trust*

This study will also explore the mediating role of cognitive trust and emotional trust between social media marketing and brand loyalty. Cognitive trust is based on consumers' judgments about brand competence and integrity and is the foundation for building long-term relationships. Research has shown that cognitive trust can reduce consumers' perceived risk and enhance their willingness to buy (Gefen et al., 2003). Emotional trust stems from consumers' emotional connection and identity to brands, which can enhance consumers' loyalty to brands. Research has shown that emotional trust increases consumer satisfaction and loyalty (Chaudhuri Holbrook, 2001).

#### *Basic Information Description*

A total of 500 questionnaires were distributed in this study. The specific analysis results are as follows:

#### Frequency Analysis Results

name	Option	frequency	Percentage (%)	Cumulative percentage (%)
gender	Woman	456	91.20	91.20
	man	44	8.80	100.00
Age	18-22 years old	143	28.60	28.60
	23-30 years old	246	49.20	77.80

## Frequency Analysis Results

name	Option	frequency	Percentage (%)	Cumulative percentage (%)
	31-35 years old	111	22.20	100.00
married or not	yes	349	69.80	69.80
	no	151	30.20	100.00
educational level	high school and below	60	12.00	12.00
	college degree	62	12.40	24.40
	bachelor degree	320	64.00	88.40
	's degree or above	58	11.60	100.00
occupation	student	59	11.80	11.80
	Government/Office Officials/Civil Servants	64	12.80	24.60
	enterprise managers	61	12.20	36.80
	clerk	45	9.00	45.80
	professional	58	11.60	57.40
	Commercial service workers	80	16.00	73.40
	freelancer	64	12.80	86.20
	else	69	13.80	100.00
area of residence	first-tier cities	117	23.40	23.40
	second-tier cities	143	28.60	52.00
	third-tier cities and below	114	22.80	74.80
	a rural area	126	25.20	100.00
monthly income	below 3000 Yuan	101	20.20	20.20
	3000-5000 Yuan	162	32.40	52.60
	5001-8000 Yuan	153	30.60	83.20
	8001 Yuan and above	84	16.80	100.00
Monthly consumption of cosmetics	below 300 Yuan	67	13.40	13.40
	300-500 Yuan	59	11.80	25.20
	501-1000 Yuan	97	19.40	44.60
	1001-2000 Yuan	141	28.20	72.80
	More than 2,001 Yuan	136	27.20	100.00
household size	2 persons and below	305	61.00	61.00
	3-5 person	151	30.20	91.20
	more than 5 people	44	8.80	100.00
total		500	100.0	100.0

Frequency analysis showed that 91.20% of the samples were female and only 8.80% were male. In terms of age distribution, 49.20% of the respondents were between 23 and 30 years old, followed by 18-22 years old accounting for 28.60%. With regard to marital status, 69.80 per cent were married. The education level is dominated by college degree, accounting for 64.00%, while high school education and below only accounts for 12.00%. Occupationally, 16.00% of the workers in commercial services, 11.80% of students and 12.80% of government/office cadres. In terms of residential areas, the proportion of secondary cities and rural areas is similar, accounting for 28.60% and 25.20% respectively. In the income distribution, 32.40% of respondents earn between 3,000 and 5,000 yuan per month. In terms of monthly consumption of cosmetics, 28.20% of respondents spent 1001-2000 yuan. In terms of family size, 61.00% of families have two or fewer members. These data provide an important demographic basis for subsequent analysis.

**Follow Social Media Platforms**

nape	response		Prevalence ( $n=500$ )
	N	responsivity	
microblog	247	14.55%	49.40%
microblog	240	14.13%	48.00%
WeChat	252	14.84%	50.40%
chatter fast hand	239	14.08%	47.80%
Little Red Book	249	14.66%	49.80%
Zhihu	238	14.02%	47.60%
station B	233	13.72%	46.60%
collect	1698	100%	339.60%

Note:  $\chi^2 = 1.161$ ,  $p = 0.979$  for goodness of fit test

According to the survey results of social media platforms, WeChat has the highest response rate of 50.40%, followed by Weibo (49.40%) and Xiaohongshu (49.80%). The response rates of other platforms such as Shaking Fast Hand (47.80%), Zhihu (47.60%) and Station B (46.60%) are relatively low. Overall, the total number of responses across all platforms was 1698, representing a penetration rate of over 339.60%, indicating that respondents are interested in multiple platforms. The goodness of fit test results showed  $\chi^2=1.161$ ,  $p=0.979$ , indicating that the model fit well. These data can provide a basis for further research on social media use behavior.

**Domestic cosmetic brands that are being used or known**

nape	response		Prevalence ( $n=500$ )
	$n$	responsivity	
huaxizi	249	20.29%	49.80%
perfect diary	233	18.99%	46.60%
proya	243	19.80%	48.60%
baique Ling	246	20.05%	49.20%
else	256	20.86%	51.20%
collect	1227	100%	245.40%

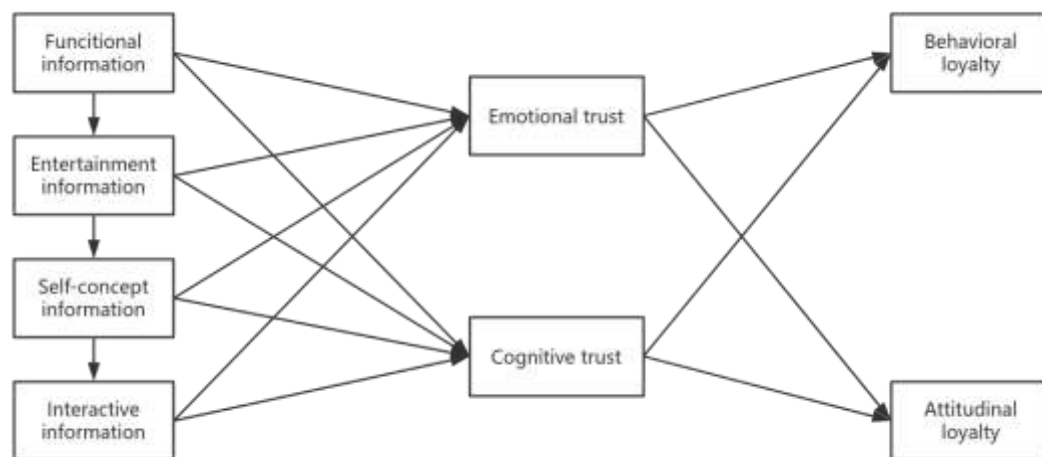
Note:  $\chi^2 = 1.162$ ,  $p = 0.884$  for goodness of fit test

The survey results show that respondents have different understanding of domestic cosmetics brands, among which "other" brands have the highest response rate of 51.20%, while "Huaxizi"(49.80%),"Pehchaolin"(49.20%) and "Pelaya"(48.60%) also show high attention. The response rate for Perfect Diary was 46.60%. The overall response number was 1227, and the penetration rate was 245.40%, showing the universality of brand recognition. The goodness-of-fit test result is  $\chi^2=1.162$ ,  $p=0.884$ , indicating that the model fits well. These data can provide valuable information for analyzing consumer preferences in domestic cosmetics market.

*Research Hypothesis*

This study constructs a theoretical model to explore the impact of different types of information in social media marketing on brand loyalty of domestic cosmetics. The model contains four variables: functional information, entertainment information, interactive information, and self-concept information, which represent the types of content commonly found on social media platforms. Cognitive trust and emotional trust are the mediating variables, which act as a bridge between information type and brand loyalty. The final dependent variable is brand loyalty, which is divided into two dimensions: behavioral loyalty and attitudinal loyalty.

In this model, functional information refers to content that provides practical information such as product performance and ingredients; entertainment information involves relaxed and pleasant elements such as humor and fun; interactive information emphasizes two-way communication between brands and consumers; and self-concept information is associated with consumers' personal identity. These different types of information affect consumers' brand loyalty by influencing their cognitive trust (i.e. trust in brand competence and reliability) and emotional trust (i.e. love and emotional connection to brand). Behavioral loyalty is reflected in repeated purchases, recommendations to others and other practical actions, while attitudinal loyalty is reflected in positive evaluation and continuous preference for brands. By analyzing the relationship between these variables, this study aims to reveal how social media marketing strategies effectively enhance brand loyalty of domestic cosmetics and provide theoretical guidance for brand management practice. The specific model is shown in the figure below:



*Combining specific arguments and intermediate variables, the specific entries are as follows:*

Issue	5. dimensionality
The messages posted on the brand's social media platforms focus on conveying the unique features of the product.	Functional information 1
The brand regularly posts information on social media platforms such as brand promotions and brand updates.	Functional information 2
There is a lot of content on social media about product reviews and tutorials for the brand.	Functional information 3
The brand's social media marketing is rich and attractive.	Entertainment information 1
Content posted on the brand's social media platforms is often related to trends.	Entertainment information 2
The content posted on the brand's social media platform is interesting.	Entertainment information 3
The brand focuses on using celebrity endorsements to enhance brand awareness and credibility.	Entertainment information 4
The brand is good at telling brand stories.	Entertainment information 5
The brand focuses on cross-border and co-branded marketing.	Entertainment information 6
The brand conveys values that are consistent with my personal values.	Self-concept 1
The lifestyle or attitude conveyed by the brand matches me.	Self-concept 2
The brand publishes content that resonates emotionally with me.	Self-concept 3
The content released by the brand reflects a certain sense of social responsibility.	Self-concept 4

Social media discussions about the brand's products have some impact.	Interactivity 1
Reviews and feedback about the brand's products influence consumer purchases.	Interactivity 2
The brand focuses on online word-of-mouth communication.	Interactivity 3
The brand frequently interacts with consumers.	Interactivity 4
The brand takes into account the individual needs of consumers when interacting with them.	Interactivity 5
The brand's interaction with consumers has left a good impression on consumers.	Interactivity 6
The product or service offered by the brand deserves my trust.	Cognitive Trust 1
The brand has a good reputation and reputation, worthy of my trust.	Cognitive Trust 2
I am pleased with the expertise and competence of this brand.	Cognitive Trust 3
The brand meets my individual needs and preferences.	Cognitive Trust 4
I love the values and culture that this brand represents.	Emotional Trust 1
Interacting with the brand is a pleasure.	Emotional Trust 2
If there is an accident with this brand product, I believe that the brand can solve the related problems well.	Emotional Trust 3
If the price of the brand goes up, I'm still willing to buy it.	Attitudinal Loyalty 1
If negative information about my favorite domestic cosmetics brand appears on social media, I am still willing to buy it.	Attitudinal Loyalty 2
When a competing brand launches a similar product, I will still choose that brand's product.	Attitudinal Loyalty 3
If the brand satisfies me, I will buy repeatedly.	Behavioral Loyalty 1
I would recommend this brand to others.	Behavioral Loyalty 2

### Data Analysis

#### Mean and Median

Basic Indicators						
Name	SampleSize	Least value	Maximum	Average	Standard Deviation	Median
Functional information 1	500	1.000	5.000	3.308	1.361	4.000
Functional information 2	500	1.000	5.000	3.026	1.103	3.000
Functional information 3	500	1.000	5.000	3.080	1.123	3.000
Entertainment information 1	500	1.000	5.000	3.340	1.404	4.000
Entertainment information 2	500	1.000	5.000	3.220	1.114	3.000
Entertainment information 3	500	1.000	5.000	3.278	1.180	3.000
Entertainment information 4	500	1.000	5.000	3.370	1.156	3.000
Entertainment information 5	500	1.000	5.000	3.282	1.128	3.000
Entertainment information 6	500	1.000	5.000	3.284	1.158	3.000
Self-concept 1	500	1.000	5.000	3.318	1.305	3.000
Self-concept 2	500	1.000	5.000	3.128	1.118	3.000
Self-concept 3	500	1.000	5.000	3.090	1.099	3.000
Self-concept 4	500	1.000	5.000	3.110	1.107	3.000
Interactivity 1	500	1.000	5.000	3.310	1.379	4.000

Basic Indicators						
Name	SampleSize	Least value	Maximum	Average	Standard Deviation	Median
Interactivity 2	500	1.000	5.000	3.028	1.102	3.000
Interactivity 3	500	1.000	5.000	3.056	1.140	3.000
Interactivity 4	500	1.000	5.000	3.066	1.110	3.000
Interactivity 5	500	1.000	5.000	3.090	1.156	3.000
Interactivity 6	500	1.000	5.000	3.096	1.123	3.000
Cognitive Trust 1	500	1.000	5.000	3.326	1.391	4.000
Cognitive Trust 2	500	1.000	5.000	3.096	1.130	3.000
Cognitive Trust 3	500	1.000	5.000	3.048	1.130	3.000
Cognitive Trust 4	500	1.000	5.000	3.064	1.120	3.000
Emotional Trust 1	500	1.000	5.000	3.380	1.387	4.000
Emotional Trust 2	500	1.000	5.000	3.104	1.147	3.000
Emotional Trust 3	500	1.000	5.000	3.066	1.135	3.000

The baseline analysis showed that the sample size of each variable was 500, ranging from 1.000 to 5.000, reflecting a wide range of scores. On average, entertainment information (3.296) and behavioral loyalty (3.224) were slightly higher than other dimensions, while interaction (3.108) had a relatively low average score. Standard deviation and median data show some dispersion in participants' scores across dimensions, particularly in behavioral loyalty (SD 1.191) and emotional trust (SD 1.088). These data provide a basis for further analysis of the impact of each dimension on consumer behavior.

#### Reliability Test

dimensionality	number of terms	sample size	Cronbach $\alpha$ coefficient
functional information	3	500	0.864
Entertainment information	6	500	0.858
self-concept	4	500	0.867
interactive cognition	6	500	0.868
trust	4	500	0.873
affection trust	3	500	0.862
attitudinal loyalty	3	500	0.87
behavioral loyalty	2	500	0.859

According to the results of dimensionality analysis, the number of items, sample size and Cronbach  $\alpha$  coefficient of each dimension were as follows: functional information consisted of 3 items, sample size was 500, Cronbach  $\alpha$  was 0.864; entertainment information consisted of 6 items,  $\alpha$  was 0.858; self-concept consisted of 4 items,  $\alpha$  was 0.867; interaction consisted of 6 items,  $\alpha$  was 0.868; cognitive trust consisted of 4 items,  $\alpha$  was 0.873; emotional trust consisted of 3 items,  $\alpha$  was 0.862; Attitudinal loyalty consists of 3 items ( $\alpha = 0.870$ ) and behavioral loyalty consists of 2 items ( $\alpha = 0.859$ ). The Cronbach  $\alpha$  coefficients of all dimensions exceeded 0.8, indicating that the reliability of the measurement was good.



*Validity Test and Factor Analysis*

Validity analysis results								
name	factor loadingcoefficient							Common Degree (Common Factor Variance)
	factor 1	factor 2	factor 3	factor 4	factor 5	factor 6	factor 7	
Functional information 1	-0.060	-0.110	-0.085	0.823	0.221	0.066	0.131	0.770
Functional information 2	-0.007	-0.075	-0.071	0.806	0.226	0.107	0.090	0.731
Functional information 3	-0.115	-0.101	-0.056	0.812	0.205	0.089	-0.011	0.737
Entertainment information 1	0.054	0.708	0.053	0.042	0.057	0.069	0.063	0.521
Entertainment information 2	-0.053	0.740	-0.025	0.001	0.073	0.007	-0.012	0.556
Entertainment information 3	0.007	0.779	-0.063	-0.038	0.099	0.033	-0.077	0.630
Entertainment information 4	-0.015	0.752	-0.003	0.002	0.142	0.062	0.080	0.596
Entertainment information 5	0.013	0.750	-0.034	-0.051	0.086	0.118	0.111	0.600
Entertainment information 6	-0.013	0.764	0.010	-0.074	0.133	0.037	0.166	0.637
Self-concept 1	-0.046	-0.019	0.860	-0.075	0.146	0.086	0.053	0.780
Self-concept 2	-0.038	-0.043	0.785	-0.010	0.130	0.074	0.082	0.648
Self-concept 3	-0.048	-0.073	0.803	0.043	0.144	0.130	0.019	0.692
Self-concept 4	0.014	0.012	0.792	-0.052	0.158	0.063	0.029	0.660
Interactivity 1	0.847	-0.045	-0.028	-0.055	0.095	0.077	0.060	0.742
Interactivity 2	0.706	-0.034	-0.007	-0.009	0.154	0.099	0.101	0.544
Interactivity 3	0.729	0.057	0.007	0.004	0.143	0.013	0.036	0.556
Interactivity 4	0.741	-0.001	-0.017	-0.007	0.045	0.082	-0.025	0.558
Interactivity 5	0.754	0.023	-0.029	0.044	0.103	0.082	0.087	0.597
Interactivity 6	0.760	-0.009	0.021	0.016	0.065	0.059	0.055	0.590
Cognitive Trust 1	0.194	0.214	0.133	0.162	0.787	0.114	0.093	0.767
Cognitive Trust 2	0.172	0.140	0.181	0.196	0.732	0.125	0.103	0.683
Cognitive Trust 3	0.181	0.192	0.169	0.175	0.722	0.110	0.091	0.671
Cognitive Trust 4	0.201	0.183	0.224	0.084	0.697	0.157	0.103	0.652
Emotional Trust 1	0.370	0.316	0.417	0.488	-0.266	0.146	0.162	0.767
Emotional Trust 2	0.306	0.339	0.383	0.486	-0.179	0.189	0.128	0.675
Emotional Trust 3	0.334	0.364	0.354	0.449	-0.183	0.204	0.189	0.682
Attitudinal Loyalty 1	0.143	0.129	0.112	0.113	0.133	0.870	0.068	0.841
Attitudinal Loyalty 2	0.138	0.084	0.151	0.114	0.137	0.824	0.079	0.766
Attitudinal Loyalty 3	0.127	0.109	0.136	0.122	0.141	0.839	0.074	0.790
Behavioral Loyalty 1	0.132	0.152	0.098	0.123	0.135	0.088	0.888	0.879
Behavioral Loyalty 2	0.167	0.156	0.119	0.161	0.189	0.132	0.854	0.874
Eigenroot (before rotation)	7.250	3.456	3.198	2.587	1.944	1.553	1.207	-
Variance explanation %(before rotation)	23.389%	11.148%	10.316%	8.344%	6.270%	5.011%	3.892%	-



## Validity analysis results

name	factor loadingcoefficient							Common Degree (Common Factor Variance)
	factor 1	factor 2	factor 3	factor 4	factor 5	factor 6	factor 7	
Cumulative variance interpretation rate %(before rotation)	23.389%	34.536%	44.853%	53.196%	59.466%	64.478%	68.370%	-
Eigenvalues (after rotation)	4.057	3.978	3.307	2.873	2.768	2.444	1.768	-
Variance explanation %(after rotation)	13.086%	12.831%	10.669%	9.269%	8.928%	7.884%	5.704%	-
Cumulative variance interpretation rate %(after rotation)	13.086%	25.917%	36.586%	45.855%	54.783%	62.666%	68.370%	-
KMO value	0.868							-
Barth sphericalvalue	8121.238							-
df	465							-
p-value	0.000							-

Note: If the numbers in the table are colored: blue indicates that the absolute value of the load coefficient is greater than 0.4, and red indicates that the commonality (variance of common factors) is less than 0.4.

Validity analysis showed that the factor load coefficients and commonality (variance of common factors) of each factor were as follows: functional information, entertainment information, self-concept and interactivity all had high factor load coefficients, especially the interactive part, with load coefficients exceeding 0.7, showing good discrimination. The factor load coefficients of cognitive trust and affective trust were also higher, reflecting strong correlation. The KMO value of 0.868 indicates that the data is suitable for factor analysis and the Bartlett sphere test has a p value of 0.000, further validating the validity of the data. The eigenvalues and variance interpretation rates after rotation show that the first seven factors can cumulatively explain 68.370% of variance, indicating that the model has good interpretation ability. It should be noted that projects with commonality below 0.4 require further examination.

## Model Fit Index

common measure	$\chi^2$	df	p	Chi-square degrees of freedom $\chi^2/df$	GFI	RMSEA	RMR	CFI	NFI	NNFI
criteria	-	-	>0.05	<3	>0.9	<0.10	<0.05	>0.9	>0.9	>0.9
price	475.463	406	0.010	1.171	0.945	0.019	0.047	0.991	0.943	0.990
other indicators	TLI	AGFI	IFI	PGFI	PNFI	PCFI	SRMR	RMSEA 90% CI		
criteria	>0.9	>0.9	>0.9	>0.5	>0.5	>0.5	<0.1	-		
price	0.990	0.933	0.991	0.774	0.823	0.865	0.033	0.010 ~ 0.025		

Note: Default Model  $\chi^2(465) = 8323.783, p = 1.000$

The model fitting indexes show that the model fits well. Specifically, the chi-square value was 475.463, the degrees of freedom was 406, and the p-value was 0.010, indicating that the model fit was significant. The chi-squared degree of freedom ratio  $\chi^2/df$  is 1.171, lower than 3, further supporting the suitability of the model. The GFI (Good Fit Index) was 0.945 and RMSEA (Root Mean Square Error Approximation) was 0.019, both meeting the fit criteria. The RMR (Root Mean Square Residual) was 0.047, CFI (Comparative Fit Index) was 0.991, NFI (Normative Fit Index) was 0.943, NNFI (Non-Normative Fit Index) was 0.990, all higher than 0.9, indicating a good model fit. Other indicators such as TLI of 0.990, AGFI of 0.933, IFI of 0.991, all meet the criteria, and SRMR of 0.033, lower than 0.1, indicating that the residual of the model is small. Overall, the model has a strong fitting ability.

Discriminant validity: Pearson correlation and square root of AVE

	functional information	Entertainment information	self-concept	interactive	cognition trust	affection trust	attitudinal loyalty	behavioral loyalty
functional information	0.831							
Entertainment information	-0.046	0.714						
self-concept	0.005	0.015	0.792					
interactive	0.011	0.045	0.014	0.727				
cognition trust	0.289	0.300	0.300	0.311	0.800			
affection trust	0.282	0.303	0.303	0.318	0.267	0.830		
attitudinal loyalty	0.223	0.210	0.259	0.258	0.388	0.397	0.839	
behavioral loyalty	0.234	0.255	0.191	0.249	0.380	0.386	0.291	0.882

Note: diagonal blue numbers are AVE square root values

Discrimination validity analysis showed that the square root of AVE (diagonal blue numbers) of each latent variable was higher than the corresponding Pearson correlation coefficient, indicating that the model had good discrimination validity. For example, functional information had an AVE of 0.831, significantly higher than its correlation coefficient with other variables, while entertainment information had an AVE of 0.714, also higher than its correlation coefficient with functional information (-0.046) and other variables. This trend was reflected in self-concept (AVE = 0.792), interactivity (AVE = 0.727), cognitive trust (AVE = 0.800), affective trust (AVE = 0.830), attitudinal loyalty (AVE = 0.839) and behavioral loyalty (AVE = 0.882), which further confirmed the independence among latent variables and the validity of the model.

Factor Loading Coefficient Table

Factor(latent variable)	Measurement item (variable)	Standard load factor (Std. Estimate)	Std. Error)	$\chi^2$ (CR value)	<i>p</i>
functional information	Functional information 1	0.89	-	-	-
	Functional information 2	0.815	0.035	20.935	0
	Functional information 3	0.785	0.036	20.039	0
Entertainment information	Entertainment information 1	0.653	-	-	-
	Entertainment information 2	0.676	0.064	12.872	0
	Entertainment information 3	0.727	0.068	13.645	0
	Entertainment information 4	0.731	0.067	13.699	0
	Entertainment information 5	0.734	0.066	13.755	0
	Entertainment information 6	0.756	0.068	14.071	0
self-concept	Self-concept 1	0.883	-	-	-
	Self-concept 2	0.744	0.038	18.91	0
	Self-concept 3	0.781	0.037	20.202	0
	Self-concept 4	0.752	0.038	19.184	0
interactive	Interactivity 1	0.852	-	-	-

	Interactivity 2	0.686	0.039	16.579	0
	Interactivity 3	0.683	0.04	16.487	0
	Interactivity 4	0.676	0.039	16.282	0
	Interactivity 5	0.728	0.04	17.927	0
	Interactivity 6	0.72	0.039	17.654	0
cognition trust	Cognitive Trust 1	0.871	-	-	-
	Cognitive Trust 2	0.779	0.036	20.349	0
	Cognitive Trust 3	0.786	0.036	20.594	0
	Cognitive Trust 4	0.759	0.036	19.585	0
affection trust	Emotional Trust 1	0.895	-	-	-
	Emotional Trust 2	0.798	0.035	20.981	0
	Emotional Trust 3	0.793	0.035	20.819	0
attitudinal loyalty	Attitudinal Loyalty 1	0.892	-	-	-
	Attitudinal Loyalty 2	0.796	0.034	20.842	0
	Attitudinal Loyalty 3	0.827	0.034	21.808	0
behavioral loyalty	Behavioral Loyalty 1	0.815	-	-	-
	Behavioral Loyalty 2	0.945	0.06	15.555	0

Note: A horizontal bar '-' indicates that the item is a reference item.

The results of factor load coefficient analysis show that the measured terms of each latent variable exhibit good standard load coefficients, indicating the validity of the model. Among the functional information measurement items, the standard load coefficient of functional information 1 was 0.89, and the other items were 0.815 and 0.785, respectively, which were significant ( $p = 0$ ). The standard load coefficients of entertainment information ranged from 0.653 to 0.756, showing strong correlation. Self-concept also performed well, with a maximum load of 0.883. Interactivity, cognitive trust, emotional trust, attitudinal loyalty and behavioral loyalty were all higher than 0.6, and the  $p$  values were all 0, which further verified the reliability and validity of the measurement. All CR values are significant, indicating that the model has good adaptability.

#### *Difference Test*

Difference Test Analysis Results			
nape	option	attitudinal loyalty	behavioral loyalty
married or not	Yes ( $n=349$ )	$3.05 \pm 1.10$	$3.14 \pm 1.20$
	No ( $n=151$ )	$3.31 \pm 1.09$	$3.41 \pm 1.16$
	$t$	5.682	5.352
	$p$	0.018*	0.021*
age	18-22 years old ( $n=143$ )	$3.01 \pm 1.04$	$2.98 \pm 1.17$
	23-30 years old ( $n=246$ )	$3.10 \pm 1.14$	$3.31 \pm 1.19$

	31-35 years old ( $n=111$ )	$3.37\pm1.07$	$3.35\pm1.19$
	$F\Box$	3.665	4.339
	$p\Box$	0.026*	0.014*
area of residence	First-tier cities ( $n=117$ )	$3.35\pm1.09$	$3.36\pm1.20$
	Second tier cities ( $n=143$ )	$3.22\pm1.06$	$3.34\pm1.13$
	Third tier cities and below ( $n=114$ )	$2.99\pm1.13$	$3.25\pm1.18$
	Rural areas ( $n=126$ )	$2.96\pm1.10$	$2.94\pm1.22$
	$F\Box$	3.604	3.397
	$p\Box$	0.013*	0.018*
Monthly consumption of cosmetics	Less than 300 yuan ( $n=67$ )	$2.88\pm1.20$	$2.87\pm1.31$
	RMB 300-500 ( $n=59$ )	$2.94\pm0.99$	$3.09\pm1.25$
	RMB 501-1000 ( $n=97$ )	$3.08\pm1.10$	$3.19\pm1.19$
	RMB 1001-2000 ( $n=141$ )	$3.14\pm1.12$	$3.26\pm1.24$
	More than 2001 yuan ( $n=136$ )	$3.36\pm1.05$	$3.44\pm1.01$
	$F\Box$	2.935	2.897
	$p\Box$	0.020*	0.022*

\*  $p<0.05$  \*\*  $p<0.01$

The results of difference test showed that marital status, age, residence area and monthly consumption of cosmetics had significant effects on attitude loyalty and behavior loyalty. Married people scored significantly lower on attitude loyalty ( $3.05\pm1.10$ ) and behavior loyalty ( $3.14\pm1.20$ ) than unmarried people (attitude loyalty  $3.31\pm1.09$ , behavior loyalty  $3.41\pm1.16$ ),  $t$  values were 5.682 and 5.352,  $p$  values were less than 0.05. Among different age groups, the 31-35 age group performed best on both loyalty scores. Differences in residential areas were also significant, with rural areas having the lowest loyalty scores. The higher the monthly consumption of cosmetics, the higher the loyalty score. These results provide an important basis for understanding the consumption behavior of different groups.

### Correlation Analysis

Pearson correlation								
	functional information	Entertainment information	self-concept	interactive	cognition trust	affection trust	attitudinal loyalty	behavioral loyalty
functional information	1							
Entertainment information	-0.046	1						
self-concept	0.005	0.015	1					
interactive	0.011	0.045	0.014	1				
cognition trust	0.289**	0.300**	0.300**	0.311**	1			
affection trust	0.282**	0.303**	0.303**	0.318**	0.267**	1		
attitudinal loyalty	0.223**	0.210**	0.259**	0.258**	0.388**	0.397**	1	
behavioral loyalty	0.234**	0.255**	0.191**	0.249**	0.380**	0.386**	0.291**	1

\*  $p<0.05$  \*\*  $p<0.01$

Pearson correlation analysis showed that functional information had low correlation with other variables, and only had significant positive correlation with cognitive trust (0.289\*\*) and emotional trust (0.282\*\*). Recreational information was not highly correlated with all variables, especially with attitude loyalty (0.210\*\*) and behavior loyalty (0.255\*\*). The correlation between self-concept and other variables was also not significant. Cognitive trust and emotional trust were positively correlated with attitudinal loyalty and

behavioral loyalty, especially cognitive trust and behavioral loyalty (0.380\*\*). These results suggest that trust plays an important role in shaping consumer loyalty.

#### *Model Regression Coefficient Analysis*

Summary table of model regression coefficients							
X	→	Y	non-normalized path coefficient	SE	$\chi^2$ (CR value)	p	normalized path coefficient
affection trust	→	behavioral loyalty	0.336	0.046	7.324	0.000	0.304
cognition trust	→	behavioral loyalty	0.349	0.049	7.121	0.000	0.296
affection trust	→	attitudinal loyalty	0.320	0.042	7.596	0.000	0.313
cognition trust	→	attitudinal loyalty	0.328	0.045	7.294	0.000	0.301
interactive	→	affection trust	0.356	0.043	8.281	0.000	0.298
self-concept	→	affection trust	0.325	0.040	8.159	0.000	0.293
Entertainment information	→	affection trust	0.356	0.043	8.306	0.000	0.299
functional information	→	affection trust	0.297	0.037	8.093	0.000	0.291
interactive	→	cognition trust	0.325	0.040	8.057	0.000	0.290
self-concept	→	cognition trust	0.302	0.037	8.062	0.000	0.290
Entertainment information	→	cognition trust	0.330	0.040	8.201	0.000	0.296
functional information	→	cognition trust	0.285	0.035	8.256	0.000	0.298

Note: → Indicates path influence relationship

The regression coefficients of the model showed that each latent variable had significant influence on behavior loyalty and attitude loyalty. The non-standardized path coefficient of affective trust to behavioral loyalty was 0.336 ( $p=0.000$ ), and the standardized path coefficient was 0.304. The non-standardized path coefficient of cognitive trust to behavioral loyalty was 0.349 ( $p=0.000$ ), and the standardized path coefficient was 0.296. Emotional trust and cognitive trust had significant path coefficients to attitudinal loyalty, 0.320 and 0.328 respectively ( $p = 0.000$ ). Interaction, self-concept and information function have significant effects on emotional trust and cognitive trust, and all of them show strong path coefficients, emphasizing the key role of emotional trust and cognitive trust in loyalty. Overall, the model exhibits good path relationships and significance.

#### **Conclusions and Recommendations**

This study analyzes the influence of functional information, entertainment information, interactive information and self-concept on brand loyalty of domestic cosmetics in social media marketing, and draws the following conclusions and suggestions.

Functional information has a significant positive effect on attitude loyalty and behavior loyalty of domestic cosmetics brands. This indicates that consumers place a high value on the usefulness and quality of products in their purchasing decisions. Therefore, domestic cosmetics brands should pay attention to improving product quality and ensure that product functions meet the practical needs of consumers. Specific measures

include providing detailed descriptions of product ingredients, methods of use and effects to enhance consumer trust; encouraging users to share authentic experiences to increase potential customer confidence through positive user reviews; and obtaining relevant industry certifications and awards to prove the professionalism and reliability of products.

Entertainment messages can significantly enhance consumers' emotional connections and brand attitudes. This means that interesting and engaging content can effectively capture consumers' attention and enhance their love of brands. Therefore, domestic cosmetics brands should publish more interesting and creative content on social media. Specific measures include creating humorous and creative ads and Short Video to appeal to younger consumer groups; launching fun online interactive games or challenges to encourage consumers to participate and share; and partnering with well-known stars or influencers to leverage their influence to increase brand appeal.

Interactive messaging can enhance consumers' sense of engagement and belonging, thereby increasing their brand loyalty. This means positive interaction can foster a connection between consumers and brands. Therefore, domestic cosmetics brands should strengthen their interaction with consumers. Specific measures include regular online Q & A, voting, raffle and other activities to encourage consumers to actively participate; one-on-one personalized communication with consumers through private letters or comment replies to understand their needs and feedback; and encouraging consumers to create brand-related content and display excellent works on official platforms.

Self-concept plays a moderating role in social media marketing, influencing consumer attitudes and behaviors towards brands. This suggests that consumers' personal identities and values are closely linked to their preferences for brands. Therefore, domestic cosmetics brands should pay attention to and strengthen the consistency with consumers' self-concept. Specific measures include clarifying the core values and target consumer groups of the brand to ensure that the brand image matches consumers' expectations; providing personalized product recommendations and services to make consumers feel the brand's attention to their unique needs; and actively participating in public welfare activities and social issues to demonstrate the brand's social responsibility and attract consumers with the same values.

Cognitive trust and emotional trust play an important role as mediating variables between social media marketing and brand loyalty. Cognitive trust is based on consumers' judgment of brand ability and integrity, which is the basis of establishing long-term relationship; emotional trust originates from consumers' emotional connection and identity to brand, which can enhance consumers' loyalty to brand. In order to improve these two trust levels, domestic cosmetics brands need to take a series of measures. For example, enhance consumer cognitive trust by providing transparent product information and excellent customer service; and cultivate emotional trust by telling brand stories, building emotional empathy, and conducting social responsibility activities. These measures not only help to enhance brand image, but also effectively promote consumer loyalty.

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