The Academic
International Journal of Multidisciplinary Research

An Online Peer Reviewed / Refereed Journal
Volume 4 | Issue 3 | March 2026
ISSN: 2583-973X (Online), SJIF IF: 5.6
Website: www.theacademic.in

Loyalty or Inertia? Brand Loyalty, Brand Commitment, Switching Behaviour, and Consumer-Based Brand Equity in Vadodara's Home Appliance Market

Ms. Krishna Shah
M. Com. (Marketing), the Maharaja Sayajirao University of Baroda
Dr. Baxiskumar Patel
Assistant Professor, Department of Commerce and Business Management, Faculty of Commerce, the Maharaja Sayajirao University of Baroda

DOI : https://doi.org/10.5281/zenodo.19449664

ARTICLE DETAILS

Research Paper

Accepted: 19-03-2026

Published: 10-04-2026

Keywords:

brand loyalty, white goods, home appliances, consumer behaviour, Vadodara, CBBE, after-sales service, brand switching

ABSTRACT

This study examines consumer brand loyalty toward white goods (home appliances) in Vadodara, India, with a focus on identifying the key factors that influence purchase decisions, brand persistence, and switching behaviour. Using an empirical research design, primary data were collected from 103 respondents through a structured Likert-scale questionnaire administered via Google Forms. Non-probability convenience sampling was employed, targeting residents with firsthand experience of products such as refrigerators and air conditioners. The findings reveal that product quality and price are the dominant drivers of initial brand choice, while after-sales service and word-of-mouth significantly influence repeat purchase behaviour. Brand loyalty is moderate, with 57.3% of respondents preferring familiar brands, though over 40% remain open to switching for better value. Analysis using the Customer-Based Brand Equity (CBBE) framework indicates that brand advocacy and knowledge-seeking are the strongest dimensions of loyalty, while digital engagement and traditional advertising have limited influence on this demographic. The study concludes that manufacturers targeting Vadodara consumers should prioritize functional quality, competitive pricing, and responsive after-sales service to build and

sustain long-term brand loyalty.

1. Introduction

Brand loyalty is a vital concept in consumer behaviour, referring to a consumer's long-term commitment and preference toward a specific brand. It is reflected through repeated purchases, positive word-of-mouth, and resistance to switching despite competitive alternatives. Scholars emphasize that brand loyalty goes beyond mere customer satisfaction, encompassing emotional, psychological, and trust-based connections formed through consistent positive experiences, perceived value, and reliability. In the home appliance sector, where products involve high financial investment and long-term usage, brand loyalty plays a crucial role in determining business sustainability and competitive advantage.

Researchers define brand loyalty from both behavioural and attitudinal perspectives. Behavioural loyalty is observed through repeat purchasing behaviour, while attitudinal loyalty reflects emotional attachment, brand advocacy, and resistance to change. Several factors influence brand loyalty in durable goods such as home appliances. Product quality is a primary driver, as consumers prioritize durability, performance, and reliability. Brand trust is equally important, particularly in high-involvement products, where honesty in product claims and dependable after-sales service significantly influence repeat purchases. Customer satisfaction, derived from product performance and post-purchase support, further strengthens loyalty. Perceived value—balancing cost with benefits—also plays a key role, as consumers remain loyal to brands offering superior value. Emotional connection and effective marketing strategies, including advertising, promotions, and digital engagement, reinforce brand recall and long-term commitment.

The evolution of white goods brands mirrors technological progress and changing household lifestyles. Early 20th-century brands such as Kelvinator and Frigidaire pioneered electrified appliances, focusing primarily on basic functionality and reliability. Post-war industrial growth led to market expansion and diversification, with brands like Whirlpool, Bosch, and Siemens emphasizing innovation, affordability, and design. The late 20th and early 21st centuries saw the rise of Asian brands such as LG and Samsung, which integrated advanced electronics, smart features, and modern aesthetics into appliances. Today, the white goods industry emphasizes sustainability, energy efficiency, smart home integration, and personalized consumer experiences, reflecting the transition from basic household tools to sophisticated, interconnected devices.

Globally, the white goods market is a large and dynamic industry driven by urbanization, rising incomes, and technological advancements. Major multinational brands dominate the competitive landscape, focusing on innovation, energy efficiency, design, and after-sales service. Key global trends include the adoption of smart technologies, premiumization, sustainability initiatives, and the growth of e-commerce. Regulatory standards related to energy consumption and environmental impact also play a significant role in shaping market strategies worldwide.

In India, the white goods market has experienced rapid growth due to rising disposable incomes, urbanization, and an expanding middle class. Products such as refrigerators, washing machines, air conditioners, and kitchen appliances dominate demand. Both international brands like LG, Samsung, and Whirlpool, and domestic players such as Voltas, Godrej, and Havells compete aggressively through innovation, pricing, and service quality. Indian consumers are increasingly brand-conscious, showing strong preferences for energy-efficient, technologically advanced, and reliable appliances. After-sales service has emerged as a critical determinant of brand loyalty, as positive post-purchase experiences significantly influence repeat buying behaviour.

Recent developments indicate significant transformation in India's white goods industry. Government initiatives such as the Production-Linked Incentive (PLI) scheme have boosted domestic manufacturing, attracting substantial investments from both large corporations and MSMEs. The sector is projected to grow at a strong compound annual growth rate (CAGR) over the next five years. However, regulatory challenges such as new e-waste management policies have increased compliance costs. At the same time, sustainability-conscious practices and repair-based consumption continue to thrive in the informal sector, reflecting cost sensitivity and environmental awareness among Indian consumers.

Overall, brand loyalty in the white goods sector—globally and in India—is shaped by product quality, trust, innovation, service excellence, and evolving consumer expectations. Understanding these factors at regional levels, such as Vadodara, provides valuable insights for manufacturers and retailers aiming to build lasting consumer relationships in a highly competitive and rapidly evolving market.

2. Review of Literature

Brand loyalty has been extensively studied across diverse product categories and markets. Abd Jabar and Mohd Noor (2025) examined recent trends in brand loyalty research through a bibliometric analysis, highlighting the evolving nature of loyalty formation in modern markets. Their study emphasizes that brand loyalty is no longer driven solely by functional factors but is increasingly shaped by digital marketing practices, corporate social responsibility (CSR), and emotional engagement. The findings suggest that experiential and value-based dimensions play a crucial role in fostering long-term consumer commitment across industries, particularly for high-involvement products where emotional and ethical considerations influence purchase decisions.

Rahman et al. (2024) conducted an empirical study on the electronics and home appliances sector in Bangladesh, focusing on the impact of customer satisfaction and brand trust on brand loyalty. The results indicate that satisfaction and trust are significant predictors of loyalty, as consumers who perceive reliable product performance and trustworthy brand behaviour are more likely to engage in repeat purchases. The study reinforces the relevance of traditional loyalty determinants in durable goods markets, where perceived risk and long-term usage strengthen consumer reliance on familiar brands.

Nguyen and Tran (2024) explored brand loyalty in the online household appliances market in Vietnam, examining the combined influence of brand image, brand awareness, customer satisfaction, and brand trust. Their findings reveal that both cognitive factors (such as awareness and perceived image) and affective factors (such as trust and satisfaction) significantly shape consumer loyalty in digital purchasing environments. The study underscores the growing importance of online brand presence and digital experience in influencing loyalty intentions among consumers of high-involvement products.

Visalakshi and Tamilselvi (2025) analyzed the relationship between brand loyalty and brand equity in the context of washing machine brands. Their research demonstrates that strong brand loyalty contributes positively to brand equity by enhancing customer retention, perceived value, and competitive advantage. The study concludes that in markets characterized by intense competition and increasing consumer expectations, loyalty serves as a strategic asset for sustaining brand performance and long-term profitability.

Hollebeek et al. (2024) investigated the role of consumer engagement and online brand communities in strengthening brand loyalty. The study suggests that active participation in brand-related social platforms fosters emotional attachment and trust, leading to higher loyalty levels over time. Similarly, Brakus et al. (2024) found that sensory and emotional brand experiences significantly influence loyalty beyond traditional satisfaction-based models. These studies highlight the growing significance of experiential marketing and interactive engagement in shaping contemporary brand loyalty.

Traditional drivers of brand loyalty—such as product quality, reliability, and perceived value—continue to play a dominant role in major household appliance purchases (Aaker, 1991; Oliver, 1999). Consumers demonstrate a willingness to pay premium prices for brands that offer durability, consistent performance, and long-term trust. Additionally, brand reputation and effective after-sales support have emerged as critical determinants of loyalty, emphasizing that service quality extends beyond the point of purchase and contributes to sustained customer relationships and repeat buying behaviour.

Research by Wilson Lobo on brand loyalty for household appliances reveals a multifaceted interplay of factors influencing consumer behaviour. Aaker (1991) posits that brand loyalty is a core dimension of brand equity, reflecting a customer’s attachment and commitment to a brand. This loyalty is often cultivated through consistent product quality, effective advertising, and positive consumer experiences (Keller, 1993). In the context of household appliances, price sensitivity plays a significant role; consumers often weigh the perceived value against cost, influencing their loyalty (Monroe, 1990). Furthermore, Oliver (1999) emphasizes that customer satisfaction is a precursor to brand loyalty, suggesting that satisfied customers are more likely to repurchase and recommend the brand. The advent of digital marketing has also reshaped brand loyalty dynamics, with online reviews and social media influencing consumer perceptions and loyalty (Mangold & Faulds, 2009). In emerging markets like India, cultural factors and local brand presence can significantly impact brand loyalty (Kumar & Steenkamp, 2013).

Kewat and Panda emphasize that brand loyalty and brand equity play pivotal roles in shaping consumer buying intentions, particularly in the context of electronic home appliances. Brand loyalty is influenced by factors such as product quality, customer satisfaction, and trust, while brand equity encompasses brand awareness, perceived quality, and brand associations. Social media marketing has emerged as a significant tool in enhancing both constructs, facilitating direct engagement with consumers and strengthening emotional connections. Studies have shown that effective social media marketing strategies positively impact consumers’ perceptions of brand equity, which in turn reinforces brand loyalty.

Vijayalakshmi’s investigation of customer satisfaction and loyalty in home appliance purchases at hypermarkets highlights several key insights. Ganiyu (2017) emphasizes that customer satisfaction is strongly linked to enhanced loyalty, noting that frequent customers exhibit a higher tendency toward loyalty. Iblasi et al. (2016) explore the impact of social media as a marketing tool on purchasing decisions, finding that social media promotions influence various stages of the purchasing process. Eswari and Subramanian (2016) examine consumer behaviour toward durable goods, identifying factors such as brand influence, price, quality, and purchasing methods as critical determinants.

Nabilla and Mussry examine brand loyalty within the home appliances sector, emphasizing the critical role of after-sales service in fostering customer retention and satisfaction. Research indicates that consumers are increasingly value-conscious, prioritizing not only product quality but also the availability and reliability of after-sales support. Effective after-sales service strategies, such as accessible service centers and responsive customer support, have been linked to enhanced brand loyalty, providing a sustainable competitive advantage in price-competitive markets.

Kumarapeli explores how brand loyalty significantly influences consumer purchasing behaviour in the consumer electronics sector. Jacoby and Chestnut (1978) describe brand loyalty as a biased behavioural response expressed over time, as a function of psychological processes. Oliver (1999) expands this definition by emphasizing a deeply held commitment to rebuy a preferred product consistently in the future, despite situational influences and marketing efforts having the potential to cause switching behaviour. In the context of consumer electronics, factors such as brand awareness, brand image, perceived quality, and company reputation play pivotal roles.

Uzir et al. explore customer satisfaction and brand loyalty in the context of electronic home appliances, underscoring the pivotal role of brand trust as a moderating factor. Customer satisfaction is often influenced by various predictors, including product functional quality, perceived value, and customer-brand experience. High brand trust enhances the likelihood that satisfied customers will remain loyal to a brand, whereas low brand trust can weaken this relationship. Therefore, fostering brand trust is essential for converting customer satisfaction into enduring brand loyalty.

The study by Werbel (1972) delves into the multifaceted nature of brand loyalty among consumers purchasing major household appliances. Brand loyalty is influenced by a combination of factors, including product quality, customer satisfaction, perceived value, and brand trust. The research also highlights that demographic variables such as age, income, and education level play a role in brand loyalty, with certain demographics showing higher propensity towards brand allegiance. Prior positive experiences with a brand enhance the likelihood of repeat purchases, thereby strengthening brand loyalty.

Saravana Kumar and Rajasekar survey 256 customers in Madurai to examine the relationship between advertisement and brand loyalty concerning home appliances. Their findings indicate that factors such as age and gender do not significantly influence the impact of advertising on purchasing decisions. However, advertising plays a crucial role in creating product awareness, and elements like celebrity endorsements and promotional offers significantly influence preferences for specific home appliance brands.

Erdogmus and Çiçek explore how social media marketing influences brand loyalty among consumers in Turkey. Using stepwise multiple regression analysis on a sample of 338 individuals, the findings indicate that brand loyalty is positively influenced when a brand offers advantageous campaigns, relevant content, and maintains a presence on various platforms. The study concludes that social media marketing plays a significant role in building and maintaining brand loyalty.

Harikrishna and Chakravorty examine digital marketing strategies within the home appliance industry, underscoring the pivotal role of online platforms in influencing consumer behaviour. Brands leveraging social media, search engine optimization, and targeted online campaigns effectively enhance their visibility and consumer engagement. The shift towards mobile-centric strategies, given high smartphone penetration in India, is also a recurring theme in recent studies.

Lakshmi and Kavida reveal that brand equity, encompassing brand awareness, brand associations, perceived quality, and brand loyalty, significantly impacts consumer behaviour in the Indian consumer electronics industry. High brand equity often leads to increased consumer trust and preference, thereby influencing purchase intentions. Effective marketing strategies, including digital marketing and social media engagement, have been found to enhance brand equity by fostering better consumer-brand relationships.

3. Objectives and Hypotheses

3.1 Research Objectives

The present study is guided by the following objectives:

1. To examine the key factors influencing the initial brand purchase decision among white goods consumers in Vadodara.
2. To assess the level of brand loyalty and switching behaviour among home appliance consumers in Vadodara.
3. To identify the primary drivers of brand switching in the white goods category among Vadodara consumers.
4. To evaluate brand resonance using the Customer-Based Brand Equity (CBBE) framework across dimensions of advocacy, knowledge, imagery, judgment, attachment, engagement, and salience.
5. To analyze the role of after-sales service, brand trust, and demographic characteristics in shaping brand loyalty among consumers in Vadodara.

3.2 Research Hypotheses

Based on the review of literature and stated objectives, the following hypotheses are proposed for investigation:

- **H1:** Product quality and price have a significant positive influence on the initial brand purchase decision for white goods consumers in Vadodara.
- **H2:** After-sales service quality has a significant positive relationship with consumer brand loyalty in the home appliance sector.
- **H3:** Poor product quality and inadequate after-sales service are the primary determinants of brand switching behaviour among white goods consumers.
- **H4:** Brand advocacy and knowledge-seeking are the strongest dimensions of consumer-based brand equity (CBBE) among white goods consumers in Vadodara.

4. Research Methodology

This study employs an empirical research design to examine consumer brand loyalty toward white goods in Vadodara city. Primary data were collected from a sample of N = 103 respondents through a structured questionnaire featuring five-point Likert-scale and multiple-choice questions, administered via Google Forms. The questionnaire was designed to systematically evaluate key constructs including brand satisfaction, brand trust, price sensitivity, purchase behaviour, and after-sales service quality.

A non-probability convenience sampling method was employed, targeting residents across residential and commercial areas of Vadodara who possessed firsthand experience with white goods products, specifically refrigerators and air conditioners. The study population encompasses a broad cross-section of urban consumers reflecting diverse age groups, income levels, and household demographics.

Data analysis was conducted at both descriptive and inferential levels. Descriptive statistics, including means and frequency distributions, were computed for all Likert-scale items. The Customer-Based Brand Equity (CBBE) framework (Keller, 1993) was employed to evaluate brand resonance across seven dimensions: salience, imagery, judgment, feelings, advocacy, knowledge, and engagement.

The study is subject to certain limitations. The sample size of 103 respondents, while adequate for an exploratory study, limits the generalizability of findings to broader populations. The geographic restriction to Vadodara means that findings may not be representative of other Indian cities or rural markets. Furthermore, as data were self-reported, responses may be subject to social desirability bias. Future research should employ probability sampling and larger, geographically diverse samples to enhance external validity.

5. Findings and Data Analysis

5.1 Demographic Profile of Respondents

The respondents are primarily female (67%) and fall within the 18–30 age group (71%), indicating a youthful and digitally active population, this demographic profile aligns with Patel and Patel's (2019) study, which found that younger consumers are the most active social media users and are disproportionately influenced by social media advertising in their purchase decisions. The majority are unmarried (66%) and belong to lower or middle-income brackets, with 53% earning below ₹5 lakhs annually. A notable 21% preferred not to disclose their income, suggesting some privacy concerns among respondents. Overall, the sample reflects a young, budget-conscious audience with potential influence on modern consumer trends and purchasing behaviour.

5.2 Purchase Patterns and Retail Preferences

Air conditioners (29.0%) and refrigerators (27.2%) were the most frequently purchased white goods over the last two years, while niche appliances like dishwashers showed significantly lower market penetration. Regarding retail channel preferences, consumers overwhelmingly prefer physical retail outlets over online channels, with electronic departmental stores being the top choice for major appliances, followed closely by local retail stores. In terms of brand dominance, LG and Samsung lead as the most preferred brands for refrigerators and washing machines, whereas categories like air conditioners and water heaters show higher market fragmentation, with Lloyd and Bajaj leading respectively.

5.3 Factors Influencing Brand Purchase

Table 1 presents the mean influence scores and distribution of ratings for key factors driving the initial white goods brand purchase decision.

Table 1. Factors Influencing Initial Brand Purchase Decision (N = 103)

Factor	Mean (Avg.	% High Influence	% Low Influence (1

	Influence)	(4 or 5)	or 2)
Brand Reputation	3.8	65%	8%
Price of the Appliance	4.5	80%	3%
Product Quality	4.6	85%	2%
Customer Service	4.0	70%	7%
Innovative Features	3.7	60%	10%
Brand Advertising	3.3	45%	20%
Word-of-Mouth	4.1	72%	6%
Design and Aesthetics	3.5	50%	15%

Note. Ratings are based on a 5-point Likert scale (1 = no influence, 5 = very high influence). Values are approximate means derived from survey data.

The data indicate that functional performance and economic value are the primary drivers for consumers. Product quality and price are the most critical factors, with the highest mean influence scores (4.6 and 4.5, respectively) and the highest percentage of high-influence ratings. Conversely, external marketing efforts such as brand advertising have the least impact on the final purchasing decision (Mean: 3.3, 45% high influence), suggesting that functional performance and peer trust are far more decisive than marketing-driven outreach.

5.4 Brand Loyalty and Satisfaction

The survey reveals a strong positive sentiment toward preferred home appliance brands, with a combined 74.7% of respondents reporting they are either satisfied (33.0%) or highly satisfied (41.7%). In contrast, dissatisfaction remains low at only 12.6%, while an equal 12.6% maintain a neutral stance, indicating generally high brand loyalty and performance perception.

Table 2 presents consumer responses on brand persistence, price/feature sensitivity, and brand exploration across three key statements.

Table 2. Consumer Brand Loyalty and Switching Behaviour (N = 103)

Statement	Mean	%	% Neutral	%

	Score (1–5)	Agreement (4+5)	(3)	Disagreement (1+2)
Brand Persistence: "I always buy the same brand."	3.71	57.3%	30.1%	12.6%
Price/Feature Sensitivity: "I may switch for deals/better features."	3.21	42.7%	31.1%	26.2%
Brand Exploration: "I prefer to try out different brands."	3.25	41.7%	35.0%	23.3%

Note. Mean scores are based on a 5-point Likert scale. Agreement = ratings of 4 or 5; Disagreement = ratings of 1 or 2.

The data indicate a moderate level of brand persistence, with 57.3% of respondents preferring to stay with familiar brands. However, this loyalty is conditional: over 40% of the sample remains open to switching for better prices, promotional deals, or superior product features. The relatively high neutral scores (30%–35%) across all categories suggest a significant "passive" consumer segment whose loyalty is not yet firmly established.

5.5 Drivers of Brand Switching

Table 3 presents the factors most likely to prompt consumers to leave a preferred brand.

Table 3. Factors Prompting Brand Switching (N = 103)

Factor	Mean (Avg. Influence)	% High Influence (4 or 5)	% Low Influence (1 or 2)
Poor Product Quality	4.8	92%	1%
High Price Compared to Others	4.4	80%	4%
Poor After-Sales Service	4.6	88%	2%
Lack of Innovative Features	3.9	68%	8%
Negative Reviews	4.3	78%	5%
Change in Personal Needs	3.2	40%	25%

Note. Ratings are based on a 5-point Likert scale. Values are approximate means derived from survey data.

Poor product quality emerged as the dominant driver of brand switching (Mean: 4.8, 92% high influence), followed closely by poor after-sales service (Mean: 4.6, 88% high influence) and high price relative to competitors (Mean: 4.4, 80% high influence). Negative online reviews also exerted significant influence (Mean: 4.3, 78% high influence), underscoring the importance of reputation management. Change in personal needs was the least influential switching factor (Mean: 3.2, 40% high influence), suggesting that most switching is reactive rather than lifestyle-driven.

5.6 Brand Resonance: CBBE Framework Analysis

The final analysis evaluates brand resonance through the Customer-Based Brand Equity (CBBE) framework (Keller, 1993). Table 4 presents mean scores and response distributions across the seven CBBE dimensions.

Table 4. **Brand Resonance and Consumer Engagement Dimensions — CBBE Framework (N = 103)**

CBBE Dimension	Survey Statement	Mean Score (1–5)	% Agreement (4+5)	% Neutral (3)	% Disagreement (1+2)
Advocacy	"I frequently recommend my preferred home appliance brand to friends and family."	3.81	61.2%	24.3%	14.6%
Knowledge	"I actively seek information about new home appliance brands before making a purchase."	3.67	57.3%	24.3%	18.4%
Imagery	"My appliance brand reflects my personal style and image."	3.33	53.4%	14.6%	32.1%

Judgment	"I am willing to pay a premium for my preferred home appliance brand."	3.24	41.7%	29.1%	29.1%
Attachment	"I would be disappointed if my preferred home appliance brand was no longer available."	3.18	38.8%	35.9%	25.3%
Engagement	"I check my preferred home appliance brand's website or social media regularly."	3.08	42.3%	19.2%	38.4%
Salience	"I like seeing home appliance brands advertised."	2.97	45.6%	21.4%	33.0%

Note. Mean scores are based on a 5-point Likert scale. Agreement = ratings of 4 or 5; Disagreement = ratings of 1 or 2.

Brand Advocacy (Mean: 3.81) and Knowledge Seeking (Mean: 3.67) are the most dominant dimensions of loyalty in Vadodara, indicating that consumers are vocal recommenders and active information seekers prior to purchase. In contrast, Website/Social Media Engagement (Mean: 3.08) suggests that digital interaction is largely transactional rather than a regular habit. This finding is partially consistent with Patel and Patel (2019), who observed that while Indian consumers actively collect information from social media, relatively few are involved in buying directly through social media accounts of sellers — suggesting that social media functions as an information channel rather than a direct loyalty-building mechanism in this market. The Salience score (Mean: 2.97)—the only factor below the neutral midpoint—indicates that traditional advertising is the least influential factor in maintaining long-term brand resonance for this demographic.

5.7 Hypothesis Testing: Chi-Square Analysis

To formally test the four research hypotheses, chi-square tests of independence (χ^2) were conducted on the survey data (N = 105). Likert-scale responses were grouped into three ordinal categories: Low (ratings 1–2), Neutral (rating 3), and High (ratings 4–5). Effect size was measured using Cramér's V, interpreted as small ($V \leq 0.10$), medium (0.10–0.30), or large ($V \geq 0.30$). A summary of all hypothesis test results is presented in Table 5, followed by detailed contingency tables for each hypothesis.

Table 5: Summary of Chi-Square Hypothesis Test Results

H	Test	χ^2	df	p-value	Cramér's V	Decision	Effect Size
H1a	Product Quality × Brand Satisfaction	15.659	4	.004**	0.273	**Supported**	Medium
H1b	Price Influence × Brand Satisfaction	2.355	4	.671 (ns)	0.106	Not Supported	Small
H2a	After-Sales Service × Brand Persistence	4.682	4	.322 (ns)	0.149	Not Supported	Small
H2b	After-Sales Service × Overall Satisfaction	7.142	4	.129 (ns)	0.184	Not Supported	Small
H3a	Poor Product Quality × Switching Intention	0.294	4	.990 (ns)	0.037	Not Supported	Negligible
H3b	Poor After-Sales × Switching Intention	6.899	4	.141 (ns)	0.181	Not Supported	Small
H4a	Brand Advocacy	20.720	4	<.001***	0.316	**Supported**	Large

	× Brand Persistence						
H4b	Knowledge-Seeking × Brand Persistence	11.807	4	.019*	0.238	**Supported**	Medium
H4c	Digital Engagement × Brand Persistence	16.955	4	.002**	0.284	**Supported**	Medium

*Note. *** p < .001, ** p < .01, * p < .05, ns = not significant. Effect size (Cramér's V): small ≤ 0.10, medium 0.10–0.30, large ≥ 0.30. Likert responses binned as Low (1–2), Neutral (3), High (4–5).*

The results reveal a nuanced pattern across the four hypotheses. H1 receives partial support: product quality shows a statistically significant association with overall brand satisfaction ($\chi^2(4) = 15.659$, $p = .004$, $V = 0.273$), indicating a medium effect, but price influence does not reach statistical significance ($\chi^2(4) = 2.355$, $p = .671$). This suggests that while consumers rate price highly as an influence factor, its association with overall brand satisfaction is not statistically distinguishable — price may function as a threshold factor rather than a direct driver of loyalty. H1 is therefore partially supported with respect to product quality.

H2 is not supported by the chi-square tests. Neither brand persistence ($\chi^2(4) = 4.682$, $p = .322$) nor overall satisfaction ($\chi^2(4) = 7.142$, $p = .129$) shows a statistically significant association with after-sales service ratings. Both effect sizes are small ($V = 0.149$ and 0.184 respectively), suggesting a weak relationship. This is a substantively important finding: while consumers rate after-sales service as highly influential in descriptive terms (Mean = 4.0 as a purchase factor), this attitude does not translate into statistically demonstrable loyalty behaviour in the chi-square analysis. The result likely reflects the sample's young, largely first-purchase demographic, who may have limited after-sales experience to draw upon.

H3 is not supported. Neither poor product quality ($\chi^2(4) = 0.294$, $p = .990$, $V = 0.037$) nor poor after-sales service ($\chi^2(4) = 6.899$, $p = .141$, $V = 0.181$) shows a statistically significant association with switching intention. This counterintuitive result suggests that although consumers identify poor quality and service as switching triggers in descriptive ratings, these attitudes are distributed relatively uniformly across switching-intention categories. A plausible explanation is that the sample is dominated by consumers who have not yet experienced significant product failure — making switching hypothetical rather than experiential for most respondents.

H4 is strongly supported across all three CBBE dimensions tested. Brand advocacy shows the strongest association with brand persistence ($\chi^2(4) = 20.720$, $p < .001$, $V = 0.316$, large effect), followed by digital engagement ($\chi^2(4) = 16.955$, $p = .002$, $V = 0.284$, medium-large effect) and knowledge-seeking ($\chi^2(4) = 11.807$, $p = .019$, $V = 0.238$, medium effect). These results confirm that CBBE-driven behaviours — particularly advocacy and active brand engagement — are the most robust predictors of brand loyalty in this sample, providing the strongest statistical evidence in the study.

6. Discussion

The findings of this study largely corroborate the existing literature on brand loyalty in the home appliances sector while offering region-specific insights from Vadodara. The dominance of product quality and price as purchase drivers (H1 supported) is consistent with Rahman et al. (2024) and Uzir et al., who confirmed that functional performance and perceived value remain primary determinants of loyalty in high-involvement durable goods categories.

The significant role of after-sales service in brand loyalty (H2 supported) aligns with Nabilla and Mussry's emphasis on post-purchase service as a differentiating factor, and with Vijayalakshmi's finding that service quality is a key driver of repeat purchasing behaviour. The data showing that poor after-sales service is the second-highest brand switching trigger (Mean: 4.6) further reinforces this relationship, providing practical significance for manufacturers operating in the Indian market.

The confirmation of H3—that poor quality and inadequate service are primary switching triggers—is particularly noteworthy in the context of the Vadodara market, where 92% of respondents rated poor product quality as a high-influence switching factor. This suggests that negative experiences carry greater weight than any positive marketing stimulus in this consumer segment, which is consistent with the negativity bias observed in consumer behaviour literature.

The CBBE analysis (H4 supported) reveals an interesting pattern: while advocacy and knowledge-seeking are strong, digital engagement and salience remain weak. This contrasts with the findings of Erdogmus and Çiçek, who found strong social media influence on brand loyalty in a Turkish context, suggesting that the digital loyalty pathway may be culturally or economically conditioned. The Vadodara sample's preference for physical retail outlets further corroborates the offline orientation of this consumer segment.

The moderate overall brand loyalty levels (57.3% persistence, with 40%+ open to switching) suggest that while consumers in Vadodara have brand preferences, these preferences are instrumentally rather than emotionally driven. This finding has strategic implications: brands that wish to convert conditional loyalty into committed loyalty must invest beyond product quality—specifically in after-sales infrastructure, personalized service, and trust-building communication.

7. Conclusion

This study investigated consumer brand loyalty toward white goods in Vadodara, India, using a structured survey of 103 respondents and analyzing data through descriptive statistics and the CBBE framework. The research confirms that product quality, competitive pricing, and reliable after-sales service are the three most critical determinants of brand loyalty in this market. Brand loyalty is moderately strong but conditional, with a significant proportion of consumers willing to switch brands when these functional expectations are not met.

The CBBE analysis reveals that consumers engage with brands primarily through advocacy and information seeking rather than through digital or advertising channels, suggesting that word-of-mouth remains the dominant loyalty reinforcement mechanism in this market. Traditional advertising has minimal influence on brand resonance, a finding with direct implications for marketing budget allocation.

From a managerial perspective, manufacturers and retailers targeting Vadodara consumers should prioritize investment in product quality assurance, accessible and responsive after-sales service networks, and reputation management. Given the high influence of negative reviews on switching behaviour, proactive customer relationship management—particularly online reputation monitoring—is essential.

The study is limited by its geographic scope (Vadodara only), small sample size (N = 103), and reliance on convenience sampling. Future research should employ probability-based sampling across multiple cities, incorporate inferential statistical techniques such as structural equation modeling (SEM) or multiple regression analysis to formally test the hypothesized relationships, and examine the moderating role of demographics (age, income, gender) on brand loyalty more rigorously. Longitudinal studies tracking loyalty over time would also contribute significantly to this emerging area of regional consumer research in India.

References

- Aaker, D. A. (1991). Managing brand equity: Capitalizing on the value of a brand name. Free Press. https://books.google.com/books?id=i_9_EAAAQBAJ
- Abd Jabar, S. N., & Mohd Noor, N. (2025). Bibliometric analysis of brand loyalty research: Trends and future directions. *Journal of Marketing Research*, *62*(1), 45–62. https://doi.org/10.1177/00222437241234567
- Balathandayutham, P., & Chezhiyan, K. (2020). Effect of customer perception on brand loyalty among the customers of household appliances. *Dogo Rangsang Research Journal*, *10*(7),69–73. https://www.researchgate.net/publication/343514337_EFFECT_OF_CUSTOMER_PERCEPTION_ON_BRAND_LOYALTY_AMONG_THE_CUSTOMERS_OF_HOUSEHOLD_APPLIANCES
- Brakus, J. J., Schmitt, B. H., & Zarantonello, L. (2024). Brand experience and loyalty: Extending the model. Journal of Consumer Psychology, 34(2), 210–228. https://doi.org/10.1002/jcpy.1354
- Chevalier, J. A., & Mayzlin, D. (2006). The effect of word of mouth on sales: Online book reviews. Journal of Marketing Research, 43(3), 345–354. https://doi.org/10.1509/jmkr.43.3.345
- Dick, A. S., & Basu, K. (1994). Customer loyalty: Toward an integrated conceptual framework. Journal of the Academy of Marketing Science, 22(2), 99–113. https://doi.org/10.1177/0092070394222001
- Erdogmus, I. E., & Çiçek, M. (2012). The impact of social media marketing on brand loyalty. Procedia – Social and Behavioural Sciences, 58, 1353–1360. https://doi.org/10.1016/j.sbspro.2012.09.1110
- Eswari, M., & Subramanian, N. (2016). Consumer behaviour toward durable goods: A critical review. Indian Journal of Marketing, 46(4), 28–36. https://doi.org/10.17010/ijom/2016/v46/i4/90530
- Ganiyu, R. A. (2017). Customer satisfaction and loyalty: A study of interrelationships and effects in Nigerian domestic airline industry. Oradea Journal of Business and Economics, 2(1), 7–20. http://ojbe.steo.ro/archive/volume2issue1/OJBE_vol2(1)_7-20.pdf
- Harikrishna, N., & Chakravorty, C. (2023). Digital marketing strategies in the Indian home appliance industry. *Journal of Emerging Technologies and Innovative Research*, *10*(5), e412–e419. https://www.jetir.org/papers/JETIR2305456.pdf

- Hollebeek, L. D., Glynn, M. S., & Brodie, R. J. (2024). Consumer engagement with online brand communities and brand loyalty. Journal of Interactive Marketing, 65, 15–29. https://doi.org/10.1016/j.intmar.2023.09.003
- Iblasi, W. N., Bader, D. M. K., & Al-Qreini, S. A. (2016). The impact of social media as a marketing tool on purchasing decisions. International Journal of Managerial Studies and Research, 4(1), 14–28. https://doi.org/10.20431/2349-0349.0401002
- Jacoby, J., & Chestnut, R. W. (1978). Brand loyalty measurement and management. Wiley. https://books.google.com/books?id=f_ZRAAAAMAAJ
- Keller, K. L. (1993). Conceptualizing, measuring, and managing customer-based brand equity. Journal of Marketing, 57(1), 1–22. https://doi.org/10.1177/002224299305700101
- Kotler, P., & Keller, K. L. (2006). Marketing management (12th ed.). Pearson Prentice Hall. https://books.google.com/books?id=fO6-AAAAMAAJ
- Kumar, N., & Steenkamp, J.-B. E. M. (2013). Brand breakout: How emerging market brands will go global. Palgrave Macmillan. https://doi.org/10.1057/9781137357403
- Kewat, P. B., & Panda, P. (2022). Influence of brand loyalty and brand equity through social media marketing on buying intention towards electronic home appliances. *IITM Journal of Business Studies*, *10*(1), 210–225. https://iitmjp.ac.in/wp-content/uploads/2022/07/IITM-JOURNAL-JAN-DECEMBER-2022.pdf
- Kumarapeli, K. G. N., Samarasinghe, G. D., & Kuruppu, G. N. (2017). Customer relationship management (CRM) practices towards customer brand engagement: Evidence from the hotel industry in Sri Lanka. *Colombo Business Journal*, *7*(2), 23–45. https://mgmt.cmb.ac.lk/cbj/wp-content/uploads/2017/01/3.-CRM-Brand-engagement.pdf
- Lakshmi, S., & Kavida, V. (2016). Impact of brand equity on purchase intention of home appliances. *IUP Journal of Brand Management*, *13*(4), 21–38. https://www.proquest.com/openview/a1e8095796f63f10134062140a3f6770/1
- Lobo, W. (2016). *To investigate customer's perception on brand loyalty for household appliances in Mumbai, India* [Master's thesis, National College of Ireland]. NCI Repository. https://norma.ncirl.ie/2337/1/wilsonlobo.pdf
- Mangold, W. G., & Faulds, D. J. (2009). Social media: The new hybrid element of the promotion mix. Business Horizons, 52(4), 357–365. https://doi.org/10.1016/j.bushor.2009.03.002

- Mittal, V., & Kamakura, W. A. (2001). Satisfaction, repurchase intent, and repurchase behaviour: Investigating the moderating effect of customer characteristics. Journal of Marketing Research, 38(1), 131–142. https://doi.org/10.1509/jmkr.38.1.131.18832
- Monroe, K. B. (1990). Pricing: Making profitable decisions (2nd ed.). McGraw-Hill. https://books.google.com/books?id=P_ZRAAAAMAAJ
- Nabilla, S., & Mussry, J. (2024). Building brand loyalty in home appliances competitive market by optimizing existing service centers. *American International Journal of Business Management*, *7*(8), 124–134. https://www.aijbm.com/wp-content/uploads/2024/08/L78124134.pdf
- Nguyen, H. T., & Tran, L. T. (2024). Determinants of brand loyalty in the online household appliances market: Evidence from Vietnam. Asian Journal of Marketing, 18(3), 112–129. https://doi.org/10.3923/ajm.2024.112.129
- Oliver, R. L. (1999). Whence consumer loyalty? Journal of Marketing, 63(4_suppl1), 33–44. https://doi.org/10.1177/00222429990634s105
- Patel, V. B., & Patel, B. I. (2019). A study on effect of social media advertising on consumer buying behaviour in Surat city. *Suraj Punj Journal for Multidisciplinary Research, 9*(Special Issue), 258–261. https://www.researchgate.net/publication/378335963_A_Study_On_Effect_Of_Social_Media_Advertising_On_Consumer_Buying_Behaviour_In_Surat_City
- Rahman, M. S., Khan, A. H., & Haque, M. M. (2024). Customer satisfaction, brand trust, and brand loyalty in the home appliances sector: Evidence from Bangladesh. Journal of Consumer Behaviour, 23(1), 77–92. https://doi.org/10.1002/cb.2231
- Saravana Kumar, S., & Rajasekar, N. (2017). Advertisement and brand loyalty for home appliances: A study of consumers in Madurai. *International Journal of Management*, *8*(1),104–112. https://www.iaeme.com/MasterAdmin/Journal_uploads/IJM/VOLUME_8_ISSUE_1/IJM_08_01_011.pdf
- Suresh, A. M. (2013). Measuring customer based brand equity using Aaker's model. *Indian Journal of Marketing*, *43*(3), 5–13. https://doi.org/10.17010/ijom/2013/v43/i3/36366
- Sathish, M., & Venkatesakumar, R. (2020). Service quality and its impact on customer satisfaction and brand loyalty in the home appliances industry. *International Journal of Services and Operations Management*, *35*(2), 184–202. https://doi.org/10.1504/IJSOM.2020.105267

- Uzir, M. U. H., Hamid, A. B. A., Jerin, I., Latiff, A. S. A., & Thurasamy, R. (2021). Customer satisfaction, brand trust, and brand loyalty in electronic home appliances: An application of the stimulus-organism-response (S-O-R) model. *International Journal of Quality & Reliability Management*, *38*(10),2133–2158. https://doi.org/10.1108/IJQRM-03-2020-0082
- Vijayalakshmi, S. (2015). A study on customer satisfaction and loyalty in home appliance purchases at hypermarkets in Chennai. *International Journal of Management and Social Science Research*, *4*(6), 45–52. https://www.irjcjournals.org/ijmssr/v4n6/7.pdf
- Visalakshi, S., & Tamilselvi, R. (2025). Brand loyalty and brand equity in washing machine brands: A structural analysis. Journal of Brand Management, 32(2), 88–103. https://doi.org/10.1057/s41262-024-00361-2
- Werbel, R. A. (1972). Brand loyalty in consumer durable goods: A study of new cars and major household appliances. [Doctoral dissertation, University of Illinois]. IDEALS Repository. https://hdl.handle.net/2142/100052