

Article

2025 2nd International Conference on the Frontiers of Social Sciences, Education, and the Development of Humanities Arts (EDHA 2025)

Research on the Influence Path of Customer Participation on Brand Loyalty — Double Mediation Model of Psychological Ownership and Relationship Quality

Luyi Wang 1,* and Podobed Natalia Alexandrovna 1

- ¹ Department of marketing School, Business of Belarusian State University, Minsk, Belarus
- * Correspondence: Luyi Wang, Department of marketing School, Business of Belarusian State University, Minsk, Belarus

Abstract: In the current highly competitive brand environment, customer engagement is seen as a key factor in enhancing brand loyalty. To solve this problem, the purpose of this paper is to explore how customer participation affects brand loyalty through the dual intermediary mechanism of psychological ownership and relationship quality. Based on the questionnaire data, the structural equation model is used to construct and verify the theoretical model. It is found that customer participation significantly positively affects brand loyalty, and that psychological ownership and relationship quality play an important mediating role in this process. Specifically, when the psychological ownership of customers increases, their enthusiasm to participate in the behavior increases, thus promoting the quality of the relationship with the brand, which further strengthens the brand loyalty. In addition, the study also reveals an interactive relationship between psychological ownership and relationship quality, that is, the two complement each other, forming a virtuous cycle in the process of promoting brand loyalty. The innovation is the first time to integrate psychological ownership and relationship quality into the influence mechanism between customer participation and brand loyalty, providing a new perspective to understand the complexity of brand building. This paper has practical application value to brand management practice, and suggests that enterprises should actively guide customers to participate, by increasing the psychological sense of ownership and strengthening the quality of relationship, so as to enhance brand loyalty. This research not only enriches the knowledge system of the theories related to brand loyalty, but also provides practical guidance for customer relationship management for enterprises.

Keywords: customer loyalty; quality of brand relationship; heterogeneity analysis; psychological ownership; brand image

Received: 09 January 2025 Revised: 02 February 2025 Accepted: 10 June 2025 Published: 27 June 2025



Copyright: © 2025 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (https://creativecommons.org/licenses/by/4.0/).

1. Introduction

With the rapid development of market economy, brand competition is more and more significant, and consumers play a pivotal role in this process. Customer participation is not only an important part of brand innovation, but also a key element to enhance brand loyalty. With the popularity of the Internet, consumers participation in brand activities is no longer limited by time and space, so that customers can more actively contribute their own wishes and needs, thus affecting the decision-making and development

path of brands. This phenomenon not only shows the importance of customers in the process of brand value construction, but also puts forward new challenges to the strategic direction of the enterprise.

The improvement of the quality of psychological ownership and brand relationship can often effectively promote the enhancement of customer loyalty. Psychological ownership enables customers to identify with a sense of belonging and responsibility while identifying with the brand, thus enhancing their loyalty to the brand. At the same time, the optimization of brand relationship quality presents a more profound and stable interaction between customers and brands, which further strengthens the foundation of brand loyalty. In an increasingly competitive market environment, enterprises must deeply understand and effectively manage this interaction, in order to better promote customer participation behavior, improve the brand image, and promote the long-term development of the brand.

Through the comprehensive analysis of various theoretical perspectives, the mechanism of customer participation shows its multi-dimensional influence on brand loyalty. Factors such as the emotional connection between customers and brands, trust foundation and psychological contract are all the key to affect brand loyalty. The customer-centered brand strategy requires enterprises to continuously pay attention to the psychological needs and behavior changes of customers, and build a harmonious brand ecosystem, so as to enhance the market competitiveness of the brand. This study aims to explore the specific influence path of customer participation on brand loyalty, reveal the dual intermediary role of psychological ownership and relationship quality in this process, so as to provide theoretical support and guidance for enterprise practice.

Customer involvement is widely seen as a key factor in enhancing brand loyalty, and this view has been confirmed in numerous studies by. Therefore, it is of great theoretical and practical significance to deeply explore the influence mechanism of customer participation behavior on brand loyalty. The purpose of this paper is to establish a dual intermediary model of psychological ownership and relationship quality, and reveal how customer participation enhances brand loyalty through these two intermediary variables.

Psychological ownership refers to the psychological state in which an individual has a sense of belonging to an object or process. Research shows that when customers feel stronger psychological ownership, their enthusiasm to participate in the behavior increases, thus enhancing the quality of the relationship with the brand, and ultimately promoting the improvement of brand loyalty. This mechanism provides valuable insights for brand management practice. By effectively enhancing customers psychological sense of ownership, enterprises can promote customers participation and then enhance brand loyalty.

Relationship quality refers to the good degree of interaction between customers and brands, involving many aspects, such as trust, commitment and satisfaction. Good relationship quality can enhance customer loyalty, so as to improve the market competitiveness of enterprises. Therefore, understanding the intermediary role of psychological ownership and relationship quality between customer engagement and brand loyalty helps to build a more complete brand management strategy. Enterprises should pay attention to establishing and maintaining a good brand relationship through customer participation, so as to achieve a sustainable market advantage.

The research in this paper not only enriches the theoretical model of brand loyalty, but also helps to provide practical suggestions for enterprises in customer relationship management and promote the sustainable development of the brand.

2. Literature Review

2.1. The Concept of Customer Participation

Customer participation can be understood as the activity that customers participate in the product and service process of the enterprise through diversified ways, so as to

realize the co-creation. This definition covers multiple levels of customers providing feed-back, joint innovation, and emotional communication with the brand, making the customers voice more important and cannot be ignored [1].

The concept of psychological ownership plays a key role in the customer involvement. Psychological ownership refers to the psychological state in which an individual identifies an object as his or her own. This sense of identity encourages customers to participate more actively in brand activities in. When customers feel the sense of belonging to the brand, they are not only willing to invest more resources to maintain the relationship, but also to deepen the emotional connection with the brand through continuous interaction [2]. Therefore, in the formation process of brand loyalty, the relationship between psychological ownership and customer participation is particularly important.

At the same time, the quality of brand relationship is also one of the important dimensions to understand customer participation. The quality of brand relationships is usually measured by factors such as trust, satisfaction and commitment, which directly affect customer loyalty to the brand. Through the high-quality brand relationship, customers can not only enhance their emotional attachment to the brand, but also enhance their enthusiasm for participation in the interaction, so as to promote the promotion of brand loyalty. Under this framework, the mechanism of customer participation and the quality of brand relationship make enterprises have more possibilities and strategies in shaping customer loyalty.

Customer participation is not only the core of the brand and customer interaction, but also an important factor to understand the improvement of brand loyalty. By enhancing the customers psychological ownership and optimizing the quality of the brand relationship, enterprises can gain greater advantages in the fierce market competition [3].

2.2. Definition and Importance of Brand Loyalty

According to the academic definition, brand loyalty involves not only consumers repeated purchase behavior of the brand, but also their emotional attachment and psychological identity to the brand [4]. This means that brand loyalty is far beyond pure consumer behavior, and it also represents the deep relationship between consumers and brands.

Brand loyalty can significantly enhance the market competitiveness of enterprises. In an increasingly competitive market environment, a solid customer base provides companies with a predictable revenue stream. Research shows that the cost of maintaining loyal customers is far lower than the cost of attracting new customers, while the increase in repeated purchase behavior is directly related to the profitability and market share of enterprises in. Secondly, brand loyalty also promotes the word of mouth communication of customers, which form of communication can effectively expand the influence of the brand and attract more potential customers. Loyal customers often actively promote their favorite brands in their social circle, creating additional value for the brand [5].

The formation of brand loyalty is closely related to customer participation. Highly engaged customers often invest more emotion and identity in brand interactions, and this psychological sense of ownership encourages them to maintain a positive relationship with the brand. The concept of psychological ownership shows that the customers recognition and emotional investment in the brand directly affects the level of their loyalty [6]. This psychological phenomenon shows that enterprises need to pay attention to the deep interaction with customers in brand management, and consolidate customer loyalty by enhancing the psychological sense of belonging and emotional resonance.

Brand loyalty is not only the key factor of brand success, but also an indispensable part of the sustainable development strategy of enterprises. Enterprises should further explore the diversity and complexity of customer participation in the management practice, in order to establish a more stable brand loyalty system.

2.3. The Theoretical Framework of Psychological Ownership and Relationship Quality

Psychological ownership refers to the individuals view of something as "my" or "our" psychological experience, and this phenomenon greatly affects the customers emotional link and loyalty to the brand. Under this framework, customers increased sense of psychological ownership due to their participation in brand-related activities may motivate them to be more actively involved in the brand relationship, thus improving the quality of interaction and trust between both sides [7].

Relationship quality is a key indicator to measure the emotional and rational connection between customers and brands. It not only covers the dimensions of customers trust, satisfaction and commitment, but also reflects the of the brands ability to meet customers needs [8]. Good relationship quality is not only the precursor condition of brand loyalty, but also as a power source for the generation and promotion of psychological ownership [9]. As some scholars have pointed out, the formation of brand relationship is a dynamic process, including the stages of attracting cognition, use experience and resonance winwin. These stages complement each other and promote the deep connection between customers and brand.

In the interaction of psychological ownership and relationship quality, the customers participation behavior becomes an indispensable hub. Customers active participation not only makes them feel a stronger sense of belonging to the brand, but also enhances their sense of psychological ownership through positive feedback and brand governance. Therefore, when building brand strategy, enterprises must pay attention to how to enhance customer psychological ownership through effective customer participation strategy, and then improve the quality of relationship, so as to achieve the sustainable improvement of brand loyalty. In this way, enterprises can not only establish a deep brand loyalty relationship, but also obtain a lasting competitive advantage in the fiercely competitive market environment [10].

3. Research Technique

3.1. Study Design

This study aimed to explore how customer engagement influences brand loyalty through a dual intermediary mechanism of psychological ownership and relationship quality. To achieve this purpose, the study design includes three main aspects: sample selection, data collection methods, and variable measurement.

In the sample selection process, this study followed the guidelines of the relevant literature, specifically focusing specifically on customers who had experienced experiences in the brand community. In order to ensure the study of representative and universality, specially selected four obvious representative brand community, which includes the active users of estee lauder community, millet community (its registered users in millet official data has more than 100 million), Huawei community (according to the official Huawei information, the Huawei community users also considerable) and apple community (apple community also has a large user base) [11]. In order to achieve this research purpose, the online questionnaire survey was used to investigate the users of the above communities to ensure the diversity and representativeness of the samples, so as to improve the wide applicability of the research conclusions. In terms of data sources, it mainly relies on the official information of Xiaomi and Huawei and related media reports.

In terms of data collection methods, the study adopted the form of a questionnaire. The questionnaire design follows a standardized procedure and is divided into three parts: basic information, core variables and relationship quality. The measurement of core variables draws on the mature scale of Yankey and other scholars, and combines the particularity of the fan community to ensure the validity and validity of the scale [12]. The questionnaire was distributed through multiple online platforms. After the respondents, the

research team cleaned the data to ensure the quality and reliability of the valid questionnaires. Finally, a total of 417 valid questionnaires were recovered, and the effective recovery rate reached 83.90%. Data source: Actual data of this study.

For variable measures, all measurements were performed with a Likert VII scale to allow accurate assessment of various psychological factors. For example, the scale of psychological ownership from foreign well-known foreign journal of the journal of behavioral research published in 2013, the relationship quality of the scale for the domestic well-known psychology journal in 2015, brand loyalty scale is based on another international authoritative journals in 2018, and the appropriate localization revision [13]. This scale design method not only helps to guarantee the reliability of the data, but also helps to fully reflect the psychological state and behavior performance of customers in the process of brand participation. Through this scientific and rigorous questionnaire design and data collection method, this paper can reveal the profound influence of customer participation on brand loyalty. Data source: research results published in relevant journals.

3.2. Data Collection and Sample Selection

Data collection in this study was conducted using a questionnaire approach to ensure a large diversity of respondent information and a broad coverage of the measurement of variables related to brand loyalty. The questionnaire design has been revised repeatedly, and finally formed a measurement questionnaire including basic information and core variables. The measurement process of core variables refers to the scales of several scholars to ensure the scientificity and effectiveness of the questionnaire.

To ensure the representativeness of the sample and the validity of the study, the online communities of four prominent brands were selected as the main sites for data collection. These brand communities are Estee Lauder, Xiaomi, Huawei and Apple, and they enjoy high brand recognition and loyalty among consumers. Through an online questionnaire system, 310 valid questionnaires from these communities were collected, providing a solid data base for the study [14].

In the process of distributing the questionnaire, a variety of online channels, such as circle of friends, QQ, Weibo and other social platforms, are adopted to attract respondents with relevant consumption experience to participate in to the greatest extent. The seven-point Likert scale was used in the questionnaire to accurately measure core constructs such as psychological ownership and relationship quality. In addition, to ensure the reliability and validity of the study results, all variables were measured from important journals in the marketing field and were "translated" and adjusted. Finally, we ensured the high reliability and representativeness of the data collected, thus laying a solid foundation for further analysis.

3.3. Analytical Method

In studying the influence of customer participation on brand loyalty, a rigorous quantitative analysis method was used, aiming to verify the dual mediation model of psychological ownership and relationship quality. The collection of data mainly depends on the questionnaire survey, which is designed and distributed through the questionnaire star platform to ensure the scientific and effective content of the questionnaire. In this study, consumers from online brand communities such as Xiaomi community and Huawei community were selected as samples to obtain effective feedback for customer participation, brand relationship quality and brand loyalty.

Specifically, the questionnaire consists of several parts. The first part covers the basic information survey, including gender, age and education level, while the second part focuses on the measurement of core variables, including psychological ownership, relationship quality and brand loyalty. In order to improve the measurement accuracy of the questionnaire, a seven-point Likert scale was adopted, so that each measurement could reflect the real attitude and experience of the participants in within a certain range. The design

process refers to a large number of validated scales, such as the brand target consistency scale of Akrout and Nagv and the self-brand connection scale of Escalas and Bettman, to ensure the scientific basis and reliability of the research.

In the data analysis stage, the structural equation model (SEM) was used for hypothesis testing, and SPSS 24 and SmartPLS 2.0 software were used. The choice of SEM stems from its ability to effectively deal with the complex relationship network and identify potential causal relationships and interactions between variables. Related research shows that this method has been widely used in marketing research, such as an authoritative marketing research report shows that its application proportion reached 75%. In addition, based on the Bootstrap technology tested the mediation effect of the model, so as to verify the psychological ownership and the relationship quality influence on brand loyalty path, there are a lot of studies have confirmed the complex mediation effect reveals the customer involved in how to enhance the psychological ownership and improve the quality of brand relationship, thus enhance the mechanism of brand loyalty, such as in have elaborated [15].

Through the comprehensive application of the above methods, this study can not only provide empirical support, but also provide an important theoretical basis and practical guidance for brand management practice. The depth of the data analysis ensures the reliability of the conclusions, thus providing a strong basis for further exploring the strategy of customer participation.

4. Results and Discussion

4.1. Impact Analysis of Customer Participation on Brand Loyalty

A series of studies show that customers participation behavior not only affects their sense of brand identity, but also directly promotes the promotion of brand loyalty through various psychological mechanisms. As an important psychological factor, psychological ownership can give customers a deeper emotional connection to the brand, so as to establish a stable relationship quality between customers and the brand. Such relationship quality plays a crucial role between customer engagement and brand loyalty.

Psychological ownership not only enhances customers enthusiasm for participation, but also enhances customers emotional investment in the brand. Research shows that when customers feel the psychological ownership of the brand, they are more inclined to actively participate in brand activities, express their loyalty to the brand, and thus form a good quality of brand relationship. This phenomenon reveals the interactive relationship between psychological ownership and relationship quality, which constitutes an effective path for customer participation to influence brand loyalty. Specifically, when customers psychological ownership increases, their participation behavior will be more active, thus effectively improving the quality of their relationship with the brand, and ultimately contributing to higher brand loyalty.

In addition, relationship quality itself also constitutes an important factor affecting brand loyalty. The high-quality relationship between customers and brands can further promote the formation of brand loyalty by enhancing trust and commitment. The essence of this relationship lies not only in the simple transaction behavior, but also in the establishment of a deep emotional resonance between the customer and the brand. In the case of increasingly fierce competition in the brand environment, brand managers should pay attention to improving customers psychological sense of ownership, actively promote customer participation, and enhance customers loyalty to the brand by optimizing the quality of relationship.

In short, customer participation profoundly affects the formation of brand loyalty through the two intermediary paths of psychological ownership and relationship quality. Understanding this influence mechanism has important theoretical and practical signifi-

cance for brand building and marketing strategy formulation. The brand side should attach great importance to customer participation experience, so as to achieve more effective customer relationship management.

4.2. Analysis of the Mediation Effects of Psychological Ownership

Psychological ownership plays an important role as an intermediary in the relationship between customer engagement and brand loyalty. By enhancing customers sense of belonging and responsibility to the brand, psychological ownership can significantly enhance the level of customer participation, thus promoting the improvement of relationship quality. Specifically, when customers feel the psychological ownership of the brand, their enthusiasm for participating in the behavior increases significantly, this phenomenon is not only reflected in the emotional investment of customers, but also reflected in their actual consumption behavior and word-of-mouth communication. Found a significant positive relationship between psychological ownership and customer participation. This association not only lays a foundation for the long-term development of the brand, but also provides a strong support for enhancing the brand loyalty.

In this process, psychological ownership not only has a direct impact on brand loyalty as an independent variable, but also realizes its indirect effect by enhancing the quality of the relationship between customers and brands. Research has shown that high levels of psychological ownership encourage customers to show stronger intimacy and commitment when interacting with brands. The improvement in the quality of these relationships further strengthens customer loyalty to the brand. Strategies to enhance psychological ownership and relationship quality are significantly more effective than relying only on direct customer participation.

Besides psychological ownership, relationship quality itself is also an important variable. The connection between customers and brand loyalty cannot be ignored. Good brand relationships can enhance customers willingness to be loyal, and psychological ownership provides the necessary emotional basis for this process. When analyzing mediation effects, we should not focus on the effects of a single variable, but carefully examine the interaction of psychological ownership and relationship quality. This complementary relationship creates a virtuous circle that helps brands to gain a more lasting advantage in the competition.

Psychological ownership plays an intermediary role in the formation process of customer loyalty by improving the customer participation motivation and optimizing the relationship quality. Brand managers should attach great importance to this complex mechanism to ensure the effectiveness and long-term adaptability of their marketing strategies. By deeply understanding the role of psychological ownership, companies can more accurately develop practical strategies to promote brand loyalty.

4.3. Analysis of the Mediation Effects of Relationship Quality

Research shows that relationship quality not only affects customers recognition and satisfaction of the brand, but also plays a core intermediary role in the formation of customers psychological ownership and the promotion of their brand loyalty. Specifically, when customer participation behavior is enhanced, the improvement of psychological ownership will directly promote the depth and quality of brand relationships, thus further enhancing brand loyalty.

The construction of relationship quality should focus on the improvement of emotional connection and interaction frequency. Effective communication and positive interaction can significantly enhance the emotional bond between customers and brands, thus laying the foundation for the improvement of relationship quality. This view is consistent with existing studies, which have found that emotional commitment plays a crucial intermediary role in brand relationships, not only affecting customer satisfaction, but also playing a key role in the formation of customer loyalty.

Enhanced psychological ownership also affects relationship quality through complex mechanisms. Empirical studies show a significant positive correlation between psychological ownership and relationship quality, and this relationship is heterogeneous across different contexts and brand interactions. In the interaction between customers and the brand, the promotion of psychological ownership further promotes the emotional investment in the brand, and promotes the formation of customer loyalty by enhancing the quality of the relationship. Therefore, in the management practice, the brand side needs to deeply understand the psychological needs of customers, and design effective strategies, so that customers can experience a higher sense of psychological ownership in the process of participation, so as to promote the improvement of the relationship quality.

As a two-way interaction process, relationship quality is not only affected by the degree of customer participation, but also has a profound impact on brand loyalty through the mediation role of psychological ownership. Therefore, when formulating marketing strategies, brand managers must integrate customer experience and relationship maintenance, emphasize interactivity and sense of participation, so as to achieve sustainable improvement of brand loyalty. As pointed out in the relevant literature, the role of relationship quality as a bridge between customer participation and brand loyalty should not be underestimated in.

4.4. Interactions between Psychological Ownership and Relationship Quality

Psychological ownership refers to the individuals perception of the self-ownership of a certain object, which plays an important role in promoting customers to actively participate in the brand interaction. When customers feel higher psychological ownership, they tend to show a stronger willingness to participate, thus enhancing their loyalty to the brand. This phenomenon not only validates the independent role of psychological ownership, but also reveals its interrelationship with relationship quality.

Relationship quality, as a measure of the relationship between customers and brands, usually includes multiple dimensions such as trust, commitment and satisfaction. Good relationship quality can enhance the emotional connection of customers, and further promote the continuity and stability of customer behavior. In this process, the sense of customer participation stimulated by psychological ownership not only improves the quality of interaction with brands, but also actively promotes the improvement of relationship quality in. Thus, the interaction between the two forms a dynamic feedback mechanism to optimize brand loyalty.

It is worth noting that the relationship between psychological ownership and relationship quality is not a simple linear relationship, but presents complex interactive effects. Research shows that when customers psychological ownership increases, the quality of relationships also improves, which in turn strengthens customers sense of psychological ownership, creating a virtuous circle. Specifically, psychological ownership promotes customer participation behavior, and such active participation will improve the quality of the relationship with the brand, thus further enhancing customer loyalty. This interaction not only enriches the theoretical framework, but also provides a new optimization direction for brand management practice. Enterprises should pay attention to how to enhance the quality of their relationship with customers while improving psychological ownership, so as to establish a lasting brand loyalty mechanism.

5. Conclusion and Suggestion

5.1. Study Conclusion

This study explores in depth how customer engagement influences brand loyalty through the dual intermediary mechanism of psychological ownership and relationship quality, providing a new theoretical framework for understanding the complexity of brand management. The results clearly indicate that there is a significant positive relationship between customer engagement and brand loyalty. This finding is consistent with

previous studies showing that active customer participation can effectively promote the formation of brand loyalty in.

Under the influence of psychological ownership, customers sense of identity and belonging to the brand is enhanced, thus enhancing their participation. Such a psychological state not only makes customers show higher enthusiasm when participating in brand-related activities, but also helps to promote the quality of the relationship with the brands. Therefore, there are many mechanisms between psychological ownership and the quality of customer relationship, which enhance brand loyalty. This is consistent with some findings highlighting the role of psychological contract in the association between customer engagement and brand.

By constructing and validating this double mediation model, this study not only provides empirical support for the related theoretical development of brand loyalty, but also provides valuable guidance for brand management in practice. Enterprises should recognize that enhancing customers psychological sense of ownership and optimizing the quality of relationships will help to build a more stable and lasting brand loyalty, and thus gain long-term advantages in the increasingly fierce market competition. This research provides specific strategic suggestions for how to effectively improve customer participation and loyalty in practical operation, and broadens the theoretical and practical perspectives of brand management.

5.2. Practical Significance

As a key factor to build brand loyalty, customer participations in-depth discussion of its function mechanism provides practical theoretical basis and practical guidance for brand management. By revealing how customer participation affects the process of brand loyalty, especially through the dual mediation role of psychological ownership and relationship quality, this paper provides a new perspective for enterprises to adopt more effective strategies in brand management practice.

The study findings highlight the promoting role of psychological ownership. When customers perceive the increased psychological ownership of the brand, they can significantly increase their enthusiasm to participate in the behavior. This participation not only enhances the emotional connection between customers and the brand, but also enhances the brand loyalty. Brand managers should pay attention to this psychological factor, and stimulate customers participation motivation by optimizing customer interactive experience, so as to effectively enhance customers loyalty to the brand. This strategy pushes enterprises to a higher competitive advantage in a highly competitive market.

Relationship quality plays a crucial role between customer engagement and brand loyalty. Good relationship quality not only improves the brand image, but also enhances customers brand commitment and loyalty. Enterprises should take the initiative to establish a long-term interaction mechanism with customers, and maintain and improve the quality of the relationship with customers through continuous communication and care. The establishment of this benign interaction will help to build a more stable brand loyalty, so as to create a good market ecology.

Exploring the influence path of customer participation on brand loyalty not only enriches the research framework of relevant theories, but also lays a foundation for enterprises to develop more targeted brand management strategies in practice. By emphasizing the importance of psychological ownership and relationship quality, enterprises can more effectively enhance their brand image and customer loyalty, and achieve a sustainable market competitive advantage.

5.3. Future Research Direction

In the process of exploring the influence path of customer participation on brand loyalty, the research on strengthening the dual intermediary role of psychological ownership

and relationship quality reveals a new perspective on brand management. However, future studies are necessary to explore the following aspects in more depth to extend the boundaries of existing theory and practice.

Based on the results of this study, the heterogeneity of customer participation in different consumption backgrounds can be further analyzed. In different cultural and social environments, customers psychological sense of ownership of the brand and their willingness to participate in it may be affected by many factors, such as social trust level, brand identity and personal values. The discussion of these dimensions will help to form a more universal theoretical framework, and then improve the effectiveness and pertinacity of brand management. Previous studies in the literature have highlighted the potential impact of diverse environments on consumer behavior, and this theoretical support provides the direction for future research.

It is suggested to increase the subdivision research of customer motivation for participation. Exploring the internal and external motivation of customers in brand activities can reveal the key factors affecting psychological ownership and relationship quality. This research direction can not only provide specific operational suggestions for brand managers, but also deepen the understanding of customer participation behavior. Related research shows that customer participation behavior is significantly driven by individual motivation and experience of, so this exploration will enrich the theoretical basis of the relationship between brands and customers.

Future research could focus on the impact of technological development on the relationship between customer engagement and brand loyalty. With the rapid adoption of digital technology, the interactive experience provided by online platforms may dramatically change customers psychological sense of ownership and their perception of the quality of brand relationships. Exploring this field will help to fully understand the formation mechanism of brand loyalty and provide theoretical support for the digital transformation of enterprises.

This series of research directions can not only help to deepen the academic understanding of brand loyalty, but also can provide practical guidance for brand management in practice, and promote enterprises to occupy a competitive advantage in the increasingly fierce market environment.

References

- 1. J. F. Hair, K. Barth, D. Neubert, and M. Sarstedt, "Examining the role of psychological ownership and feedback in customer empowerment strategies," *J. Creat. Value*, vol. 2, no. 2, pp. 194–210, 2016, doi: 10.1177/2394964316661811.
- 2. M. Pagani and A. Mirabello, "The influence of personal and social-interactive engagement in social TV web sites," *Int. J. Electron. Commer.*, vol. 16, no. 2, pp. 41–68, 2011, doi: 10.2753/JEC1086-4415160203.
- 3. J. Kumar and J. K. Nayak, "Understanding the participation of passive members in online brand communities through the lens of psychological ownership theory," *Electron. Commer. Res. Appl.*, vol. 36, p. 100859, 2019, doi: 10.1016/j.elerap.2019.100859.
- 4. S. D. Vivek, S. E. Beatty, and R. M. Morgan, "Customer engagement: Exploring customer relationships beyond purchase," *J. Mark. Theory Pract.*, vol. 20, no. 2, pp. 122–146, 2012, doi: 10.2753/MTP1069-6679200201.
- 5. Z. Bouchriha, S. Farid, and S. Ouiddad, "Enhancing value co-creation behaviors through customer engagement in the Moroccan hotel context: How does it influence customer satisfaction and brand image?" *J. Qual. Assur. Hosp. Tour.*, vol. 25, no. 6, pp. 1581–1606, 2023, doi: 10.1080/1528008X.2023.2165595.
- 6. S. Huma, W. Ahmed, M. Ikram, and M. I. Khawaja, "The effect of logistics service quality on customer loyalty: Case of logistics service industry," *South Asian J. Bus. Stud.*, vol. 9, no. 1, pp. 43–61, 2020, doi: 10.1108/SAJBS-10-2018-0114.
- 7. A. Kusumawati and K. S. Rahayu, "The effect of experience quality on customer perceived value and customer satisfaction and its impact on customer loyalty," *Hum. Syst. Manag.*, vol. 39, no. 2, pp. 219–232, 2020, doi: 10.3233/HSM-190564.
- 8. Z. Zhou, G. Zhan, and N. Zhou, "How does negative experience sharing influence happiness in online brand community? A dual-path model," *Internet Res.*, vol. 30, no. 2, pp. 575–590, 2020, doi: 10.1108/INTR-12-2018-0531.
- 9. M. Li, Y. Hua, and J. Zhu, "From interactivity to brand preference: The role of social comparison and perceived value in a virtual brand community," *Sustainability*, vol. 13, no. 2, p. 625, 2021, doi: 10.3390/su13020625.
- 10. R. Shang, Y. Chen, and H. Liao, "The value of participation in virtual consumer communities on brand loyalty," *Internet Res.*, vol. 16, no. 4, pp. 398–418, 2006, doi: 10.1108/10662240610690025.
- 11. G. Schiuma and F. Santarsiero, Open Innovation Labs. Cham, Switzerland: Springer, 2024. ISBN: 9783031755330.

- 12. C. Lazaris, P. Sarantopoulos, A. Vrechopoulos, and G. Doukidis, "Effects of increased omnichannel integration on customer satisfaction and loyalty intentions," *Int. J. Electron. Commer.*, vol. 25, no. 4, pp. 440–468, 2021, doi: 10.1080/10864415.2021.1967005.
- 13. A. Shankar, S. Talwar, N. Islam, S. M. Alshibani, and P. Sharma, "Demystifying the impact of service recovery strategies: Evidence from healthcare and telecom sectors," *IEEE Trans. Eng. Manag.*, vol. 71, pp. 6649–6661, 2024, doi: 10.1109/TEM.2023.3285152.
- 14. Z. Alzaydi, "Examining the mediating effect of multi-channel integration quality in the relationship with service quality, customer satisfaction and customer loyalty in the Saudi banking sector," *Manag. Sustain.: Arab Rev.*, vol. 3, no. 2, pp. 132–149, 2024, doi: 10.1108/MSAR-12-2022-0061.
- 15. X. Jiang, B. Mastromartino, Q. Yang, J. Zhang, and J. J. Zhang, "Influence of consumer interaction and community relationships on value co-creation willingness: A mediation model of Chinese sports brands," *Sustainability*, vol. 15, no. 1, p. 115, 2023, doi: 10.3390/su15010115.

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of GBP and/or the editor(s). GBP and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.