

The Impact of Brand Personality on Brand Loyalty and Its Indirect and Moderating Effects: An Empirical Study Based on Nike

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Abstract: Brand personality is a critical factor influencing brand loyalty. This study integrates two mediating variables (brand identification and brand trust) and two moderating variables (social media engagement and brand-cultural congruence) to systematically examine their multilevel mechanisms. Empirical analysis focusing on the Nike brand demonstrates that competence and ruggedness dimensions exert significant positive effects on brand loyalty ($\beta = 0.158/0.390$; $R^2 = 60.4\%$). Brand identification (accounting for 50.68% of the total effect) and brand trust (37.39%) form critical chain indirect effects, with the total indirect effects constituting 62.36% of the overall influence. While social media engagement ($\beta = 0.37$) and brand-cultural congruence ($\beta = 0.383$) significantly enhance brand loyalty, their moderating effects were not statistically significant. The research validates the integrated indirect pathway in which personality influences identification/trust, which in turn influences loyalty, confirms the effects of other moderating variables, and provides theoretical support for differentiated marketing strategies in sportswear brands.

1 INTRODUCTION

Over the past several years, academics have turned their attention to brand personality, elevating it to a key subject within marketing and brand management scholarship. In his classic study, Aaker (1997) proposed the Five-Dimension Brand Personality Model, which includes sincerity, excitement, competence, sophistication, and ruggedness, and pointed out that different brand personalities have varying degrees of influence on consumers' brand loyalty. In today's highly competitive market environment, brand loyalty has been proven to be one of the key factors for long-term success of enterprises. Loyal consumers tend to repeatedly purchase the same brand's products and actively recommend them to others, thereby bringing long-term value to the brand (Mabkhot & Salleh, 2017). In the field of brand marketing, brand personality is considered an important factor influencing brand loyalty (Alowaidi, Alhaeegy & Kadhim, 2024). Some scholars also believe that brand personality can enhance brand loyalty by jointly strengthening consumers' brand trust and brand identification (Kim, Han & Park, 2001). At the same time, research has shown that

social media engagement and brand-cultural congruence are important moderating variables, and the significant way in which they affect consumers' brand loyalty is by altering consumers' perception and interpretation of brand personality (Hudson et al., 2020). However, the relative influence of a series of variables and the impact of brand personality on brand loyalty still lack systematic quantitative research. Studying this issue is not only of great practical significance, as it helps enterprises to formulate more precise brand marketing strategies, but also provides data reference for other researchers. This research examines how brand personality drives brand loyalty by first evaluating the relative influence of its distinct dimensions, then uncovering the dual mediation pathways, namely through brand identification and brand trust, along with their respective indirect effect proportions, and finally assessing whether social media engagement and the alignment between brand values and cultural norms moderate the link between personality and loyalty. By constructing an integrated theoretical model of the four variables and using empirical methods to quantify the influence magnitudes of the indirect and moderating effects, the study verifies the applicability

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of the theoretical model and evaluates the interaction relationships among the variables, thereby providing empirical support. The research not only fills the academic gap in the multi-layered impact mechanism of brand personality but also provides a strategic basis for enterprises to optimize and shape brand personality and enhance brand loyalty. This study selects Nike as a typical case, and its appropriateness lies in the fact that the brand is typical of the global sports market, with a universal user base across age and gender, and a systematic construction of brand personality. As a paradigm of brand symbolization practice, Nike continuously shapes the core value of the sports spirit by establishing core personality dimensions (Manivel, 2024). Using Nike as a case provides an ideal observation field for exploring the impact mechanisms of multiple variables of brand personality on brand loyalty.

2 LITERATURE REVIEW

Brand personality refers to the anthropomorphic characteristics exhibited by a brand in the minds of consumers. It differentiates the brand from its competitors and helps consumers establish an emotional connection (Aaker, 1997). In his classic study, Aaker (1997) proposed the Five-Dimension Brand Personality Model, which has become an important theoretical framework in the field of brand marketing. At the same time, Muniz & Marchetti (2022) studied the applicability of brand personality in different markets and suggested that some brands may combine multiple dimensions rather than fitting into a single category. Brand loyalty is a comprehensive manifestation of consumers' sustained preference for and repeat purchase behavior of a particular brand, reflecting consumers' long-term commitment to the brand on both psychological and behavioral levels (Oliver, 1999). Existing research indicates that brand loyalty primarily includes two dimensions: Behavioral Loyalty and Attitudinal Loyalty, which interact and jointly shape consumers' brand loyalty (Punniyamoorthy & Prasanna Mohan Raj, 2007). Behavioral Loyalty refers to the brand loyalty demonstrated through actual purchase behavior and can be measured by repeat purchase rate, purchase share, and purchase inertia indicators. Attitudinal Loyalty reflects consumers' emotional attachment and psychological identification with the brand, manifested through brand preference, recommendation willingness, and emotional commitment (Dick & Basu, 1994). Research has shown that cultivating a unique brand persona can

indirectly boost consumer loyalty by first fostering brand identification and subsequently building brand trust (Kimpakorn & Tocquer, 2010). Brand identification is mainly based on Self-Congruity Theory, where consumers tend to choose brand personalities that align with their Actual Self or Ideal Self (Usakli & Baloglu, 2011). According to Signaling Theory, a company's consistent performance in brand personality can be seen as a credible signal of quality commitment, reducing consumers' decision-making risks (Islam & Rahman, 2016). In recent years, studies have shown that social media engagement and brand-cultural congruence are two key moderating variables, and both significantly affect consumers' brand loyalty by altering their perception and interpretation of brand personality (Hudson et al., 2020). The moderating effect of social media engagement is reflected in the interactivity and content co-creation features of social media, which significantly amplify the psychological penetration efficiency of brand personality for consumers. The moderating effect of brand-cultural congruence is reflected in the alignment between brand personality and local cultural values, which directly affects the conversion efficiency of brand loyalty. Existing research has revealed the dynamic evolution of the relationship between brand personality and brand loyalty. From the early direct effect theory of brand personality proposed by Aaker (1997)—where for every one standard deviation increase in personality distinctiveness, repeat purchase intention grows by 14%—it has gradually developed into indirect path analysis based on Self-Congruity Theory. For example, Huang et al. (2020) verified that the dual joint indirect effect of brand identification and brand trust is significantly stronger than the single mechanism. However, existing research still suffers from a lack of integration and has yet to construct a framework integrating multiple mediating and moderating variables, leading to insufficient explanatory completeness and practical consistency regarding the multi-layered impact mechanism of brand personality.

Based on relevant theories and literature analysis, this study proposes the following hypotheses:

H1: Brand personality positively affects brand loyalty.

H2: Brand identification and brand trust have a chain-mediated effect between brand personality and brand loyalty.

H3: Social media engagement and brand-cultural congruence have a moderating effect on the relationship between brand personality and brand loyalty.

3 RESEARCH DESIGN

This study will use Nike as a case and collect numerical data through a structured questionnaire survey with a Likert scale. The research will utilize multiple linear regression alongside the Bootstrap technique for examining mediation models, as well as other appropriate statistical procedures to evaluate the stated hypotheses. It will assess the direct influence of brand personality on loyalty, trace indirect pathways via brand identification and trust, and explore how social media engagement and brand-culture alignment moderate these effects, thereby enabling rigorous statistical inference about how these variables interrelate. The research framework follows the path of "independent variable (brand personality) mediating variables (identification/trust) → dependent variable (loyalty)" and integrates moderating variables (Figure 1).

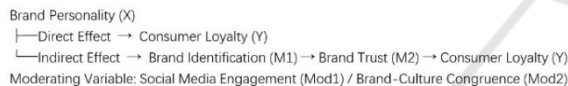


Figure 1: The Influence Path Model of Brand Personality on Brand Loyalty.

4 DATA COLLECTION

The items related to core variables in the survey questionnaire developed for this study are adapted from widely used and validated scales in the marketing field, such as those by Aaker (1997) and Sirianni et al. (2013), ensuring reliability and validity, which have been verified through the literature. The final version of the questionnaire consists of 30 questions. The questionnaire also includes demographic variables such as gender, age, and income, to control for potential confounding factors that may interfere with the analysis of the main effects. The purpose is to quantify respondents' perceptions and behavioral attitudes toward the Nike brand using a structured scale. An online self-administered questionnaire survey was used as the data collection method, distributed via an online platform, and expanded through social media to increase the sample coverage. A total of 325 valid responses were collected.

5 DATA ANALYSIS RESULTS

The Cronbach's α coefficients for the data reliability analysis all meet the standard of being greater than 0.7, indicating good data reliability (Table 1).

Table 1: Cronbach's Reliability Analysis.

Dimension	Number of Items	Sample Size	Cronbach's α Coefficient
Brand Personality	10	325	0.921
Brand Identification	3	325	0.724
Brand Trust	3	325	0.774
Social Media Engagement	3	325	0.718
Brand-Cultural Congruence	3	325	0.754
Brand Loyalty	5	325	0.827

The results of the KMO test and Bartlett's test show that the KMO value is $0.964 > 0.7$ and Bartlett's sphericity test ($p < 0.05$) indicates high validity, suggesting that factor analysis can be performed (Table 2).

Table 2: KMO Test and Bartlett's Test

Bartlett's Sphericity Test	KMO Value	0.964
	Approximate Chi-Square	4472.612
	df	351
	P	0.000

Through regression analysis to test the main effects, we find that competence and ruggedness, two dimensions of brand personality, have a statistically significant positive association with brand loyalty (Table 3).

Table 3: Linear Regression Analysis Results($n=325$).

	Unstandardized Coefficients		t	p
	B	Standard Error		
Constant	1.277	0.174	7.352	0.000***
Sincerity	0.046	0.045	1.025	0.306
Excitement	0.051	0.046	1.114	0.266
Competence	0.158	0.047	3.360	0.001**
Sophistication	0.097	0.046	2.134	0.034*
Ruggedness	0.390	0.049	7.973	0.000***
R2	0.604			
Adjusted R2	0.598			
F	F=97.427,p=0.000			
D-W value	1.976			
Dependent Variable: Brand Loyalty				
*p<0.05 **p<0.01 ***p<0.001				

Through Bootstrap method for testing the indirect effects, the results show that brand personality has a significant positive predictive effect on brand identification, brand trust, and brand loyalty. That is, the stronger the brand personality, the higher the consumers' brand identification, brand trust, and brand loyalty. The examined brand-related

constructs, personality, identification, and trust, each demonstrates statistically significant positive associations with loyalty outcomes (Table 4).

Table 4: Indirect Effects Regression Analysis.

Outcome Variable	Predictor Variable	Overall Fit Index			Regression Coefficient Significance	
		R	R ²	F	standard B	t
Brand Loyalty	Brand Personality	0.752	0.566	421.057	0.752	20.52
Brand Identification	Brand Personality	0.701	0.492	312.27	0.701	17.671
Brand Trust	Brand Personality	0.815	0.664	317.48	0.598	13.184
	Brand Identification				0.275	6.069
Brand Loyalty	Brand Personality	0.827	0.684	231.773	0.283	5.188
	Brand Identification				0.339	7.291
	Brand Trust				0.293	5.419

*p<0.05 **p<0.01 ***p<0.001

An examination of mediating mechanisms reveals that indirect effects significantly contribute to the relationship between brand personality and brand loyalty. Brand identification emerges as the key route through which brand personality enhances consumer commitment. Moreover, brand trust acts as another important mediator, with increased consumer confidence reinforcing brand loyalty. Empirical findings also suggest a comparatively weaker chain mediation effect, in which brand personality influences loyalty through a sequential process—first by strengthening brand identification, which in turn promotes trust (Table 5).

Table 5: Indirect Effects Path Analysis.

Path		Effect Value	Bootstrap Standard Error	Boot CI Lower Limit	Boot CI Upper Limit	Relative Effect Size
Direct Path	Direct Effect	0.268	0.052	0.166	0.37	37.64%

Mediating Path	Total Indirect Effect	0.444	0.054	0.332	0.546	62.36%
Ind1	Brand Personality → Brand Identification → Brand Loyalty	0.225	0.038	0.148	0.301	50.68%
Ind2	Brand Personality → Brand Trust → Brand Loyalty	0.166	0.037	0.094	0.239	37.39%
Ind3	Brand Personality → Brand Identification → Brand Trust → Brand Loyalty	0.053	0.017	0.025	0.09	11.94%

An evaluation of the moderating influence indicates that involvement with social media platforms exerts a notably positive effect on consumer allegiance to brands. Elevated levels of social media interaction are associated with stronger brand commitment among consumers. Nonetheless, the interplay between brand personality and social media engagement appears to have an insignificant effect on brand loyalty. This suggests that the mediating role of brand personality in linking social media engagement to brand loyalty is limited, while the direct contribution of social media engagement to fostering brand loyalty is considerably more pronounced (Table 6).

Table 6: Social Media Engagement - Moderating Effect Model Coefficients

	Coefficient	Standard Error	t	p
Constant	4.965	0.048	102.664	0.000***
Brand Personality	0.449	0.045	9.977	0.000***
Social Media Engagement	0.37	0.045	8.234	0.000***

Brand Personality * Social Media Engagement	0.009	0.027	0.323	0.747
R ²	0.642			
F	191.554			
Dependent Variable: Brand Loyalty				
*p<0.05 **p<0.01 ***p<0.001				

The examination of moderating variables reveals that alignment between brand values and cultural context exerts a significant positive influence on consumer loyalty. Greater brand-cultural congruence is linked to heightened levels of brand commitment. However, the combined effect of brand personality and brand-cultural congruence does not show a meaningful impact on loyalty outcomes. This implies that the indirect influence of cultural fit via brand personality is relatively minor, whereas its direct contribution to strengthening brand loyalty is considerably more impactful (Table 7).

Table 7: Brand-Cultural Congruence - Moderating Effect Model Coefficients.

	Coefficient	Standard Error	t	p
Constant	5.003	0.051	98.076	0.000***
Brand Personality	0.387	0.051	7.547	0.000***
Brand-Cultural Congruence	0.383	0.05	7.669	0.000***
Brand Personality * Brand-Cultural Congruence	-0.023	0.026	-0.867	0.386
R ²	0.639			
F	189.53			
Dependent Variable: Brand Loyalty				
*p<0.05 **p<0.01 ***p<0.001				

6 DISCUSSION

The data analysis shows that competence (professionalism, reliability) and ruggedness (outdoor, strong image) in brand personality have a significant direct positive impact on Nike's brand loyalty. Companies can directly enhance consumer loyalty by strengthening these two personality traits. This result confirms the strategic value of brand personality as a core element of brand differentiation. The indirect effect analysis reveals that the chain

mediation mechanism involving brand identification and brand trust is pivotal in connecting brand personality to brand loyalty. Together, these mediating pathways account for 62.36% of the total effect, highlighting the critical role of the chain mediation mechanism in influencing consumer loyalty. This result supports the integrated framework of Self-Congruity Theory and Signaling Theory: consumers form emotional attachment through the match between brand personality and self-concept (identification) and reduce decision-making risks through the predictability of brand behavior (trust), which ultimately translates into long-term loyal behavior. Additionally, while the direct effects of social media engagement and brand-cultural congruence are significant, their moderating effects did not pass the test. A possible explanation is that social media, as an information dissemination channel, is more likely to amplify the perceived intensity of brand personality (main effect) rather than change the direction of the relationship between personality and loyalty (moderating effect). Brand-cultural congruence may indirectly influence loyalty through brand identification rather than directly moderating the main path.

7 CONCLUSION

This study constructed an integrated model of brand personality, dual mediating variables (brand identification/brand trust), and dual moderating variables (social media engagement/brand-cultural congruence), revealing the multi-level driving mechanism of brand loyalty. The empirical results show that brand personality explains brand loyalty more effectively through the indirect paths established by brand identification and brand trust than through direct effects, providing a more detailed explanation of the "brand personality - brand loyalty" theoretical framework. At the same time, for sports brands with a similar positioning to Nike, the study clarified the core roles of competence and ruggedness in brand personality, providing empirical evidence for optimizing brand personality. Sports brands with the same positioning as Nike should prioritize strengthening the brand's competence (such as technical expertise) and ruggedness (such as sports spirit) images to directly enhance consumer loyalty. Additionally, brands should strengthen consumer brand identification through visual symbols, brand stories, and other methods, while building brand trust through consistent behavior (such as quality commitments) to indirectly consolidate loyalty.

Although the moderating effects of social media engagement and brand-cultural congruence were not significant, their main effects suggest that brands still need to frequently reach target groups on social media and enhance personality perception intensity through localization strategies (such as cultural symbol integration). This study uses Nike as a single case, and the generalizability of the conclusions needs to be verified across multiple industries and brands. Cross-sectional data struggles to capture dynamic interactions between variables, so future research could incorporate longitudinal studies. Moreover, although Nike has broad influence in the sports brand sector, its consumer base (mainly young users) and product positioning (focused on mass sports) do not cover all types of sports brands. For example, brands focusing on skill-based sports (such as golf or bowling) may have a different consumer age structure and demand characteristics.

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