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Analyzing Social Media Engagement's Effect on Cosmetics Purchase Decisions: An Empirical Investigation Based on the Theory of Planned Behavior

Zixuan Liu

Food Science And Engineering Department, Guangdong Ocean University, Yangjiang City, Guangdong, 529500, China
Email: 1733530274@qq.com

Abstract:

Given the swift evolution of social media platforms , its impact towards consumers' purchasing behavior of beauty products has become a focus of attention in both academia and industry. Stemming from the TPB, the aim of this research is to investigate the influence mechanism and internal pathways of the focus of social media on the intent to purchase by consumers toward beauty products. The research adopts an online questionnaire survey method, using a five-point Likert scale to measure relevant variables, and systematically analyzes the data through validity and reliability analysis, correlation analysis, linear regression analysis, and mediation effect analysis. Findings show that the focus on social media markedly enhances consumer attitudes, personal standards, and the sense of behavioral influence in buying beauty items. Simultaneously, attitudes, subjective norms, and perceived behavioral control also significantly and positively predict purchase intention. Additionally, the direct effect of social media attention on purchase intention is also important. Further mediation analysis reveals that attitudes, subjective norms, and perceived behavioral control play a partial mediating role both social media attention and purchase intention.

Keywords: Beauty products, Social media attention, TPB, Mediation effect

1. Introduction

Within the context of modern society , Products of beauty have evolved into a vital component of daily human existence(Eze, Tan et al., 2012). According to Insight Ace Analytic (2022), the global beauty and cosmetics industry market size reached 2.7billion in 2021 *and is projected to grow to*13.34 billion by 2030, demonstrating significant market potential. Meanwhile, the swift evolution of social media

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has not only altered how individuals interact and amuse themselves(Gwenn Schurgin O'Keeffe, 2011) but has also become a critical channel for consumers to access product information and reviews, becoming more crucial in the process of making decisions for beauty product purchases. Although numerous scholars have explored factors influencing consumers' purchase of beauty products from various perspectives (Debarun Chakraborty et al., 2024; Jeong Bin Whang et al., 2021), and Research has increasingly concentrated on social media networks, studies examining the effect of social media attention on consumers' purchase intention for Cosmetics based on the TPB remain scarce.

2. Literature review

2.1 Social media attention

Social media, as a virtual hub for information exchange, provides individuals and other members within the platform with convenient channels for sharing information, including text messages, photos, videos, and various online links (Helmrich, A. M., 2021). Over the past two decades, social media has gradually become a popular choice for people to maintain relationships with friends and family, seek entertainment, and spend leisure time, thanks to its unique functional attributes (Arness, D. C., & Ollis, T., 2023). However, in today's era of overwhelming information flow, the attention resources of the public have become increasingly scarce. Both traditional news media and emerging digital platforms are fiercely competing for this valuable resource within the media ecosystem. Against this backdrop, the concept of social media attention has been redefined as the degree of attention that the general audience pays to various topics or subjects on social media. This audience-centric definition offers a new research pathway for analyzing media attention (Müller, M., 2022).

2.2 TPB theoretical model

TPB proposed by Ajzen (1985), provides a solid theoretical model designed to forecast and elucidate the buying motives associated with beauty products. (Huong V.T.M et al., 2024). Model TPB primarily consists of three fundamental variables: attitude(ATT), subjective norm (SN), and perceived behavioral control (PBC). Among these, attitude is dual-dimensional, encompassing both positive and negative aspects. At the behavioral level, attitude reflects a person's optimistic or pessimistic anticipations about the results of a particular action.SN refers to the social pressure exerted on an individual (Ajzen & Driver, 1992), where expectations from others and societal pressures can significantly influence individual behavior. PBC denotes Individuals' assessment of the simplicity or complexity involved in participating in carrying out a given action(Ajzen, 1991). Additionally, the TPB model allows for the inclusion of other explanatory variables that can significantly influence behavior or intentions (F.G. Kaiser & H. Scheuthle, 2003), thereby enhancing the model's explanatory power.

2.3 Theoretical analysis and research hypothesis

2.3.1 Investigating how following on social media influences the intent to purchase.

As social media evolves swiftly, its impact on consumers' purchase intentions has emerged as a central theme in scholarly studies. Numerous researches have shown a significant correlation link social media attention with consumers' purchase intentions. For instance, KV, S. et al. (year) found that features such as displaying discount rates or celebrity endorsements in social media advertisements significantly enhance consumers' purchase intentions. Similarly, Lim, X. J. et al. (year) demonstrated that the higher the match between the advertisement endorser and the product, the stronger the consumers' purchase interest. An increasing number of scholars have explored the impact of social media engagement on consumer behavior from various perspectives, further highlighting the significance of social media attention in shaping consumer decision-making processes. Based on this, the research proposes the following hypothesis:

H1: Social media attention has a significant positive impact on consumers' purchase intentions for beauty products.

2.3.2 Attitude operates as a mediating mechanism connecting social media with purchase intention

Social media provides consumers with abundant information and user reviews about beauty products. By following official social media accounts of beauty brands, beauty bloggers, and participating in beauty-related discussions, consumers can access multidimensional information about product performance, quality, and usage effects. This information not only shapes consumers' perceptions and

evaluations of beauty products but also further influences their behavioral attitudes. For instance, Guo et al. (2011) found that information dissemination on social networks not only directly affects purchasing behavior but also influences consumer attitudes, such as perceived value or risk perception of products. Additionally, Zafar et al. (2021) highlighted that popular reviews may reinforce positive attitudes or mitigate negative attitudes, indirectly promoting or inhibiting impulsive consumption behavior. These findings align closely with the mechanism of behavioral attitudes influencing behavioral intentions in the TPB. Based on this, the study formulates the following investigational hypothesis:

H2: Social media attention has a significant positive impact on consumers' attitudes toward purchasing beauty products.

2.3.3 Subjective norms function as a mediator linking social media to purchase intention

Social media plays a crucial role in shaping subjective norms. Consumers are embedded in complex social networks on social media platforms, where their behaviors are easily influenced by friends, family, and opinion leaders they follow. When consumers observe members of their social circles sharing positive experiences with a particular beauty product or see beauty influencers recommending a brand, they often experience social pressure or a sense of identification, leading to a willingness to try the product. Research by P. Mikalef, M. Giannakos, and A. Pateli indicates that users tend to share product information with friends after browsing. This sharing behavior not only enhances the dissemination of information but also has the potential to attract more potential customers. In recent years, word-of-mouth marketing has gained increasing importance in the marketing field, as positive reviews from peers can significantly drive future purchasing behavior. However, companies must also be cautious of the impact of negative reviews, as negative word-of-mouth can quickly spread, adversely affecting product market performance and corporate reputation. Based on this, the study puts forward the following hypothesis:

H3: Social media attention yields a demonstrable positive influence on subjective norms.

2.3.4 Perceived behavioral control plays a mediating role link the use of social media platforms with the intent to purchase

Social media attention can significantly enhance consumers' perceived behavioral control over the purchase of beauty products. Firstly, social media provides consumers with abundant product information and purchasing channel details, enabling them to easily find desired beauty products and understand relevant purchasing methods. For instance, by following official accounts of beauty brands, consumers can access information about sales channels, including links to online e-commerce platforms and addresses of offline stores, while also staying updated on product prices and promotional activities. The transparency and accessibility of such information enhance consumers' sense of control over their purchasing behavior. When consumers perceive that they can effortlessly obtain the desired products, the convenience and security of transactions significantly boost their purchase confidence and intention on social media platforms (Sembada, A. Y., & Koay, K. Y., 2021). Secondly, beauty tutorials and usage tips shared on social media also contribute to improving consumers' perceived behavioral control. By learning these tutorials and techniques, consumers can better master the use of beauty products, thereby increasing their confidence in purchasing and using such products. Based on this, the study proposes the following hypothesis:

H4: Social media attention displays a meaningful positive relationship with perceived behavioral control.

3. Methodology

3.1 Variable measurement

This study employs a five-point Likert scale (1 - strongly disagree to 5 - strongly agree) to measure the variables, with the specific scale designs as follows:

3.1.1 Behavioral Attitude

Modified from the measurement scale developed by Zhang, Leibao et al. (2019), it measures consumers' attitudes toward purchasing beauty products.

3.1.2 Subjective Norm

Adapted from the scale by Ajzen, I (2002), it measures the social pressure and expectations perceived by consumers from important people, such as family and friends, regarding the purchase of beauty products.

3.1.3 Perceived Behavioral Control

Adapted from the scale by Wong, Song-Lin et al. (2018), it measures consumers' perceived ability to purchase and use beauty products, including the convenience and auton-

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omy of purchasing. Example items include: "Purchasing beauty products is primarily up to me."

3.1.4 Social Media Attention

Measures the extent to which consumers pay attention to beauty-related content on social media.

3.1.5 Purchase Intention for Beauty Products

Directly measures consumers' intention to purchase beauty products by assessing the probability of purchasing cosmetic in the near future.

4. Result

4.1 Analysis of Frequency

Table 1 Frequency analysis (n=404)

Title	Option	Frequency	Percentage%
Gender	Male	175	43.32
	Female	229	56.68
Age group	Aged 18 or below	24	5.94
	18-24	77	19.06
	25-34	139	34.41
	35-44	108	26.73
	Aged 45 or above	56	13.86
Educational background	Junior high school or lower	16	3.96
	upper secondary	84	20.79
	College degree	282	69.8
	Master's degree or higher	22	5.45
Income level	5000 or below	99	24.51
	5000-10000	141	34.9
	10001-15000	91	22.53
	15001-20000	47	11.63
	20001or above	26	6.44

As shown in the table, the sample consists of 43.32% males and 56.68% females, indicating a relatively balanced gender distribution. Furthermore, the sample covers a wide range of age groups, ensuring diversity and enhancing the generalizability and representativeness of the research findings.

4.2 Reliability test

Table 2 Reliability test (n = 404)

Name	Corresponding items	Cronbach alpha coefficient
Attitude(ATT)	3	0.815
subjective norm(SN)	3	0.827
perceived behavioral control(PBC)	3	0.826
purchase intention(PI)	3	0.838
media attention(MA)	3	0.833

Data dependability was evaluated through the application of Cronbach's α coefficient. Typically, α >0.8 denotes high reliability; 0.7–0.8 implies good dependability; 0.6–0.7 indicates acceptable dependability; and <0.6 represents poor reliability. As shown in the table, the α coefficients for all four dimensions exceed 0.8, with the minimum value being 0.815.

This indicates high data reliability, ensuring credible and

reliable research results.

4.3 Validity analysis

Table 3 KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.871
Bartlett's Test of Sphericity	Approx. Chi-Square	2736.775
	df	105.000
	Sig.	0.000

Validity tests (KMO=0.871; Bartlett's χ^2=2736.775, p<0.01) confirmed the questionnaire's excellent suitability for analysis.

4.4 Liner regression analysis

Table 4 Linear regression analysis (n = 404)

	Unstandardized coefficients		Standardized coefficients	t	p	VIF	R squared	Adj-R squared	F
	B	Standard error	Beta						
Constant	1.957	0.149		13.148	0.000		0.180	0.178	F(1,404)=88.055, p=0.000
media attention	0.397	0.042	0.424	9.384	0.000	1.000			

a dependent variable: attitude
D-W: 1.774
Linear regression analysis was conducted with attitude as the dependent variable and social media attention as the independent variable. The model formula is: Attitude = 1.957 + 0.397 * Social Media Attention, with an adjusted R^2 of 0.178, indicating that social media attention explains 17.764% of the variance in attitude. All VIF values <5 and D-W ≈2 indicated no multicollinearity or autocorrelation.The F-test was significant (F=88.055, p<0.001), representing that social media attention significantly affects attitude. A considerable positive influence of social media attention on attitude was found (β=0.397, t=9.384, p<0.001).

Table 5 Linear regression analysis (n = 404)

	Non-standardized coefficients		Standardized coefficients	t	p	VIF	R squared	Adj-R squared	F
	B	Standard error	Beta						
Constant	2.137	0.156		13.662	0.000		0.130	0.128	F(1,404)=60.206, p=0.000
Social media attention	0.345	0.045	0.361	7.759	0.000	1.000			

a dependent variable: subjective norm
D-W: 1.935
Social media attention had a notable positive influence on subjective norm (β=0.345, t=7.759, p<0.001; F=60.206, p<0.001), accounting for 12.8% of variance (adjusted R^2=0.128). VIF <5 and D-W ≈2 indicated no multicollinearity or autocorrelation.

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Table 6 Linear regression analysis (n = 404)

	Non-standardized coefficients		Standardized coefficients	t	p	VIF	R squared	Adj-R squared	F
	B	Standard error	Beta						
Constant	1.963	0.148		13.221	0.000		0.197	0.195	F(1,404)=98.551, p=0.000
Social media attention	0.419	0.042	0.444	9.927	0.000	1.000			

a dependent variable: perceived behavioral control

D-W: 2.042

Regression results indicated social media attention significantly affected PBC (β=0.419, t=9.927, p<0.001; F=98.551, p<0.001), with 19.5% variance explained (adjusted R^2=0.195). No multicollinearity (VIF <5) or autocorrelation (D-W ≈2) was observed.

Table 7 Linear regression analysis (n = 404)

	Non-standardized coefficients		Standardized coefficients	t	p	VIF	Rsquared	Adj-Rsquared	F
	B	Standard error	Beta						
Constant	0.995	0.193		5.149	0.000		0.286	0.279	F(4,404)=39.967, p=0.000
Attitude	0.106	0.051	0.104	2.088	0.037	1.394			
Subjective norm	0.155	0.049	0.156	3.172	0.002	1.354			
Perceived behavioral control	0.194	0.050	0.193	3.886	0.000	1.373			
Social media attention	0.245	0.048	0.257	5.120	0.000	1.408			

a dependent variable: purchase intention

D-W: 2.072

The model explained 27.89% of variance in purchase intention (adjusted R^2=0.279). No multicollinearity (VIF <5) or autocorrelation (D-W ≈2) was observed; the F-test was significant (F=39.967, p<0.001). ATT (β=0.106, p<0.05), SB (β=0.155, p<0.01), PBC (β=0.194, p<0.001), and social media attention (β=0.245, p<0.001) had significant positive effects on purchase intention.

4.5 Mediation effect analysis

4.5.1 Attitude plays a mediating role connecting social media following with purchase intention

Table 8 Summarize the results of mediation effect size (*p < 0.05 **p < 0.01 ***p < 0.001)

Item	Test outcomes	c	a*b	c’	Effect proportion formula	Proportion of effect
		Overall Impact	Mediator influence	Direct impact		
Social media attention=>Attitude=>Purchase intention	partial mediation	0.422***	0.080***	0.342***	a * b / c	0.190

Note:the total effect is represented by c, the indirect effect (intermediate effect) by ab, and the direct effect by c’.*

For the path analysis of “social media attention → attitude → purchase intention,” a (0.397***) and b (0.202***) were significant, c’ (0.342***) was significant, and the 95% Bootstrap confidence interval for a*b (0.080***) was

(0.034 - 0.127), excluding 0. These results meet the criteria for partial mediation. Thus,attitude served as a partial mediator, explaining 19.0% of social media attention's total effect on purchase intention.

4.5.2 Subjective norms mediate the association of social media attention with purchase intention

Table 9 Summary of mediation effect size results (*p < 0.05 **p < 0.01 ***p < 0.001)

Item	Results of the analyses	c	a*b	c'	Effect scale formula	Proportion of effect
		Overall impact	Mediating Effect	Direct Influence		
Social media attention=> Subjective norms =>Purchase intention	partial mediation	0.422***	0.083***	0.340***	a * b / c	0.196

Note: Note: c denotes the total effect, a*b is the product of a and b (indirect effect), and c' represents the direct effect. For the path analysis of "social media attention → subjective norm → purchase intention," a (0.345***) and b (0.239***) were significant, c' (0.340***) was significant, and the 95% Bootstrap confidence interval for a*b (0.083***) was (0.050 - 0.120), excluding 0. These results meet the criteria for partial mediation. Thus, subjective norm partially mediates the relationship between social media attention and purchase intention, accounting for 19.6% of the total effect.

4.5.3 Perceived behavioral control mediates the effect of social media attention on purchase intention

Table 10 Summary of mediation effect size results (*p < 0.05 **p < 0.01 ***p < 0.001)

Item	Analysis results	c	a*b	c'	Effect proportion formula	Proportion of influence
		Total influence	Indirect impact	Direct impact		
Social media atttention=>Perceived behavioral control =>purchase intention	partial mediation	0.422***	0.110***	0.312***	a * b / c	0.26

Note: The total effect is expressed as c, the intermediate effect (indirect effect) as ab, and the direct effect as c'.*
For the path analysis of "social media attention → perceived behavioral control → purchase intention," a (0.419***) and b (0.262***) were significant, c' (0.312***) was significant, and the 95% Bootstrap confidence interval for a*b (0.110***) was (0.067 - 0.158), excluding 0. These results meet the criteria for partial mediation. Thus,Social media attention influences purchase intention through the partial mediation of perceived behavioral control, accounting for 26.0% of the total effect.

5. Conclusion

This study, based on the Theory of Planned Behavior (TPB), explores the mechanism by which social media attention influences consumers' purchase intentions for beauty products. The findings show that social media attention significantly and positively affects consumers' attitudes, subjective norms, and perceived behavioral control. Mediation analysis demonstrates how social media attention affects purchase intention through the partial mediation of attitudes, subjective norms, and perceived behavioral control, indicating both direct and indirect effects. This study extends theoretical research on the impact of social media attention on beauty product purchase intentions and provides theoretical support for marketing practices in the beauty industry. Future research could expand the sample to include diverse cultural backgrounds and consumer groups, and explore other potential influencing factors to deepen understanding.

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