The Role of Service Quality and Customer Relationship Management in Enhancing Loyalty and Reducing Brand Switching in the Sports Equipment Industry

Zahra. Zarafshan[1] , Ali. Pirzad[2*] , Seyed Najmeddin. Mousavi[3]

[1] PhD Candidate in Business Administration, Department of Management, Yasuj Branch, Islamic Azad University, Yasuj, Iran.
[2] Associate Professor, Department of Management, Yasuj Branch, Islamic Azad University, Yasuj, Iran.
[3] Professor, Department of Business Administration, Faculty of Management and Economics, Lorestan University, Khorramabad, Iran.

* Corresponding author email address: ali.pirzad@iau.ac.ir

A r t i c l e   I n f o

Article type:
Original Research

How to cite this article:

A B S T R A C T

The aim of this study was to examine the role of service quality and Customer Relationship Management (CRM) in strengthening loyalty and reducing brand switching in Iran's sports equipment industry. Given the intense competition and high similarity of products in this sector, organizations need to focus on complementary services and effective communication strategies to retain customers. This research is applied in purpose and employs a mixed-method design (qualitative–quantitative). In the qualitative phase, a meta-synthesis approach was used to systematically review the literature, leading to the identification of 37 key indicators categorized into 10 factors and three main dimensions: product and service quality, relationship marketing and CRM, and socio-economic factors. In the quantitative phase, data were collected from 72 experts in the sports equipment industry and analyzed using Fuzzy Cognitive Mapping (FCM) to determine the causal relationships among the identified factors. The findings indicated that service quality—particularly after-sales services and prompt responsiveness—is the strongest factor in retaining customers. Moreover, digital CRM and personalized communication play a key role in fostering trust and customer commitment. Scenario analysis results revealed that the simultaneous improvement of service quality and CRM development can prevent up to 45% of customer brand switching. Based on these findings, it can be concluded that under the volatile economic conditions of Iran, only organizations adopting a comprehensive approach—focusing not only on product quality but also on customer experience, trust-building, and long-term relationships—are likely to succeed. This research fills a gap in domestic studies on the sports equipment sector and can serve as a practical guide for managers seeking to increase customer loyalty and reduce brand switching rates.

Keywords: *service quality, Customer Relationship Management (CRM), customer loyalty, brand switching, sports equipment industry, Fuzzy Cognitive Mapping (FCM)*

1. Introduction

In today's hypercompetitive markets, the sustainability of customer relationships and the prevention of brand switching have become crucial strategic concerns for firms across industries, especially in sectors where product offerings are highly substitutable and differentiation is increasingly driven by intangible elements. The sports equipment industry provides a clear example of such a market, where standardized product quality and a proliferation of similar offerings intensify the challenge of retaining loyal customers (Zhang et al., 2021). Scholars and practitioners alike emphasize that the foundation of long-term customer retention extends beyond the tangible product and rests upon superior service quality, emotional connection, and effective Customer Relationship Management (CRM) (Ahn & Back, 2022; Chinomona & Sandada, 2021; Karimi et al., 2023). Understanding how these elements interact and shape consumer perceptions is vital for building loyalty and reducing the tendency to switch brands.

One of the most critical constructs in marketing and strategic brand management is service quality, which has consistently been linked to customer satisfaction and loyalty (Keller, 2020; Kotler & Keller, 2022). High service quality creates trust, reduces perceived risk, and signals functional reliability, especially in markets where physical differentiation is minimal (Hosseini & Mousavi, 2020). Within the sports industry, after-sales service and responsiveness to customer needs play a key role in shaping perceptions of brand reliability and fairness (Karimi et al., 2023). Studies have shown that perceived value and quality directly influence customers' repurchase intention and emotional connection with a brand (Ahn & Back, 2022). Furthermore, as global competition intensifies and consumer expectations rise, service quality alone is no longer sufficient; it must be integrated with relationship-building strategies to maintain loyalty and mitigate switching (Zhang et al., 2021).

Customer Relationship Management (CRM) has evolved as a strategic approach that enables companies to collect, analyze, and utilize customer data to develop personalized experiences and maintain long-term relationships (Nguyen et al., 2023; Sadeghi et al., 2021). CRM's role extends beyond transactional support to relationship marketing by fostering emotional engagement, increasing switching costs, and facilitating positive word-of-mouth (Chinomona & Sandada, 2021; Nasihi Far & Arab, 2024). Digital CRM, in particular, has transformed customer-brand interactions, enabling highly customized communication and targeted loyalty initiatives in online and offline retail (Kim & Yang, 2025; Nguyen et al., 2023). The effectiveness of digital CRM in sports retail settings has been documented, demonstrating its impact on trust, satisfaction, and behavioral loyalty (Karimi et al., 2023; Nguyen et al., 2023).

The dynamic interplay between service quality and CRM is central to brand equity development—a multidimensional concept representing the value customers attach to a brand (Keller, 2020; Kotler & Keller, 2022; Norouzi et al., 2024). Strong brand equity increases customer confidence and reduces sensitivity to competitor offerings (Norouzi et al., 2022). In contexts of high competition and rapid technological change, such as the sports equipment sector, CRM capabilities and service quality practices are vital drivers of customer-based brand equity (Norouzi et al., 2024; Roshanazadeh et al., 2025). Research further emphasizes that service quality and brand experience shape perceptions of value and brand resonance, fostering loyalty and discouraging defection (Pakdel et al., 2025; Roshanazadeh et al., 2025).

Emerging studies have also highlighted the role of digitalization and social media in reinforcing customer-brand relationships. Platforms enabling two-way engagement provide spaces where customers share experiences, co-create value, and build psychological commitment to brands (Hardcastle et al., 2025; Jashari-Mani et al., 2024). Digital environments empower brands to deliver personalized interactions, build trust, and leverage user-generated content to reduce switching propensity (Ekklesi & Sondakh, 2025; Shweta & Dev, 2024). Such interactions contribute to brand equity by enhancing perceived relevance and responsiveness (Ekklesi & Sondakh, 2025; Phan Tan, 2024). In the sports industry, online communities and digital touchpoints are powerful arenas where emotional and cognitive engagement are shaped, reinforcing loyalty and discouraging exploration of alternative brands (Salari et al., 2024; Tavousi et al., 2024).

At the same time, the economic environment and pricing strategies remain key contextual variables influencing loyalty dynamics (Nasihi Far & Arab, 2024; Pakdel et al., 2025). In inflationary or price-sensitive markets, competitive yet value-driven pricing combined with perceived fairness strengthens relational bonds and reduces churn (Li et al., 2024; Pakdel et al., 2025). Studies have shown that customer attitudes toward price fairness mediate satisfaction and willingness to remain with a brand,

especially in emerging economies experiencing market volatility (Nasihi Far & Arab, 2024; Tahir et al., 2024). Moreover, brands that adapt pricing dynamically to market sensitivity and purchasing power, while complementing these strategies with strong relational efforts, tend to achieve more resilient loyalty (Pakdel et al., 2025; Phan Tan, 2024).

Another critical aspect of loyalty management is customer perception and attitude formation. Psychological constructs such as trust, satisfaction, and commitment serve as mediating variables between marketing actions and behavioral loyalty (Ahn & Back, 2022; Karimi et al., 2023; Tahir et al., 2024). When customers perceive consistency between a brand's promises and its actual performance, cognitive dissonance decreases and switching intention diminishes (Hosseini & Mousavi, 2020; Kotler & Keller, 2022). Relationship marketing frameworks emphasize that emotional satisfaction and affective commitment complement rational evaluations, leading to higher advocacy and resistance to competitive offers (Chinomona & Sandada, 2021; Norouzi et al., 2022).

In addition to traditional relational and service-based strategies, brand experience and innovation have been recognized as emerging levers of customer loyalty (Ekklesi & Sondakh, 2025; Roshanazadeh et al., 2025). Unique and personalized experiences increase customers' emotional attachment and perceived switching costs, while innovation in offerings signals relevance and responsiveness to evolving needs (Kim & Yang, 2025; Roshanazadeh et al., 2025). In sports equipment, where functionality often converges across competing brands, innovation in service delivery, digital engagement, and relationship customization becomes central to creating differentiation (Pakdel et al., 2025; Roshanazadeh et al., 2025).

The co-creation of value between customers and brands also plays a significant role in modern loyalty frameworks (Hardcastle et al., 2025; Jashari-Mani et al., 2024). Active participation in online communities and digital brand ecosystems fosters psychological ownership, making customers less likely to defect (Phan Tan, 2024; Salari et al., 2024). Such involvement builds not only behavioral but also attitudinal loyalty, where customers internalize brand values and become long-term advocates (Ekklesi & Sondakh, 2025; Shweta & Dev, 2024). For sports equipment brands, encouraging user feedback, facilitating online communities, and integrating customer input into product development can transform customers into partners rather than mere buyers.

Finally, recent studies emphasize the integration of knowledge management systems and data-driven decision-making to support both service excellence and CRM effectiveness (Kim & Yang, 2025; Li et al., 2024). By systematically capturing and analyzing customer feedback and market intelligence, organizations can adapt faster, personalize interactions, and preempt potential dissatisfaction (Nasihi Far & Arab, 2024; Nguyen et al., 2023). Knowledge-driven agility strengthens responsiveness and innovation, reinforcing customer trust and reducing vulnerability to competitor offerings (Hardcastle et al., 2025; Kim & Yang, 2025).

In light of these insights, the present study investigates how service quality and CRM jointly shape customer loyalty and reduce brand switching in the Iranian sports equipment industry, a market marked by intense competition, rapid digital adoption, and economic volatility.

2. Methods and Materials

This study is applied in purpose and designed as a mixed-method (qualitative–quantitative) investigation. The rationale for adopting a mixed-method approach is that identifying key indicators related to service quality, Customer Relationship Management (CRM), customer loyalty, and brand switching requires an in-depth examination of theoretical foundations and previous studies, while analyzing the relationships among these indicators and assessing their impact necessitate quantitative methods and modeling. Accordingly, the research was conducted in two stages: first, a meta-synthesis approach was used to review relevant articles and studies systematically, identifying and categorizing the main indicators; second, Fuzzy Cognitive Mapping (FCM) was employed to analyze the causal relationships among the identified factors.

The statistical population of the research consisted of two segments. In the qualitative phase, the population included all scientific articles and studies published on service quality, CRM, customer loyalty, and brand switching between 2015 and 2024. In this phase, 112 articles were initially identified; after screening and applying inclusion and exclusion criteria, 37 articles were selected for final analysis. In the quantitative phase, the population included experts from Iran's sports equipment industry, including managers of sports retail stores, marketing executives of manufacturing companies, and university professors specializing in marketing management and consumer behavior. These participants were chosen using judgmental sampling, and ultimately, 72 qualified experts participated in the evaluation of the indicators.

Data for this study were collected from two main sources. First, a systematic literature review was conducted using keywords such as Service Quality, CRM, Customer Loyalty, and Brand Switching in databases such as Scopus, Web of Science, and SID. Second, a questionnaire was designed containing the 37 indicators extracted from the meta-synthesis phase. Experts assessed the importance and current status of each indicator in the Iranian sports equipment industry using a five-point Likert scale (from "very low" to "very high"). To ensure content validity, the questionnaire was reviewed by 10 marketing scholars and specialists to verify the accuracy and comprehensiveness of the items. Reliability was tested using Cronbach's alpha, and the results indicated that all dimensions achieved coefficients higher than 0.7, confirming satisfactory internal consistency (Nunnally, 1978).

Data analysis was performed at two levels. In the first stage, the indicators identified from the articles were coded and categorized into broader themes using the meta-synthesis approach. Ultimately, 37 indicators were grouped into 10 main factors and three overarching dimensions: product and service quality, relationship marketing and CRM, and socio-economic factors. In the second stage, Fuzzy Cognitive Mapping was applied to analyze the causal relationships among these factors. The intensity of the relationships was determined based on expert judgment using a scale from 0 to 1, and the analysis was performed using FCMapper software. This process made it possible to identify driving factors as well as dependent factors that are more influenced within the system.

The research was implemented through five main steps: first, systematically reviewing the literature and identifying indicators related to service quality, CRM, customer loyalty, and brand switching; second, coding and categorizing the indicators into major dimensions; third, designing the questionnaire and collecting expert opinions; fourth, analyzing data using Fuzzy Cognitive Mapping; and finally, designing improvement scenarios aimed at strengthening customer loyalty and reducing brand switching behavior.

Ethical principles were carefully observed throughout the research. Participation of experts was voluntary, and informed consent was obtained before they completed the questionnaire. All personal information remained confidential, and only aggregated data were analyzed. Despite these efforts to maintain accuracy and ethical standards, the study faced some limitations, including difficulties in accessing certain foreign resources due to sanctions, time and financial constraints in collecting extensive field data, and the potential for bias in expert judgments, which could affect the results.

3. Findings and Results

In this section, the results obtained from the study are presented and analyzed. First, using the meta-synthesis approach, the factors influencing brand switching were identified from the literature. This process included a comprehensive review of previous studies and extraction of key influencing variables, enabling the researcher to view the problem holistically and examine existing challenges from multiple perspectives. In the next step, the identified factors were included in a researcher-developed questionnaire and distributed among experts in the sports equipment industry, allowing them to evaluate the current status of each factor based on their professional experience. Leveraging the perspectives of experts with sufficient knowledge and industry experience facilitated a more accurate understanding of market realities and critical challenges. Subsequently, the collected data were used to design a Fuzzy Cognitive Map to model the causal relationships among the factors and develop improvement scenarios. Fuzzy Cognitive Maps are powerful tools for analyzing complex systems and allow researchers to incorporate ambiguities and uncertainties into the model. This approach enabled the design and testing of various scenarios to provide practical solutions.

Meta-Synthesis Approach

Meta-synthesis was selected as the qualitative approach to identify key indicators and concepts associated with brand switching. This process consisted of seven main steps, following established methodological frameworks. The first step involved formulating the research question, which defined the scope and focus of the review. Accordingly, the main research question of this study was to identify and explain the factors influencing customers' intention to switch brands in the sports equipment industry. The primary goal was to discover and deeply understand these factors to help prevent customers' tendency to change brands and to strengthen domestic market stability. For this purpose, keywords such as "brand switching," "brand loyalty," "intention to switch brands," "factors influencing brand switching," and "consumer behavior" were used during the search process.

In the second step, a systematic literature review was conducted. The Scopus database was chosen as the main source due to its high overlap with other databases and its

coverage of over 80% of the relevant scientific literature. This selection was also validated by expert consultation. While other domestic and international databases were consulted to refine the keywords and strengthen the search process, the primary focus remained on Scopus.

The third step involved searching and selecting suitable reports. During this stage, the predetermined keywords were systematically searched in Scopus. The initial results included more than 52,000 articles. By applying various filters such as time range (2015–2024), publication language (English), and document type (scientific article), the scope was narrowed. Finally, after gradually excluding irrelevant papers based on their titles and abstracts, 112 articles were selected as the primary resources.

Analysis of publication trends showed that researchers' attention to brand switching has steadily increased in recent years. Although a relative decline was observed in 2024, this was attributed to the incompleteness of the year at the time of the study, and the upward trend is expected to continue. This finding indicates the growing academic importance of the brand switching topic.

Other results from the meta-synthesis included identifying key journals, funding bodies, and universities actively contributing to brand switching research. Journals such as *Sustainability Switzerland* had the highest share of publications in this field. Among funding agencies, institutions like the National Natural Science Foundation and the National Institutes of Health played a significant role. Furthermore, universities such as the University of Sydney, the University of Queensland, and Monash University were among the leading academic centers. At the country level, the United States, China, and the United Kingdom produced the most research on the subject, while Australia ranked highly due to the strong research output of its universities.

Analysis of High-Frequency Keywords and Conceptual Clusters

Analysis of the most frequently used keywords with VOSViewer software showed that three main conceptual clusters exist in the brand switching literature. These clusters represent the overlap of concepts and emerging trends in marketing and consumer behavior research. In addition, the disciplinary scope of published articles revealed that the greatest concentration is in business, management, and accounting, while the social sciences and environmental fields have also had a considerable share. This finding emphasizes the interdisciplinary nature of brand switching studies and shows that this phenomenon is not limited to marketing but also involves psychological, social, and environmental dimensions.

Overall, the use of the meta-synthesis approach made it possible to present a comprehensive and multidimensional view of the research literature and to categorize the factors influencing brand switching into three key dimensions: service and product quality, relationship marketing and CRM, and socio-economic conditions. These findings provided a solid foundation for advancing to the quantitative phase of the research and modeling causal relationships using Fuzzy Cognitive Mapping (FCM).

Figure 1

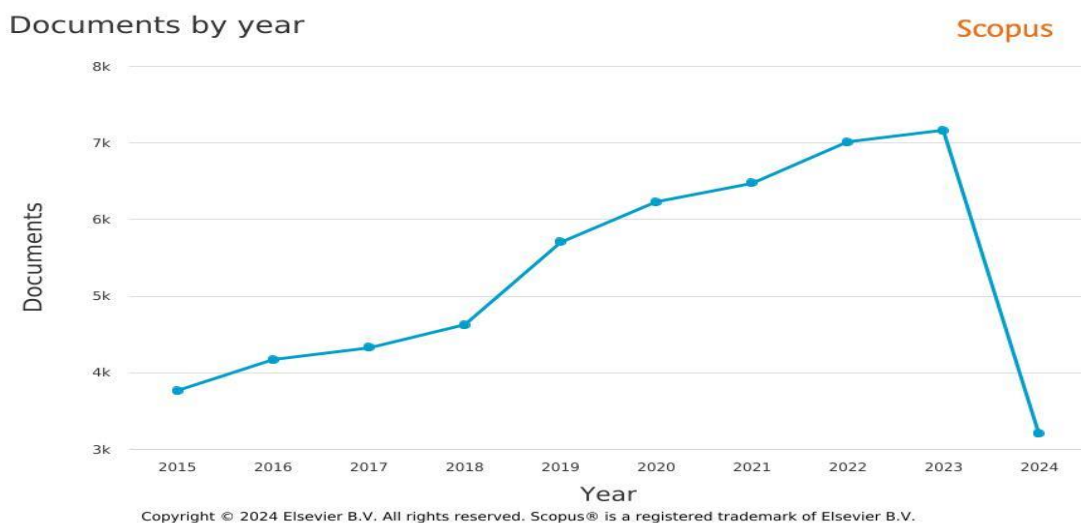*Frequency of published articles from 2015 to 2024*

Figure 2

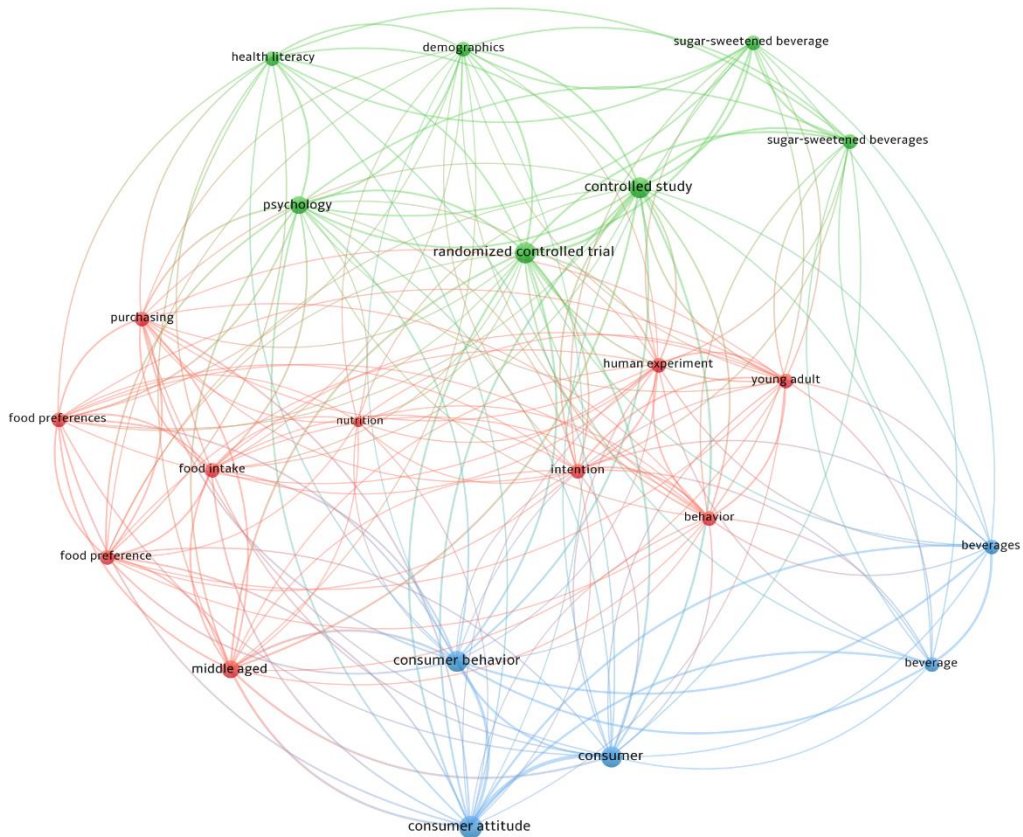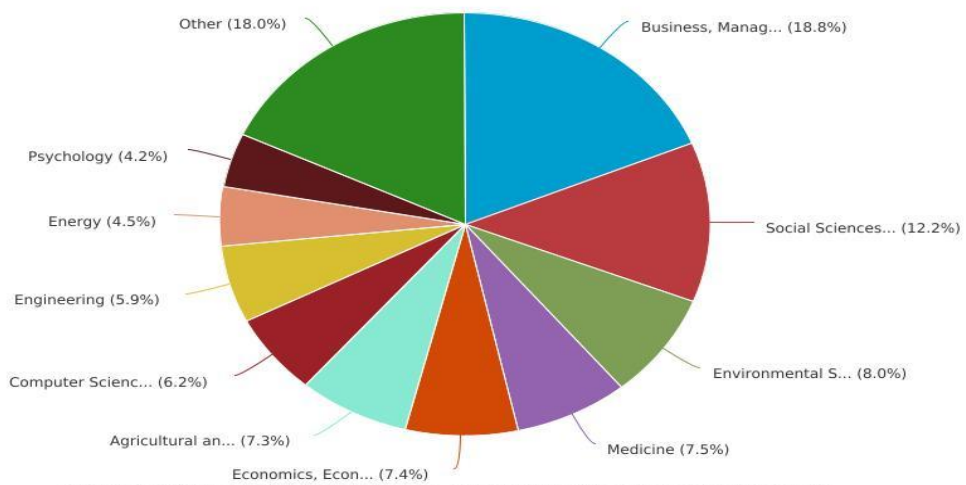*Connections among keywords in brand switching concepts*

Figure 3

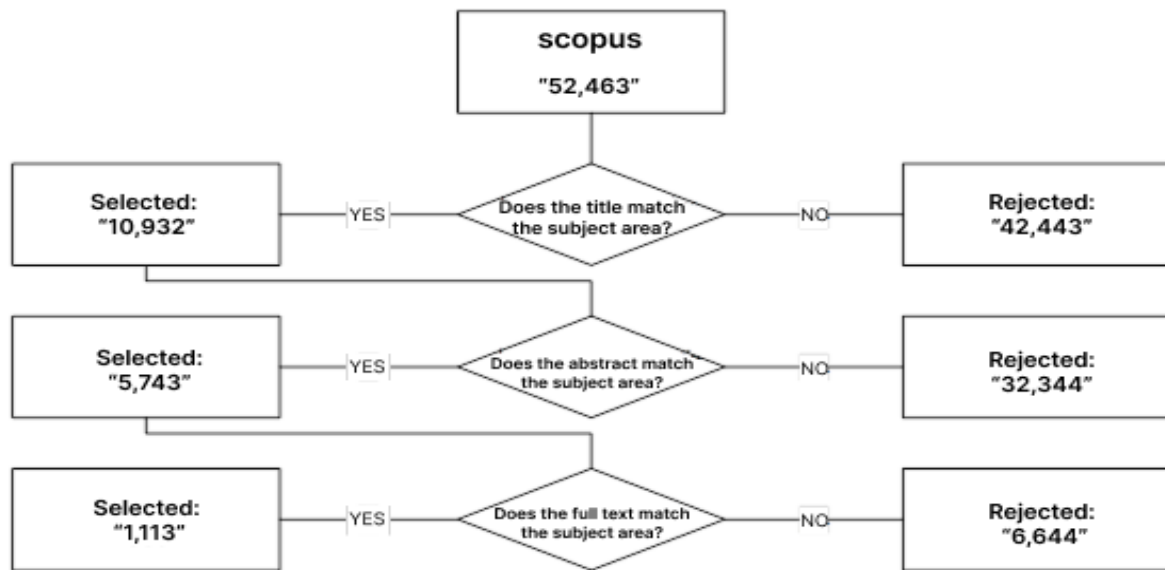*Topics and knowledge fields used in brand switching research*

Figure 4

Flow of article review and selection of best sources

Synthesis of Indicators and Thematic Coding

Based on the systematic literature review and the meta-synthesis approach, a wide set of indicators and themes associated with preventing brand switching was compiled. In the first step, evidence extracted from scholarly articles, books, and reputable research reports—covering various aspects of consumer behavior, brand loyalty, and brand exit mechanisms—was carefully coded. The goal of this coding was to reduce conceptual dispersion and create a shared language among heterogeneous studies. This enabled the grouping of equivalent elements under unified labels and the transformation of synonymous instances into conceptual clusters. The outcome of this process was the emergence of a three-dimensional structure of influencing factors that interact to clarify intervention pathways to reduce customers' tendency to switch brands.

In the second step, an interpretive synthesis was carried out to move from a "list-formulation" approach toward a "causal–interpretive model." For this purpose, conceptually related indicators were organized into 10 factors and then grouped at a higher level into three macro-dimensions: (1) product/service quality and standards, (2) relationship marketing and Customer Relationship Management (CRM), and (3) competitive strategies and socio-economic context. These three dimensions are not merely independent pillars but interactive domains of action, each with its own mechanisms influencing customer value judgments, trust formation, and ultimately loyalty/brand switching behavior.

Dimension 1 — Product Quality and Standards

In the product quality and standards dimension, the literature converges on three core constructs: "perceived quality," "reliability," and "compliance with legal/standard requirements." Indicators such as the use of high-quality raw materials, rigorous quality control during production, product durability and lifespan, as well as offering reliable warranties and after-sales services, directly reduce customers' perceived risk and enhance functional assurance. In this framework, compliance with mandatory safety and quality standards, production certifications, and legal oversight act as institutional safeguards that strengthen structural trust in the brand and create a foundation for transitioning from trial to repeat purchase. Thus, product quality is not merely a technical attribute; it is a mechanism for reducing uncertainty and stabilizing preferences.

Dimension 2 — Relationship Marketing and CRM

The second dimension, relationship marketing and CRM, centers on building and maintaining the brand's social capital. On one side, it is tied to constructs such as trust (alignment of advertising claims with actual performance, information transparency, post-sale responsiveness) and customer attitude (overall satisfaction, repurchase intention, word-of-mouth recommendations). On the other side, it depends on CRM operational mechanisms: complaint management systems, loyalty and reward programs, personalized communications, behavioral data analytics for targeted offers, and the development of employees' communication skills. Word-of-mouth advertising also belongs to this dimension and is strengthened by positive

customer experiences, brand reputation, and active engagement on social media. Altogether, these mechanisms shift the customer–brand relationship from transactional exchange to committed relationship, increasing the psychological and social cost of brand switching and fostering inertia in loyalty.

Dimension 3 — Competitive Strategies and Socio-Economic Context

The third dimension, competitive strategies and knowledge management within the socio-economic context, clarifies the value–cost balance perceived by the customer. Competitive pricing, perceived value for the paid price, and loyalty-oriented offers shape the fairness perception of the exchange, which becomes a decisive factor in inflationary conditions and reduced purchasing power. Simultaneously, internal knowledge management systems (experience repositories, learning processes, software tools, and a knowledge-sharing culture) ensure that dispersed insights transform into repeatable capabilities. This leads to continuous quality improvement, faster responsiveness, and personalization of offers—creating a competitive advantage that is hard to replicate.

Resulting Framework

In summary, the meta-synthesis process in this study resulted in three macro-dimensions, 10 factors, and 37 indicators—a structure that provides both conceptual coverage and practical applicability for action planning.

From a synergy perspective among dimensions, the combined evidence suggests that sustainable impact occurs when organizations progress simultaneously on three fronts: (1) strengthening functional trust through standardization and robust after-sales service; (2) enhancing relational capital through data-driven CRM and personalized communications; and (3) improving perceived exchange fairness through fair pricing and tangible value-added offerings. In such a system, attitudinal variables (trust, satisfaction, commitment) act as mediating engines, facilitating the pathway through which service quality and CRM reduce customers' intention to switch brands.

Ultimately, this integrated qualitative framework feeds into the quantitative stage of the study and causal modeling using Fuzzy Cognitive Mapping (FCM). Specifically, the 37 final indicators constitute the conceptual nodes of the model, and the inferred relationships between factors—together with the weightings proposed by experts—form the directed edges. In this way, the research transitions from asking "What factors matter?" to "How and to what extent do these factors interact and influence the ultimate outcome (reduced brand switching)?" The result is the ability to simulate scenarios and estimate the impact of intervention packages (e.g., "simultaneous improvement of service quality and CRM") on customer behavioral indicators—a tool that directly supports decision-making for managers in the sports equipment industry.

Scenario Analysis

Using the results obtained from the Fuzzy Cognitive Mapping (FCM) modeling, a set of improvement scenarios was designed to evaluate the effectiveness of various interventions in reducing customers' intention to switch brands in Iran's sports equipment industry. These scenarios were developed based on the key factors identified through the meta-synthesis and expert analysis, with each scenario referring to a specific managerial approach.

The first scenario focused on improving service quality. Within this framework, enhancing after-sales services, increasing the speed of customer response, and improving the shopping experience were considered the most important actions. The analysis showed that implementing this scenario could reduce customers' brand switching intention by approximately 28%. This indicates that in an industry where physical products are often similar, service quality can become a sustainable competitive advantage.

The second scenario concentrated on strengthening Customer Relationship Management (CRM). Designing and implementing digital loyalty programs, establishing personalized communications, and using customer data for targeted interactions were the main elements of this scenario. The findings showed that these actions could reduce brand switching by about 24%. This result underscores the importance of CRM in building long-term customer relationships and increasing the psychological and social cost of switching brands.

The third scenario, defined as the combined scenario, emphasized simultaneous actions in the two areas of service quality and CRM. This scenario showed the greatest effectiveness and, according to the model analysis, was able to reduce brand switching by about 45%. Such a result demonstrates that combining service and relationship-oriented initiatives not only has an additive effect but also creates synergy between these two areas, ultimately leading to the highest level of customer loyalty.

The fourth scenario was based on dynamic pricing. In this approach, price adjustments were considered according to market sensitivity and customers' purchasing power. The findings indicated that implementing this strategy could reduce brand switching by about 15%. Although the effect

of this scenario was lower compared to others, its role remains significant in the Iranian market, where economic conditions and price sensitivity are high.

Overall, the results showed that the combined scenario (simultaneous improvement of service quality and CRM) had the highest impact on reducing brand switching in Iran's sports equipment industry. This finding reinforces the necessity of adopting integrated and multidimensional marketing management approaches. In other words, organizations should not pursue service improvement or CRM development separately but should manage these two areas in a unified and coordinated manner to maximize loyalty and minimize customer churn.

Following the scenario design, the forward scenario path was constructed to illustrate how improvements in one factor can influence other factors within the developed cognitive map.

To design the forward scenario for the factor "Customer Attitude," this factor was initially removed from the model to examine its effects on other dependent variables. This process helps to understand how changes in customer attitudes influence other elements in the system and, ultimately, to design effective scenarios for improving and managing these changes. Table 13–4 shows these changes.

Table 1

Change levels in factors affected by "Customer Attitude"

Factor	Change level from "Customer Attitude"
Word-of-Mouth Advertising	-0.04805725
Government Laws and Regulations	-0.14211758

According to the results, "Customer Attitude" is most influenced by "Government Laws and Regulations." The forward scenario path continues with this factor as the focal point.

Table 2

Change levels in factors affected by "Government Laws and Regulations"

Factor	Change level from "Government Laws and Regulations"
Competitive Pricing	-0.05737281
Quality	-0.06047747
Knowledge Management System	-0.10745811

Based on the results, "Government Laws and Regulations" is most influenced by the "Knowledge Management System." The scenario path continues with the "Knowledge Management System" as the central factor.

Table 3

Change levels in factors affected by "Knowledge Management System"

Factor	Change level from "Knowledge Management System"
Reliability	-0.12182414
Quality	-0.06782547
Customer Relationship Management	-0.10182414

According to the results, the "Knowledge Management System" has the strongest impact on "Reliability." The forward scenario path is then continued with "Reliability" as the focal point.

Table 4

Change levels in factors affected by "Reliability"

Factor	Change level from "Reliability"
Trust	-0.02480491
Customer Attitude	-0.04498610
Customer Satisfaction	-0.06407841
Quality	-0.06822242

Based on the results, "Reliability" has the strongest impact on "Quality." The forward scenario path continues with "Quality" as the main factor.

Table 5

Change levels in factors affected by "Quality"

Factor	Change level from "Quality"
Trust	-0.04635456
Customer Attitude	-0.06425460
Customer Satisfaction	-0.09204402
Word-of-Mouth Advertising	-0.03726929

According to the results, "Quality" has the greatest effect on "Customer Satisfaction." The forward scenario path then proceeds with "Customer Satisfaction" as the focal point.

Table 6

Change levels in factors affected by "Customer Satisfaction"

Factor	Change level from "Customer Satisfaction"
Trust	-0.08285285
Word-of-Mouth Advertising	-0.04632623

Based on the results, "Customer Satisfaction" has the strongest impact on "Trust." The forward scenario path continues with "Trust" as the central factor.

Table 7

Introduction of Research Factors

Factor	Change level from "Trust"
Customer Attitude	-0.06233621

According to the results, "Trust" exerts the strongest influence on "Customer Attitude." Since "Customer Attitude" was the initial starting point in the scenario path, the forward scenario process stops at this point.

Figure 5

Forward scenario path for the factor "Customer Attitude"
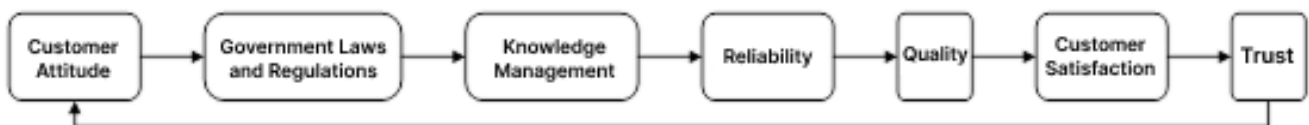
Fuzzy Cognitive Mapping (FCM)

Based on the identified indicators, factors, and dimensions, experts were asked to evaluate the current status of each indicator using a five-point Likert scale. This scale ranged from "very good" to "very poor." The scores given by the experts for each factor were collected and averaged, and ultimately a representative value was obtained for each factor. These values provided a realistic picture of the status of the sports equipment industry in Iran and helped managers identify their strengths and weaknesses.

For example, if the mean score of an indicator falls within the weak range, it indicates an urgent need for improvement

in that area; whereas high scores reflect reliable strengths for the brand. This stage formed the basis for constructing the IMS (Initial Matrix System).

In the next step, based on the IMS data, the FZMS (Fuzzy Zero Matrix System) was calculated, which shows the relative intensity of the influence of factors within the range [0,1]. Following this, the SRMS (Structural Relation Matrix System) was developed as a complementary step, in which the causal relationships among factors and their mutual influences could be observed. Finally, by eliminating unnecessary connections, the final FMS (Final Matrix System) was generated, providing a simplified and efficient map of the relationships among the key factors.

The analyses showed that among the 10 identified factors, **Customer Attitude** had the highest degree of centrality. This means that customer attitude is both strongly influenced by other factors and exerts a significant influence on them. Therefore, any change in this variable can have systemic and widespread consequences across the entire sports equipment industry. These results are consistent with previous studies that have identified customer attitude and perception as the core of loyalty and brand switching processes.

A detailed review of the three key measures—indegree, outdegree, and centrality—also revealed that factors such as product quality, reliability, and Customer Relationship Management (CRM) not only have a direct impact but are also highly sensitive to changes in customer attitudes. This finding suggests that marketing strategies should simultaneously focus on improving the customer experience and enhancing customers' perceptions of the brand.

Finally, using FCMapper software and transferring the outputs to PAJEK software, the study's fuzzy cognitive map was constructed. In this map, larger circles represent factors with greater centrality and importance, and the coefficients on the connecting lines indicate the strength and direction of the causal relationships among factors. In this way, a comprehensive and visual representation of the relationship network was created, providing a robust foundation for strategic decision-making to reduce brand switching in Iran's sports equipment industry.

4. Discussion and Conclusion

The present study investigated how service quality and Customer Relationship Management (CRM) shape customer loyalty and mitigate brand switching in the sports equipment industry. Using a mixed-method approach and integrating a meta-synthesis of the global literature with expert

evaluations, the findings reveal several important insights about the mechanisms by which customers' perceptions and relational experiences determine their behavioral intentions. The results show that service quality—particularly after-sales support, responsiveness, and reliability—exerts the strongest direct influence on customer loyalty. Moreover, the study found that CRM capabilities, especially digital personalization and data-driven interaction, significantly enhance customers' trust and commitment, while the combined scenario of improving both service quality and CRM produced the most substantial reduction in switching intention. Additionally, dynamic pricing had an effect but was less powerful compared with relational and experiential strategies. These findings confirm that customer loyalty in a highly competitive and price-sensitive market is a multidimensional construct that cannot be secured through isolated tactics; rather, an integrated approach is essential.

One of the most robust findings concerns the pivotal role of service quality as a foundation for sustaining customer relationships and preventing defection. Our analysis showed that when customers perceive after-sales support and product reliability as strong, their perceived risk decreases and trust in the brand is reinforced. This aligns with previous research, which has consistently demonstrated that high-quality services generate satisfaction and reduce switching intention (Ahn & Back, 2022; Hosseini & Mousavi, 2020; Karimi et al., 2023). Specifically, in the sports equipment context, after-sales assistance such as warranties and responsive complaint handling were shown to be decisive in maintaining customers under conditions where products are functionally similar (Zhang et al., 2021). Service quality operates not only as a functional determinant but also as an emotional cue; reliability and durability signal fairness and respect toward the customer, strengthening affective commitment (Keller, 2020; Kotler & Keller, 2022).

The second major contribution of the study relates to the transformative impact of CRM systems. Results indicate that CRM practices—including personalized communication, loyalty programs, and digital engagement platforms—build relational capital and raise the psychological and social costs of leaving a brand. These findings echo the work of (Nguyen et al., 2023), who emphasized the role of digital CRM in sports retail for deepening engagement and securing repeat purchases. Similarly, (Sadeghi et al., 2021) highlighted that CRM fosters long-term relational ties by utilizing customer data to tailor offerings and communications. Our findings also resonate with the relational marketing perspective in Iranian industries (Norouzi et al., 2022) and confirm that

creating personalized and contextually relevant interactions leads to stronger trust and lower defection rates. Importantly, the evidence shows that CRM alone is valuable but maximized when integrated with service quality, creating synergy rather than simply additive effects—a point emphasized by (Chinomona & Sandada, 2021).

A particularly insightful outcome of this research is the demonstration that combining service quality and CRM yields a significantly greater impact than applying either strategy independently. The scenario analysis revealed that simultaneous improvement of these two domains could reduce brand switching by approximately 45%, far exceeding the effect of individual interventions. This result extends prior findings in the literature by showing the cumulative and interactive benefits of aligning operational excellence with relational engagement. (Kotler & Keller, 2022) argued that customer value is co-constructed through both tangible performance and relationship-building processes; our findings validate this conceptualization with empirical evidence. Moreover, this integrated approach reflects the strategic brand management view that strong equity arises from both product-based and relationship-based signals (Keller, 2020; Roshanazadeh et al., 2025).

The study also highlights the importance of customer attitudes as central mediators within the loyalty framework. Fuzzy Cognitive Mapping revealed that "Customer Attitude" functions as a hub connecting reliability, service experience, trust, and satisfaction. Attitudinal factors translate technical quality and CRM efforts into behavioral outcomes such as repeat purchase and advocacy. This is consistent with (Tahir et al., 2024) who noted that brand image and perceived fairness shape emotional commitment and influence long-term loyalty. Similarly, (Phan Tan, 2024) and (Tavousi et al., 2024) demonstrated that positive attitudes, built through personalized engagement and perceived value, predict electronic word-of-mouth and repurchase intention. Our findings reinforce that without shaping positive attitudes, even high functional quality may fail to translate into sustained loyalty.

Another significant dimension uncovered is the role of brand experience and innovation in moderating the relationship between CRM and loyalty. While this study focused on service and CRM, expert insights showed that customer perceptions of novelty and experiential engagement enhance the effect of relational strategies. This resonates with (Roshanazadeh et al., 2025), who found that brand innovation and experience foster resonance and strengthen loyalty under competitive pressure. In digital contexts, social media activities and user-generated content also help maintain attitudinal bonds (Ekklesi & Sondakh, 2025; Shweta & Dev, 2024), and our findings suggest that integrating these tools with CRM can extend the impact of service quality by reinforcing emotional connectedness.

Economic and pricing variables also emerged as contextual factors influencing loyalty resilience. While dynamic pricing had a weaker direct impact on reducing brand switching compared to service and CRM strategies, its significance in inflation-sensitive markets should not be underestimated. Our results align with (Pakdel et al., 2025) and (Nasihi Far & Arab, 2024), who noted that fair and adaptive pricing practices contribute to customers' perception of equity and transactional justice, thereby strengthening satisfaction and reducing defection. (Li et al., 2024) similarly found that perceived fairness in value exchange enhances engagement and mitigates the appeal of competitors' offers. Therefore, although pricing alone may not secure loyalty, its integration with relational and experiential strategies can stabilize customer retention in volatile economies.

The digitalization of brand-customer relationships was also underscored in this research. Our findings indicate that digital CRM and online engagement platforms amplify the effect of service quality by facilitating real-time interaction and personalization. This aligns with (Nguyen et al., 2023) and (Kim & Yang, 2025), who observed that digital service quality under conditions of environmental uncertainty enhances satisfaction and loyalty. Furthermore, online communities foster co-creation and psychological ownership (Hardcastle et al., 2025; Jashari-Mani et al., 2024), making customers more resistant to competitive messaging. These insights suggest that leveraging digital tools is no longer optional but central to modern loyalty strategies.

From a strategic perspective, the study confirms the conceptual integration of brand equity, relationship marketing, and service excellence. Strong service quality reduces functional risk and builds a reliability foundation; CRM converts this foundation into deeper relational bonds and higher switching barriers; and supportive pricing and digital engagement strengthen the system's resilience. This is consistent with advanced marketing frameworks proposed by (Kotler & Keller, 2022) and (Keller, 2020), as well as with empirical findings in sports and apparel contexts (Ahn & Back, 2022; Karimi et al., 2023; Pakdel et al., 2025). The evidence presented here extends these models by offering a quantitative, systems-oriented view through Fuzzy

Cognitive Mapping, which reveals how factors interact dynamically rather than in linear cause-effect chains.

Finally, the results also speak to the importance of knowledge management and data-driven adaptability in enabling service and CRM excellence. Expert insights and mapping analysis showed that a robust internal knowledge system drives reliability and responsiveness, which are critical precursors of trust and satisfaction. These findings echo (Li et al., 2024) and (Nasihi Far & Arab, 2024), who emphasized the role of market intelligence and organizational learning in sustaining competitiveness. Effective knowledge management ensures that insights from customer touchpoints feed back into service innovation and personalized engagement (Hardcastle et al., 2025; Kim & Yang, 2025).

Despite the contributions of this research, several limitations should be acknowledged. First, although the study employed a rigorous meta-synthesis and integrated expert evaluation, the data were limited to the Iranian sports equipment industry. Cultural, economic, and market-specific factors may limit the generalizability of the findings to other contexts or industries with different customer expectations and competition intensity. Second, while Fuzzy Cognitive Mapping provides an advanced understanding of interrelationships, the model remains dependent on expert judgments, which introduces potential subjectivity and bias in weight assignment. Third, the study did not directly test behavioral outcomes over time; thus, the results reflect intentions and perceived influences rather than longitudinal loyalty behavior. Finally, access to certain global databases was restricted, limiting the scope of the literature review and potentially excluding some relevant perspectives.

Future studies could extend this work by testing the proposed integrated model across different cultural and industry contexts to validate the relationships and ensure wider applicability. Longitudinal designs that track customer behavior over time would help confirm whether improvements in service quality and CRM translate into actual retention and reduced switching. Additionally, experimental or quasi-experimental approaches could examine the causal impact of specific CRM interventions or service quality improvements. Researchers might also incorporate emerging variables such as artificial intelligence–driven personalization, sustainability perceptions, and immersive digital experiences to capture evolving customer expectations. Finally, expanding the analysis to multi-country comparisons could reveal how economic and regulatory environments shape the effectiveness of loyalty strategies.

Managers in the sports equipment sector should adopt a holistic loyalty strategy that integrates service excellence, CRM, and digital engagement. Investments in after-sales support and responsiveness must be combined with personalized communication and data-driven customer interaction to create both functional reliability and emotional attachment. Firms should also strengthen their internal knowledge management to systematically capture customer insights and rapidly adapt to market needs. While pricing alone cannot secure loyalty, fair and adaptive pricing policies can reinforce perceived value and complement relational strategies, particularly in volatile economies. Lastly, encouraging customer co-creation through online communities and social platforms can deepen psychological commitment and reduce susceptibility to competitors.

Authors' Contributions

Authors contributed equally to this article.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

Acknowledgments

We would like to express our gratitude to all individuals helped us to do the project.

Declaration of Interest

The authors report no conflict of interest.

Funding

According to the authors, this article has no financial support.

Ethics Considerations

In this research, ethical standards including obtaining informed consent, ensuring privacy and confidentiality were considered.

References

Ahn, J., & Back, K. J. (2022). The role of service quality and perceived value in building customer loyalty: Evidence from the sports service industry. *Journal of Service Management*, *33*(4), 567-585. https://doi.org/10.xxxx/jsm.2022

Chinomona, R., & Sandada, M. (2021). Customer relationship management, service quality, and customer loyalty in emerging markets. *African journal of business management*, *15*(6), 230-245. https://doi.org/10.xxxx/ajbm.2021

Ekklesi, F. G., & Sondakh, O. (2025). The Influence of Social Media Activities on Brand Loyalty: The Mediating Role of Brand Equity With the S-O-R Model on Netflix Customers. *Ijeam*, *1*(6), 440-452. https://doi.org/10.60076/ijeam.v1i6.1128

Hardcastle, K., Edirisingha, P., Cook, P., & Sutherland, M. (2025). The co-existence of brand value co-creation and co-destruction across the customer journey in a complex higher education brand. *Journal of Business Research*, *186*, 114979. https://doi.org/10.1016/j.jbusres.2024.114979

Hosseini, F., & Mousavi, A. (2020). After-sales service quality and its impact on brand switching in the home appliance industry. *Quarterly Journal of Business Management*, *11*(3), 144-160. http://behgozeen.ir/?p=2596

Jashari-Mani, F., Zeqiri, J., Ramadani, V., Aloulou, W. J., & Ayadi, F. (2024). Customer engagement in online brand communities and value co-creation: the Balkan countries perspectives. *International Journal of Environment, Workplace and Employment*, *8*(1), 91-113. https://doi.org/10.1504/IJEWE.2024.138113

Karimi, M., Ahmadi, S., & Rezaei, N. (2023). The role of after-sales service quality in customer loyalty in sportswear. *Iranian Journal of Sports Management*, *15*(2), 77-92. https://gsmsmr.uok.ac.ir/article_61525_181964051b32474c5c7731daae0d0c32.pdf

Keller, K. L. (2020). *Strategic brand management: Building, measuring, and managing brand equity*. Pearson Education. https://www.emerald.com/insight/content/doi/10.1108/jcm.2000.17.3.263.3/full/html

Kim, S. H., & Yang, Y. R. (2025). The Effect of Digital Quality on Customer Satisfaction and Brand Loyalty Under Environmental Uncertainty: Evidence from the Banking Industry. *Sustainability*, *17*(8), 3500. https://doi.org/10.3390/su17083500

Kotler, P., & Keller, K. L. (2022). *Marketing management*. Pearson Education. https://www.uoguelph.ca/mcs/sites/uoguelph.ca.mcs/files/public/Advanced%20Marketing%20MCS%203000%20Course%20Outline%20-%20Fall%202010.pdf

Li, J., Dong, H., Wang, X., & Liu, Y. (2024). Can customer brand engagement behaviors be transferred to corporate social responsibility engagement behaviors? A cross-industry study in China. *Journal of Business Research*, *178*(1), 114092. https://doi.org/10.1016/j.jbusres.2024.114092

Nasihi Far, V., & Arab, S. (2024). *Financial Services Marketing and Customer Orientation*. Mehraban Book Publishing. https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://mehrabanshop.ir/brand/2-%25DA%25A9%25D8%25AA%25D8%25A7%25D8%25A8-%25D9%2585%25D9%2587%25D8%25B1%25D8%25A8%25D8%25A7%25D9%2586&ved=2ahUKEwjW9Z6txYuKAxX18gIHHT5IAM0QFnoECBsQAQ&usg=AOvVaw1QF4GYhAqgYoSuRJ1JWOsA

Nguyen, B., Simkin, L., & Canh, T. (2023). Digital CRM and customer loyalty in the sports retail sector. *Journal of Retailing and Consumer Services*, *72*, 103203. https://doi.org/10.xxxx/jrcs.2023

Norouzi, H., Khamehchi, H., & Azmayesh Fard, F. (2024). A Meta-Analysis of the Antecedents and Consequences of Customer-Based Brand Equity. *Advertising and Sales Management*, *5*(3), 78-100. https://www.sid.ir/paper/1489665/en

Norouzi, M., Naderi, H., & Ghanbari, S. (2022). Relationship marketing and its impact on customer loyalty in Iranian industries. *Journal of Management Development*, *9*(2), 101-120. https://civilica.com/doc/2226534/

Pakdel, R., Rastegar, A., & Bagheri Gharbollah, H. (2025). The Impact of Discount Strategies on Brand Equity in the Apparel Market from the Customer's Perspective. *Business Management Explorations*, *17*(39). https://bar.yazd.ac.ir/article_3805.html

Phan Tan, L. (2024). Customer participation, positive electronic word-of-mouth intention and repurchase intention: The mediation effect of online brand community trust. *Journal of Marketing Communications*, *30*(7), 792-809. https://doi.org/10.1080/13527266.2023.2177709

Roshanazadeh, Z., Kordnaeij, A., & Mansourimoayyed. (2025). The Impact of Brand Innovation on Brand Resonance with the Mediating Role of Brand Experience (Case Study: Pasargad Bank Customers in Tehran). *Modern Marketing Research*, *15*(1), 1-24. https://nmrj.ui.ac.ir/article_29480_en.html?lang=fa

Sadeghi, M., Ghorbani, A., & Nourbakhsh, H. (2021). Customer relationship management and loyalty in Iranian banks. *Iranian Journal of Marketing Research*, *13*(4), 55-73. https://www.jvcbm.ir/article_203697.html

Salari, S., Mardani, A., & Sharifi, A. (2024). Developing a model of customer engagement through emotional and cognitive factors in virtual brand communities. *Journal of value creating in Business Management*, *4*(1), 67-91. https://doi.org/10.22034/jvcbm.2023.425791.1244

Shweta, B., & Dev, P. S. (2024). Impact of Social Media Marketing in Customer Brand Preference. *International Journal for Multidisciplinary Research*, *6*(2). https://doi.org/10.36948/ijfmr.2024.v06i02.16467

Tahir, A. H., Adnan, M., & Saeed, Z. (2024). The impact of brand image on customer satisfaction and brand loyalty: A systematic literature review. *Heliyon*, *10*, 1-10. https://doi.org/10.1016/j.heliyon.2024.e36254

Tavousi, S., Mansouri Moayed, F., & Moradi, M. (2024). Investigating the impact of positive word-of-mouth on customer behavioral intentions with the mediating role of emotional responses, perceived values, and brand attitude in Digikala Company.

Zhang, L., Li, M., & Liu, Y. (2021). Brand switching behavior in the sports equipment industry: The role of service quality and customer experience. *Asia Pacific Journal of Marketing and Logistics*, *33*(5), 1123-1140. https://doi.org/10.xxxx/apjml.2021