

Analysis of the Influence Mechanism of Social Media Marketing on Brand Loyalty

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Abstract

Social media has become an important tool for brand marketing. How to effectively improve brand loyalty through social media marketing is still an urgent problem to be solved. This paper studies the influence mechanism of social media marketing on brand loyalty, aiming to reveal its action path and provide optimization strategies. First, through social media data crawling, multi-dimensional data such as user interaction with brand content, perceived value and satisfaction are collected. Then, the structural equation model (SEM) is used to analyze the direct impact of social media marketing activities on user brand loyalty, and brand trust and emotional identification are introduced as mediating variables to analyze its indirect action mechanism. The study found that the direct impact coefficient of content interactivity on brand loyalty is between 0.53 and 0.65, and the indirect impact coefficients of creativity and authenticity through brand trust are between 0.43 and 0.58 respectively. Emotional identification plays a key role in the construction of users' continued purchase intention, and its effect coefficient is between 0.32-0.46. Social media marketing provides a theoretical basis and practical guidance for enterprises to formulate social media marketing strategies by enhancing users' brand trust and emotional identification.

Keywords

Social Media Marketing; Brand Loyalty; Influence Mechanism; Structural Equation Model.

1. Introduction

With the advent of the digital age, social media has rapidly evolved into an important platform for brand marketing, and companies have established closer ties with consumers through social media. Social media has not only become a channel for brands to disseminate information, but also an important place for consumers to interact, feedback and participate. However, although many brands have invested a lot of resources in social media, how to effectively improve consumers' brand loyalty remains an urgent problem. Brand loyalty not only affects consumers' repurchase intentions, but also affects the long-term development and competitiveness of brands. Therefore, in-depth research on the influence mechanism of social media marketing activities on brand loyalty is of great practical significance for companies to formulate corresponding marketing strategies.

This paper adopts a systematic research method to collect users' data on brand content interaction, perceived value and satisfaction in multiple dimensions through social media data capture. This not only provides a rich empirical basis for analysis, but also makes the research results more credible and applicable. Furthermore, this paper introduces brand trust and emotional identification as mediating variables, and uses structural equation modeling (SEM) to comprehensively analyze the impact of social media marketing activities on brand loyalty. The choice of this method helps to reveal the complex relationship between various factors and deeply understand how social media marketing can enhance brand loyalty by influencing users' emotions and trust.

The first two chapters of this paper introduce relevant literature and theoretical background, and sort out the relationship between social media marketing and brand loyalty. The third chapter elaborates on the research methods, including data collection and analysis tools. The fourth chapter presents the description of the data and the analysis of sample characteristics, providing a research basis. The fifth chapter focuses on the fitting and verification of the structural equation model, and explores the influencing factors and their mechanisms of action.

2. Related Work

In recent years, the study of brand loyalty has gradually become a hot topic in the marketing field, attracting the attention of many scholars. Tong started with the analysis of the brand loyalty theory of sports shoes and apparel, and adopted the literature analysis method and questionnaire method to summarize the factors that affect the brand loyalty of sports shoes and apparel at the enterprise level and the consumer level. He proposed an optimal path to improve brand loyalty for sports shoes and apparel companies, hoping to promote the development of China's sports shoes and apparel industry in a positive and rapid way [1]. Liu et al. used a snowball sampling method to investigate 403 young consumers of branded hotels using the self-consistency scale, positive emotion scale, brand attachment scale and brand loyalty scale to analyze the relationship between self-consistency and brand loyalty in the context of hotel consumption[2]. Wang et al. reviewed the literature on price strategy and brand loyalty, found the gap, provided clues for subsequent research, and helped to advance the research on brand loyalty in depth[3]. Guo et al. used a structural equation model to conduct a questionnaire survey to deeply study the formation mechanism of tea consumers' loyalty to the brand[4]. Wang et al. believed that both companionship interaction and knowledge interaction are conducive to the cultivation of brand loyalty, but the former is more conducive to the promotion of brand loyalty. This shows that when companies operate new product crowdsourcing communities, they should guide users to make more friends in the community and increase the user's companionship interaction activity to a greater extent, so as to more effectively achieve the goal of improving brand loyalty[5]. Parris and Guzman aimed to critically review the most cited literature published between 2000 and 2020 in 24 top marketing journals on the three most researched brand concepts of the 21st century [6]. Agu et al. explored the relationship between sustainable business practices and brand loyalty, focusing on its impact on modern enterprises[7]. Bernarto et al. are expected to provide coffee shop management with insights on how to improve brand loyalty, which can be achieved by increasing their brand awareness, brand image, and brand trust[8]. Akoglu and Özbe aimed to reveal the influence of emotional and rational factors between brand experience and brand loyalty [9]. Haudi et al. aimed to determine the impact of social media marketing activities on brand trust, brand equity, and brand loyalty in social media [10]. Through these studies, brands' strategies and practices in enhancing loyalty have been explored in depth, providing rich insights for future research.

3. Methods

3.1. Tools and Methods for Social Media Data Crawling

Determining the target platform is the first step in data crawling. Common social media platforms include Facebook, Twitter, Instagram, and WeChat. Different platforms have different degrees of openness and data access policies, so understanding the API of each platform is key. In terms of tool selection, Python is the most commonly used data crawling programming language and is popular for its rich libraries and frameworks. Among them, BeautifulSoup and Scrapy are two commonly used web crawling tools. The former is suitable for processing HTML and XML documents, while the latter is suitable for large projects and can efficiently extract and process data [11]. In addition, the Requests library can be used to easily send HTTP requests to

obtain web page content. For access to social media APIs, Tweepy and Facebook Graph API are commonly used tools that allow developers to directly extract data from social media platforms. The crawling process is to be actualized with first acquiring the API key and setting permissions. It is thereby made legit to crawl data via OAuth authentication. The subsequent crawling script should thus be written, according to the demands posed upon crawling. Proper configuration of crawling frequency and time timing is also to stoically bypass any suspicion of malicious conduct in the platforms. The data gets captured as either JSON or CSV storage format, allowing great conveniences in further data processing and analysis[12]. Data cleaning thus requires removing or infilling incomplete records, while text preprocessing such as stop removal and punctuation trimming should also be included to trim down subsequent operational inaccuracies.

3.2. Construction of Structural Equation Model (SEM)

This study distinguishes basic latent variables, including social media marketing activities (content creativity, interactivity, and information authenticity), brand trust, emotional identification, and brand loyalty. The study will collect data on user interactions on social media, perceived value, and satisfaction with the company. The collected data will be preprocessed, including deleting invalid questionnaires and processing missing values to ensure the reliability and validity of the data [13]. The computer software package SPSS was used to analyze the data. After confirming the measurement model, a structural model was proposed, which specifies the interrelationships between latent variables. Path coefficients are proposed by theoretical hypotheses and are used to evaluate the direction and strength of direct or indirect relationships between these variables. The most widely used method to obtain coefficient estimates is maximum likelihood estimation, whose results indicate the strength and direction of the influence between variables.

3.3. Influencing Factors of Social Media Marketing Activities

The influencing factors of social media marketing activities can be analyzed from multiple dimensions, including content creativity, interactivity, and information authenticity. These factors play a vital role in building user brand loyalty. In order to systematically evaluate these influencing factors, this paper collected relevant data through questionnaires to analyze users' perceptions and reactions to different social media marketing activities. First, content creativity refers to whether the content posted by the brand on social media is attractive and novel [14]. By setting relevant questions, users' evaluation of brand content is evaluated. Second, interactivity emphasizes two-way communication between users and brands, which can enhance user participation and brand identity. Finally, information authenticity involves the credibility of the information conveyed by the brand, which directly affects users' trust and loyalty. Table 1 shows users' ratings of different influencing factors (1-5 points, 1 is the lowest and 5 is the highest):

Table 1. Users' ratings of different influencing factors:

Influence Factor	Average Rating	Standard Deviation	Importance Ranking
Content Creativity	4.2	0.78	2
Interactivity	4.5	0.65	1
Information Authenticity	4.3	0.70	3
Posting Frequency	3.8	0.85	4
User Engagement	4.1	0.72	5

3.4. Mediating Variables

This paper selects brand trust and emotional identification as mediating variables. First, brand trust refers to consumers' belief in the reliability and integrity of a brand. In social media marketing, the creativity, interactivity and authenticity of content can directly affect users' brand trust. For example, when a brand publishes high-quality, authentic and creative content, users are more likely to build trust in the brand, thereby enhancing loyalty. Second, emotional identification reflects the emotional connection between consumers and brands. Through positive social media interactions and emotion-driven content, users can resonate and form emotional identification with the brand [15]. Emotional identification not only enhances brand trust, but also directly affects users' purchase intentions and loyalty.

4. Results and Discussion

4.1. Data Description and Sample Characteristics Analysis

This paper collects social media usage data of 500 users, and the sample covers users of different ages, genders and regions. Data analysis shows that 48% of the participants are male and 52% are female, with a relatively even age distribution, including 30% aged 18-24, 35% aged 25-34, 20% aged 35-44, and 15% aged 45 and above. In terms of the frequency of social media use, 73% of users use social media every day for 1-3 hours, and more than 50% of users say they are more active in interacting with brand content. In the evaluation of brand loyalty, 68% of users said they have a high sense of trust in commonly used brands, while 62% of users are willing to continue to buy the brand's products. These data show that social media plays an important role in the formation of user brand loyalty, and the diversity of sample characteristics provides a good foundation for subsequent analysis.

4.2. Experimental Results

In this paper, exploratory factor analysis (EFA) is used to confirm the structure of the measurement model and ensure that the observed variables effectively reflect the latent variables. 20 brands are selected to analyze the factors affecting their loyalty. Figure 1 shows the results of the coefficients of content interactivity (I) and creativity and authenticity (II):

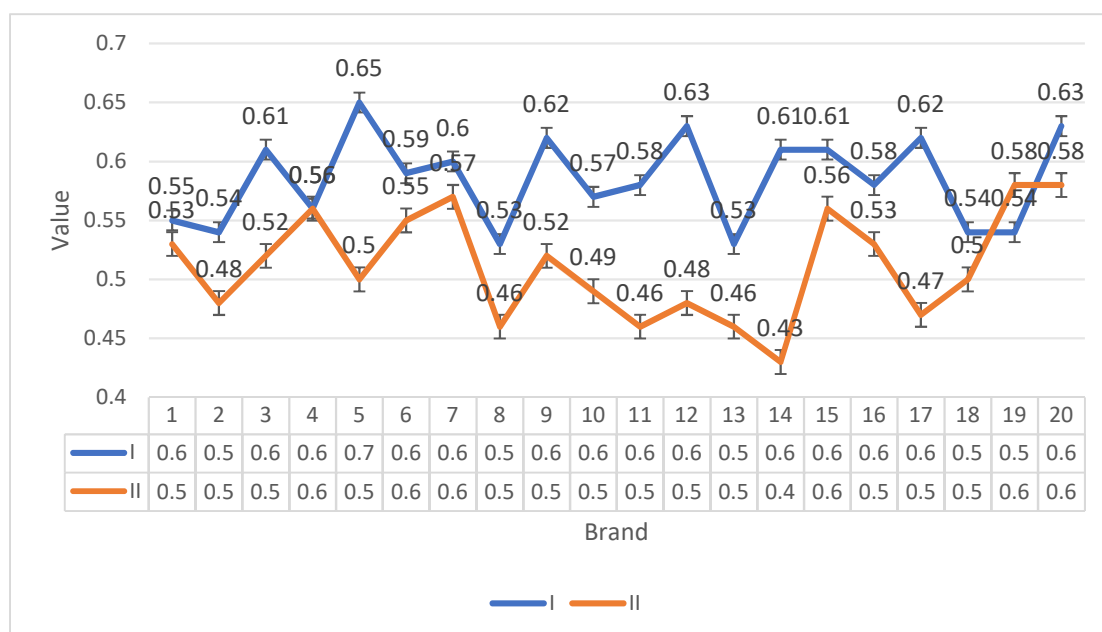


Figure 1. Influence coefficients of content interactivity (I) and creativity and authenticity (II)

When analyzing the factors affecting the loyalty of 20 brands, the influence coefficients of content interactivity (I) and creativity and authenticity (II) show a certain trend of change. Overall, the influence coefficient of content interactivity (I) ranges from 0.53 to 0.65, showing a high stability and positive impact, especially in the 5th brand, where it reaches the highest value of 0.65, indicating that the degree of user interaction with the brand on social media is positively correlated with brand loyalty. In contrast, the influence coefficient of creativity and authenticity (II) fluctuates widely, ranging from 0.43 to 0.58, indicating that although creativity and information authenticity also have a positive impact on brand loyalty, their effects are less stable, especially in multiple brands, showing a low influence coefficient, such as the 14th brand is only 0.43. The reason for this difference may be that users' sense of participation and interaction quality with brand content can more directly affect their loyalty, while creativity and authenticity may be affected by brand communication strategy and market positioning. Overall, enhancing content interactivity may be a key strategy to improve brand loyalty, while creativity and authenticity are equally important, but need to be further optimized and stabilized to ensure their continued impact on user loyalty. Figure 2 shows the impact coefficient results of emotional identification (III):

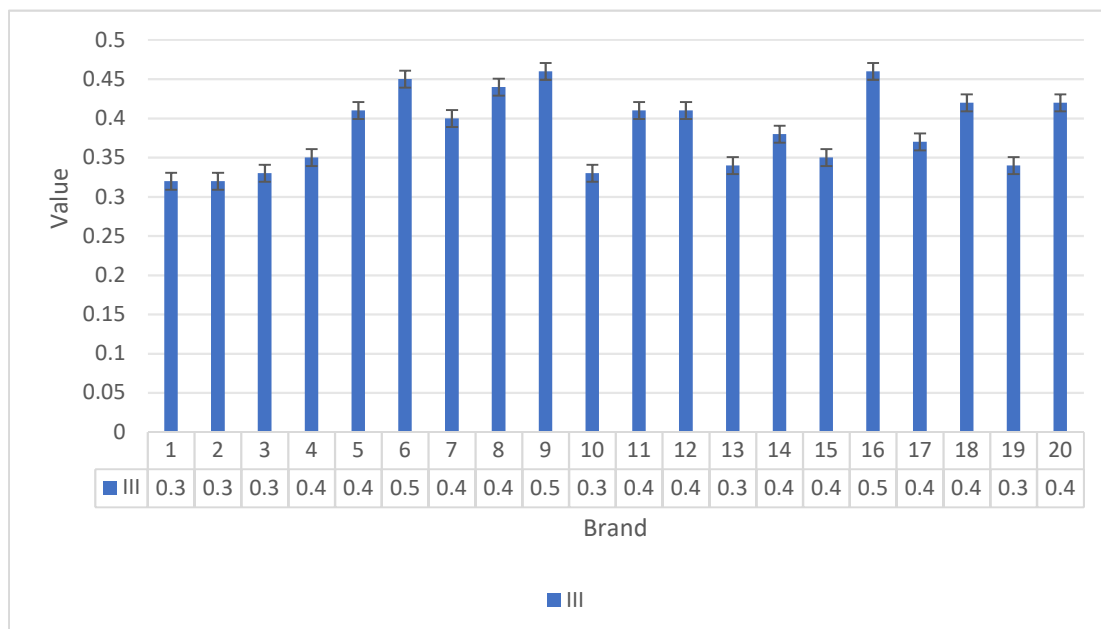


Figure 2. Influence coefficient of emotional identification

The influence coefficient of emotional identification (III) shows a relatively uniform trend of change, ranging from 0.32 to 0.46. This result shows that emotional identification plays a positive role in building brand loyalty, but the overall influence is relatively limited. In the data, the highest influence coefficient is 0.46, which appears in the 9th and 6th brands, indicating that these brands have done a good job in establishing emotional connections with consumers, and may enhance consumers' emotional identification through effective brand stories, emotion-driven advertising or user participation activities. On the other hand, other brands, especially those with influence coefficients between 0.32 and 0.34, show that there is still obvious room for improvement in the establishment of emotional identification, which may be due to the lack of effective emotional marketing strategies or insufficient communication between brands and consumers. Overall, although emotional identification has a positive impact on brand loyalty, brands still need to continue to work hard to enhance user emotional identification, deepen consumers' emotional connections through more emotionally resonant content and interactions, and thus enhance brand loyalty.

5. Conclusion

This paper analyzes the impact mechanism of social media marketing on brand loyalty and reveals the important role of content interactivity, creativity and authenticity, as well as emotional identification and brand trust. The results show that social media marketing activities can significantly improve users' brand loyalty by enhancing brand trust and emotional identification, especially when users actively participate in brand interaction. The effect of improving brand loyalty is more significant. The study also has certain limitations, such as the geographical restrictions of the sample and the singleness of brand selection, which may affect the universality of the results. Future research should consider a wider range of sample sources and diverse brand types to enhance the external validity of the research conclusions. At the same time, it is possible to explore the impact of the characteristics of different social media platforms on brand loyalty and analyze the differences in user behavior on each platform.

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