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Brand Performance Analysis in the Insurance Industry (Explaining the Role of Cognitive and Affective Attitudes Using the S-O-R Framework and Brand Community)

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Abstract

This study evaluates brand performance on social media by adopting the Stimulus-Organism-Response (S-O-R) framework to understand brand perception in the insurance industry. Employing an applied research approach, data were collected through a survey, and the analysis was conducted using structural equation modeling based on partial least squares (PLS-SEM). The statistical population consisted of Pasargad Insurance customers in Iran, from which a sample of 298 participants was selected using convenience sampling. The results indicated that brand community interaction significantly influences both cognitive and affective attitudes. Moreover, relationship investment in the community has a positive impact on brand community commitment and affective attitude but does not predict cognitive attitude. Additionally, both cognitive and affective attitudes influence brand loyalty and brand recommendation. The findings underscore the significance of all mediating relationships, except for the relationship between relationship investment in the community and brand performance through cognitive attitude. This study can assist companies in the insurance sector in enhancing their brand performance by engaging customers through managing appropriate stimuli.

Keywords: Brand community, cognitive attitude, affective attitude, brand performance, S-O-R.

1. Introduction

In today's hyper-connected digital marketplace, brands are no longer passive entities broadcasting messages to consumers. Instead, they are dynamic actors engaging with consumers in emotionally charged, cognitively stimulating environments, particularly through online platforms. This evolution necessitates a rethinking of traditional models for evaluating brand performance, especially in highly trust-dependent sectors such as insurance. In this context, the Stimulus–Organism–Response (S-O-R) framework offers a comprehensive theoretical lens for examining how environmental cues (stimuli) evoke internal psychological states (organisms), ultimately driving consumer behavior (responses) such as brand loyalty and brand advocacy (Sethi et al., 2024; Wang & Yang, 2025).

Brand performance is increasingly linked to relational and experiential factors rather than merely functional utility. In the insurance sector, which deals with abstract, high-involvement products, building trust and fostering long-term customer relationships is paramount (Ahada et al., 2025; Chaher & Lakhal, 2025). As a result, emotional and cognitive dimensions of brand attitudes have emerged as central constructs in understanding how consumers evaluate, engage with, and remain loyal to

insurance brands (Caruana & Vella, 2024; Liao & Wu, 2024). Brand community engagement, particularly in digital platforms, has shown a strong capability to activate both affective and cognitive processing mechanisms in consumers, aligning closely with the S-O-R model's explanatory power (Chernev, 2025; Kaur et al., 2020). Thus, the interactions within brand communities serve not merely as information exchanges but as significant psychological stimuli shaping how consumers perceive brand identity, trustworthiness, and value congruence (Jashari-Mani et al., 2024; Phan Tan, 2024).

The digital transformation in marketing has positioned brand communities as critical mediators between brand stimuli and consumer response. These communities often become loci for value co-creation, where customers participate actively in shaping brand meaning and mutual trust, especially in services characterized by high perceived risk such as insurance (Sethi et al., 2024; Wang & Yang, 2025). Empirical evidence demonstrates that brand community interactions positively impact affective and cognitive attitudes, both of which significantly influence downstream outcomes like loyalty and advocacy (Kiran et al., 2024; Oklevik et al., 2024). While affective attitudes are rooted in emotional bonds and identification with the brand, cognitive attitudes stem from rational evaluations of brand performance, service quality, and corporate integrity (Alfian et al., 2024; Lusianti et al., 2024). The dual-attitude perspective aligns with the S-O-R paradigm by acknowledging that consumer behavior is shaped by a complex interplay of emotional and rational processes triggered by brand-related stimuli (Saoula et al., 2024; Sun et al., 2024).

The importance of brand communities is further heightened by the participatory culture of social media, which accelerates brand-related discourse and strengthens communal identity (Kaur et al., 2020; Nguyen et al., 2020). In the insurance industry, such communities can serve as powerful stimuli that reduce perceived uncertainty, increase transparency, and foster trust-based relationships between consumers and insurers (Chu & Liao, 2025; Nelson et al., 2024). When companies invest in building these communities—by encouraging interaction, sharing user-generated content, and rewarding participation—they activate psychological states that deepen both emotional attachment and cognitive evaluations of the brand (Caruana & Vella, 2024; Cerchione, 2025). These internal states then manifest in observable behavioral outcomes such as repeated purchases, long-term policy renewals, and positive word-of-mouth—key indicators of brand performance in high-involvement sectors (Alfian et al., 2024; Saputri et al., 2024).

Brand performance, in this study, is conceptualized as a multi-dimensional construct including both attitudinal and behavioral components such as brand loyalty, willingness to recommend, and perceived brand value (Bing et al., 2024; Kiran et al., 2024). The S-O-R model offers a powerful structure for understanding how stimuli like community engagement and relational investment (S) influence consumer psychological states (O), which are segmented into cognitive and affective attitudes, ultimately producing responses (R) such as loyalty and recommendation (Chernev, 2025; Kumar & Kumar, 2020). By distinguishing between these two types of attitudinal mediators, the model allows for a more nuanced interpretation of how customer-brand interactions operate. Cognitive attitudes might involve assessments of efficiency, reliability, or policy clarity, while affective attitudes reflect feelings of emotional closeness, admiration, and brand love (Liao et al., 2024; Liu et al., 2020).

Moreover, the degree to which brands invest in building and sustaining community relationships—such as offering exclusive content, responsive communication, or co-creation opportunities—has been shown to predict higher affective commitment and psychological brand ownership among consumers (Wang & Yang, 2025; Xue et al., 2020). These factors in turn bolster consumers' brand loyalty and advocacy behaviors even in highly competitive and regulation-intensive markets such as insurance (Kosasih et al., 2024; Razia et al., 2020). Customer satisfaction in these contexts is mediated not only by service quality but also by perceived brand resonance, which is cultivated through sustained interaction and emotional alignment (Lusianti et al., 2024; Oklevik et al., 2024). This also aligns with studies emphasizing the significance of communal-brand connection in promoting service loyalty (Acar et al., 2024; Caruana & Vella, 2024).

It is important to acknowledge the dynamic nature of brand performance metrics in the digital age. Beyond traditional financial indicators, non-financial measures—such as consumer engagement levels, online brand advocacy, and emotional attachment—have gained prominence (Chaher & Lakhal, 2025; Liu et al., 2020). These metrics are particularly relevant in

the insurance domain where brand performance depends not solely on pricing competitiveness but on building perceived trust and assurance over time (Ahada et al., 2025; Phan Tan, 2024). Brand communities thus become an operational mechanism through which companies can elicit stronger customer responses by influencing both their rational beliefs and emotional experiences (Jashari-Mani et al., 2024; Sethi et al., 2024). When embedded within the S-O-R framework, these community interactions are best understood as multi-sensory and symbolic stimuli that initiate both evaluative and emotional internal processing (Katsantonis & Katsantonis, 2024; Szabla & Blommaert, 2020).

Furthermore, the implementation of community-based strategies in the insurance sector complements the growing importance of corporate social responsibility (CSR) and customer-centric innovation. Several studies confirm that consumer trust and satisfaction mediate the relationship between CSR and brand loyalty in service industries (Chaher & Lakhal, 2025; Saoula et al., 2024). When brand communities reflect socially responsible values, they not only foster brand identification but also reinforce emotional and cognitive brand attitudes (Asthana, 2020; Sethi et al., 2024). Moreover, technology-enabled platforms, including messaging apps and social media channels, serve as critical enablers of real-time, peer-driven brand experiences, further intensifying the stimulus effect (Fahlevi et al., 2024; Yuwono et al., 2024). Such environments support circular brand economies where engagement, satisfaction, and performance reinforce one another in a continuous feedback loop (Cerchione, 2025; Purwanto & Prayuda, 2024).

In sum, the current study contributes to brand management literature by applying the S-O-R framework to the context of the insurance industry, where understanding the antecedents and consequences of brand attitudes is vital. The present study seeks to apply the S-O-R framework to assess brand performance in the insurance industry, with a specific focus on how brand community engagement acts as a stimulus influencing cognitive and affective brand attitudes, which in turn drive loyalty and recommendation behaviors.

2. Methods and Materials

This research is descriptive in nature, as it aims to describe values. The objective of the study is to conduct a survey with a practical application of findings in the field of electronic commerce. The primary advantage of survey research lies in its generalizability. Since data were collected through library research and supported by a questionnaire, the study can also be categorized as a type of field research. The statistical population of this study consisted of Pasargad Insurance customers in Iran. Based on the “rule of thumb” suggested by Barclay et al. (1995) and the G*Power software, a minimum of 85 participants was required. We selected 298 Pasargad Insurance customers through convenience non-random sampling in Telegram social media groups. The research model of this study was examined using Partial Least Squares Structural Equation Modeling (PLS-SEM) based on components.

A total of 435 questionnaires were collected over a two-week period. Among these, 104 questionnaires (26%) were incomplete, and 298 (74%) were valid. Our criteria for selecting respondents were (1) active users on social media and (2) individuals insured by Pasargad Insurance and its products. Therefore, Table 1 presents the demographic characteristics of the statistical sample in terms of gender, age, education, and frequency of visits to the company's Telegram channel. The results showed that 65% of respondents were female, 29% were between 41–50 years old, 39% held postgraduate degrees or higher, and 43% visited the company’s channel daily.

Table 1. Descriptive Statistics of the Study

Demographic Variables	Frequency	Percentage
Gender: Female	196	66%
Gender: Male	102	34%
Age: <18	5	2%
Age: 19–30	72	24%
Age: 31–40	81	27%
Age: 41–50	87	29%
Age: 51–60	51	17%
Age: >61	2	1%
Education: Diploma or lower	24	8%
Education: Below Bachelor's	59	20%

Education: Bachelor's	100	33%
Education: Postgraduate or higher	115	39%
Visit Frequency: Daily	127	43%
Visit Frequency: Weekly	124	42%
Visit Frequency: Monthly	28	9%
Visit Frequency: Quarterly	12	4%
Visit Frequency: Over three months	7	2%

The data collection instrument was a standardized questionnaire. A five-point Likert scale was used, including the following options: 1 – Strongly Disagree, 2 – Disagree, 3 – Neutral, 4 – Agree, and 5 – Strongly Agree. This is one of the most commonly used measurement scales for questionnaire items. The measurement instruments are shown in Table 2.

Table 2. Measurement Instrument Specifications

Variable	Construct	Item	Mean	SD	Factor Loading	α	rho_A	CR	AVE
Brand Community	Brand Community Interaction (Adapted from Kumar & Kumar, 2020)	I benefit from following the community rules.	3.77	0.73	0.749	0.766	0.766	0.850	0.587
		I am motivated to participate in community activities because it makes me feel good or because I enjoy it.	-	-	0.778	-	-	-	-
		My motivation to engage in community activities is to support other members.	-	-	0.763	-	-	-	-
		I participate in community activities because I can achieve personal goals.	-	-	0.775	-	-	-	-
	Relationship Investment in Community (Adapted from Kumar & Kumar, 2020)	This community strives to retain loyal and affiliated members.	3.74	0.73	0.790	0.822	0.831	0.874	0.580
		This community always seeks to improve its relationship with members.	-	-	0.767	-	-	-	-
		This community provides trustworthy and useful programs and services.	-	-	0.783	-	-	-	-
		This community does not care about its members.	-	-	0.744	-	-	-	-
		I am confident that this community offers the best deals.	-	-	0.723	-	-	-	-
Brand Attitude	Cognitive Attitude (Adapted from Liu et al., 2020)	The company's products are useful.	3.76	0.79	0.753	0.761	0.762	0.847	0.580
		I believe the company's design has a positive environmental outlook.	-	-	0.738	-	-	-	-
		The company offers modern programs and gives me the opportunity to get to know them.	-	-	0.764	-	-	-	-
		Compared to similar companies, I find this company more reliable.	-	-	0.790	-	-	-	-
	Affective Attitude (Adapted from Liu et al., 2020)	This company evokes a sense of enhanced identity.	3.57	0.66	0.799	0.746	0.750	0.840	0.568
		This company makes me feel that my needs are met.	-	-	0.771	-	-	-	-
		The company's discipline and design fully align with my personality.	-	-	0.724	-	-	-	-
		I enjoy participating in this company's activities.	-	-	0.717	-	-	-	-
Brand Performance	Brand Loyalty (Adapted from Foroudi, 2019)	I believe I am loyal to this company.	3.73	0.69	0.737	0.843	0.846	0.888	0.615
		I will not purchase products from other companies while this one is available.	-	-	0.730	-	-	-	-

		Compared to other companies with similar features, I am willing to pay a higher price for this one.	-	-	0.828	-	-	-	-
		I believe this company has credibility.	-	-	0.815	-	-	-	-
		I enjoy choosing this company.	-	-	0.807	-	-	-	-
	Brand Recommendation (Adapted from Foroudi, 2019)	I speak positively about this company to others.	3.81	0.86	0.802	0.748	0.748	0.856	0.665
		I recommend that everyone use this company's products.	-	-	0.813	-	-	-	-
		I encourage my friends and relatives to use this company's products.	-	-	0.831	-	-	-	-

There were 25 items used to measure the study's variables. Data were collected through an online questionnaire. Participants were invited to complete the survey via a link shared in the official Telegram channel of Pasargad Insurance.

3. Findings and Results

In the present study, Cronbach's alpha, a form of intrinsic homology, was used to assess the reliability of the questionnaire. Typically, Cronbach's alpha ranges from 0 to 1, where 0 indicates no positive correlation and 1 indicates a perfect relationship. The closer the result is to 1, the more reliable the questionnaire is considered. As shown in Table 2, an alpha level above 0.70 for each questionnaire indicates satisfactory reliability for all six questionnaires used in this study. Furthermore, the overall reliability of the questionnaire was calculated as 0.92, indicating a high level of reliability.

Discriminant validity, convergent validity, and indicator reliability were used to assess the appropriateness of the measurement model. Fornell and Larcker (1981) proposed three criteria for evaluating construct validity: discriminant validity, composite reliability of each construct, and average variance extracted (AVE) as a measure of convergent validity. AVE values greater than 0.50 and composite reliability values above 0.70 indicate acceptable convergent validity and reliability of measurement models. The results presented in Table 2 confirm the convergent validity and composite reliability of the constructs, suggesting that the measurement models are appropriate and reliable.

On the other hand, discriminant validity is assessed using three methods: (1) cross-loading analysis, (2) the Fornell–Larcker criterion, and (3) the heterotrait–monotrait (HTMT) ratio. Based on the cross-loading method, each item's loading on its corresponding construct should be at least 0.10 higher than its loadings on other constructs. As shown in Table 3, the cross-loadings are appropriate since the bolded values represent the item's highest factor loading on its intended construct, exceeding all of its cross-loadings.

Table 3. Discriminant Validity Results via Cross-Loading

	Affective Attitude	Brand Community Interaction	Brand Loyalty	Brand Recommendation	Cognitive Attitude	Community Relationship Investment
AA1	0.799	0.439	0.543	0.477	0.481	0.290
AA2	0.771	0.431	0.528	0.382	0.454	0.288
AA3	0.724	0.475	0.499	0.395	0.509	0.192
AA4	0.717	0.420	0.466	0.355	0.514	0.119
BCE1	0.439	0.749	0.498	0.458	0.453	0.167
BCE2	0.450	0.778	0.516	0.506	0.475	0.187
BCE3	0.434	0.763	0.493	0.510	0.478	0.203
BCE4	0.472	0.775	0.479	0.502	0.495	0.219
BL1	0.455	0.499	0.737	0.494	0.500	0.199
BL2	0.527	0.442	0.730	0.461	0.487	0.205
BL3	0.514	0.521	0.828	0.557	0.513	0.209
BL4	0.572	0.505	0.815	0.524	0.512	0.216
BL5	0.575	0.564	0.807	0.579	0.590	0.246
BR1	0.413	0.504	0.518	0.802	0.538	0.167
BR2	0.433	0.519	0.520	0.813	0.508	0.177
BR3	0.467	0.555	0.597	0.831	0.503	0.224
CA1	0.498	0.557	0.559	0.583	0.753	0.201
CA2	0.440	0.492	0.510	0.451	0.738	0.192

CA3	0.509	0.398	0.478	0.429	0.764	0.112
CA4	0.526	0.413	0.462	0.438	0.790	0.143
CRI1	0.229	0.182	0.175	0.190	0.142	0.790
CRI2	0.214	0.205	0.206	0.209	0.183	0.767
CRI3	0.267	0.260	0.267	0.202	0.174	0.783
CRI4	0.260	0.158	0.230	0.151	0.197	0.744
CRI5	0.131	0.132	0.131	0.104	0.110	0.723

The Fornell–Larcker criterion compares the square root of AVE for each construct with its correlations with other constructs. This method was used in the current study. The model demonstrated acceptable reliability, as all diagonal values (square roots of AVE) are greater than the off-diagonal correlation values in each column. As shown in Table 4, all constructs meet this criterion, confirming discriminant validity.

Table 4. Discriminant Validity Using Fornell–Larcker Criterion

Variable	Affective Attitude	Brand Community Interaction	Brand Loyalty	Brand Recommendation	Cognitive Attitude	Community Relationship Investment
Affective Attitude	0.753					
Brand Community Interaction	0.586	0.766				
Brand Loyalty	0.647	0.677	0.784			
Brand Recommendation	0.669	0.645	0.815	0.815		
Cognitive Attitude	0.634	0.666	0.621	0.648	0.761	
Community Relationship Investment	0.217	0.232	0.275	0.254	0.300	0.762

The Heterotrait–Monotrait Ratio (HTMT) was used in this study as a modern approach to evaluate discriminant validity in variance-based SEM, as recommended by Henseler et al. (2015). HTMT is computed via bootstrapping and is based on the ratio of average heterotrait–heteromethod correlations to average monotrait–heteromethod correlations (Henseler et al., 2015).

According to Gold et al. (2001) and Teo et al. (2008), HTMT values should be below 0.90; alternatively, Clark and Watson (1995) and Klein (2015) suggest a threshold of 0.85. As shown in Table 5, none of the constructs exceeded the 0.90 threshold, thus confirming discriminant validity.

Table 5. HTMT Results

Variable	Affective Attitude	Brand Community Interaction	Brand Loyalty	Brand Recommendation	Cognitive Attitude	Community Relationship Investment
Affective Attitude						
Brand Community Interaction	0.775					
Brand Loyalty	0.850	0.805				
Brand Recommendation	0.715	0.852	0.841			
Cognitive Attitude	0.862	0.798	0.821	0.826		
Community Relationship Investment	0.363	0.308	0.316	0.286	0.260	

In summary, based on the results of convergent and discriminant validity assessments, there are no concerns regarding the validity of the measurement model.

After assessing the reliability and validity of the measurement model, the structural model—composed of relationships between latent variables—was evaluated. In the present study, two criteria were employed: the coefficient of determination (R^2) and the predictive relevance coefficient (Q^2).

R^2 is a measure indicating the influence of an independent variable on a dependent variable. Values of 0.19, 0.33, and 0.67 are considered indicators of weak, moderate, and strong explanatory power, respectively. According to Table 6, the R^2 values for the dependent constructs in the study were assessed and can be interpreted as adequate fit for the structural model based on the aforementioned thresholds. Additionally, Q^2 values were used to evaluate the predictive relevance of the model using the Stone–Geisser criterion. The benchmarks for Q^2 are 0.02, 0.15, and 0.33 for small, medium, and large predictive relevance, respectively. Given that the results in Table 6 show moderate Q^2 values for five key constructs, the model is considered to have moderate predictive power.

Table 6. R^2 and Q^2 Values

Latent Variable	Cognitive Attitude	Brand Recommendation	Brand Loyalty	Brand Community Engagement	Affective Attitude
R^2	0.385	0.425	0.544	0.061	0.363
Q^2	0.204	0.268	0.314	0.034	0.194

After evaluating the measurement and structural models, the **Goodness of Fit (GOF)** index was used to assess the overall model adequacy. GOF values of 0.01, 0.25, and 0.36 represent small, medium, and large overall model fit, respectively.

Table 7. Overall Model Fit of Research Constructs

Latent Variable	Communality	Average Shared Variance ($\overline{R}^2$)	GOF
Affective Attitude	0.568	0.603	0.463
Brand Community Engagement	0.587	0.061	-
Brand Loyalty	0.615	0.544	-
Brand Recommendation	0.665	0.425	-
Cognitive Attitude	0.580	0.385	-

Table 7 shows the overall model fit results for the latent constructs. Since the GOF value is 0.463, the overall model fit is confirmed at a "strong" level.

After evaluating both the measurement and structural models and confirming their fitness, the research hypotheses were examined and tested. Table 8 presents the results for each hypothesis, including the significance coefficients, standardized path coefficients, and test outcomes at the 95% confidence level.

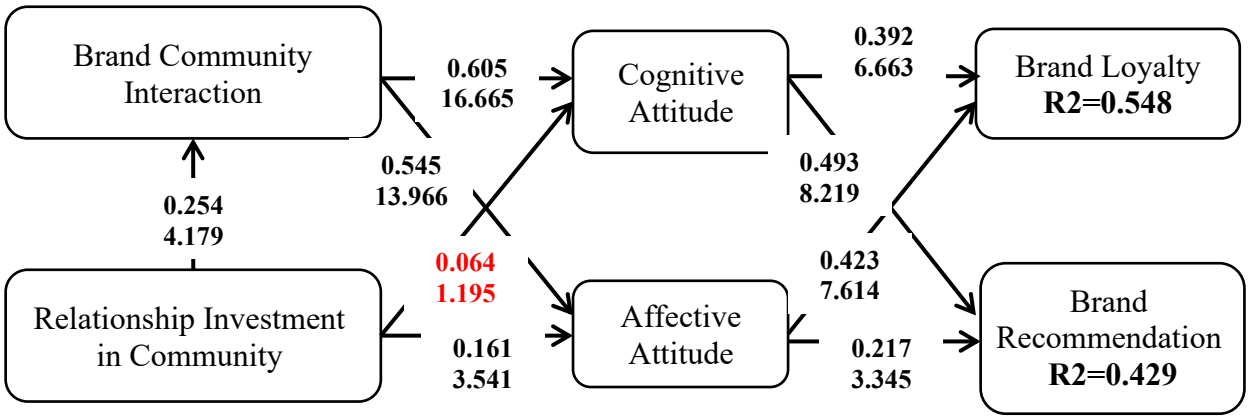

Figure 1. Structural Model Estimation

The significance coefficients of variables are illustrated in Figure 1 and detailed in Table 8. As all path coefficients exceed the absolute value of 1.96—except for Hypothesis 4—all hypotheses were supported except H4.

Table 8. Hypothesis Testing

Hypothesis	Path	Path Coefficient (β)	T-Value	P-Value	Test Result
H1	Brand Community Engagement → Cognitive Attitude	0.605	16.665	0.000	Supported
H2	Brand Community Engagement → Affective Attitude	0.545	13.966	0.000	Supported
H3	Community Relationship Investment → Brand Community Engagement	0.254	4.179	0.000	Supported
H4	Community Relationship Investment → Cognitive Attitude	0.064	1.195	0.233	Rejected
H5	Community Relationship Investment → Affective Attitude	0.161	3.541	0.000	Supported
H6	Cognitive Attitude → Brand Loyalty	0.392	6.663	0.000	Supported
H7	Cognitive Attitude → Brand Recommendation	0.493	8.219	0.000	Supported
H8	Affective Attitude → Brand Loyalty	0.423	7.614	0.000	Supported
H9	Affective Attitude → Brand Recommendation	0.217	3.345	0.001	Supported

Table 9. Mediation Effects Testing

Structural Path	Direct	Indirect [95% CI]	Total Effect [95% CI]	P-Value	Decision
CRI → BCE → AA	0.162	0.138 (0.069; 0.199)	0.300 (0.167; 0.389)	0.000	Supported
BCE → AA → BL	0.238	0.230 (0.158; 0.301)	0.468 (0.395; 0.525)	0.000	Supported
CRI → BCE → AA → BL	0.153	0.059 (0.027; 0.093)	0.212 (0.118; 0.297)	0.001	Supported
CRI → AA → BL	0.144	0.068 (0.027; 0.114)	0.212 (0.118; 0.297)	0.003	Supported
BCE → CA → BL	0.231	0.237 (0.162; 0.323)	0.468 (0.395; 0.525)	0.000	Supported
CRI → BCE → CA → BL	0.152	0.060 (0.030; 0.102)	0.212 (0.118; 0.297)	0.001	Supported
CRI → CA → BL	0.187	0.025 (-0.013; 0.073)	0.212 (0.118; 0.297)	0.244	Rejected
BCE → AA → BR	0.299	0.118 (0.048; 0.201)	0.417 (0.342; 0.479)	0.002	Supported
CRI → BCE → AA → BR	0.142	0.030 (0.010; 0.061)	0.172 (0.085; 0.245)	0.020	Supported
CRI → AA → BR	0.137	0.035 (0.013; 0.068)	0.172 (0.085; 0.245)	0.020	Supported
BCE → CA → BR	0.119	0.298 (0.208; 0.380)	0.417 (0.342; 0.479)	0.000	Supported
CRI → BCE → CA → BR	0.096	0.076 (0.037; 0.117)	0.172 (0.085; 0.245)	0.000	Supported
CRI → CA → BR	0.141	0.031 (-0.018; 0.085)	0.172 (0.085; 0.245)	0.247	Rejected
CRI → BCE → CA	0.063	0.154 (0.077; 0.224)	0.217 (0.098; 0.336)	0.000	Supported

CRI = Community Relationship Investment, BCE = Brand Community Engagement, AA = Affective Attitude, BL = Brand Loyalty, CA = Cognitive Attitude, BR = Brand Recommendation.

These findings reveal the indirect roles of cognitive and affective attitudes in mediating the effects of community-based brand engagement and relationship investment on brand loyalty and brand recommendation.

4. Discussion and Conclusion

The findings of this study confirm the effectiveness of the S-O-R framework in capturing the complex mechanisms that link brand community engagement and community relationship investment to brand performance in the insurance industry. The results revealed that brand community engagement significantly influences both cognitive and affective attitudes toward the brand, aligning with the core premise of the S-O-R model, where stimuli (community interaction) activate internal states (attitudes) that shape behavioral responses (loyalty and recommendation). These results are consistent with prior studies emphasizing the power of communal interaction in stimulating affective commitment and cognitive processing within consumer-brand relationships (Jashari-Mani et al., 2024; Wang & Yang, 2025).

More specifically, the findings indicated that affective attitude mediates the relationship between both brand community engagement and relationship investment, and brand loyalty and recommendation. This supports the notion that emotional attachment is a crucial pathway through which consumers translate their brand experiences into long-term commitment and advocacy. These results echo prior research highlighting the centrality of affective bonding and emotional resonance in the development of loyalty in service-oriented industries (Caruana & Vella, 2024; Lusianti et al., 2024). The emotional stimuli derived from active community participation, such as shared identity and value alignment, thus play a vital role in shaping favorable brand behaviors.

In contrast, cognitive attitude was found to have a significant direct effect on brand loyalty and brand recommendation, yet community relationship investment did not significantly predict cognitive attitude. This suggests that while rational evaluations of a brand's competence, reliability, and value offering are crucial in driving behavior, they are not necessarily stimulated through relational investments unless such investments are perceived as value-adding or performance-enhancing. These findings partially diverge from previous literature which suggested that consistent community-based investment by the brand enhances consumers' rational assessment of service credibility and trustworthiness (Nelson et al., 2024; Phan Tan, 2024). A possible explanation lies in the insurance context, where perceived risk and complexity may lead consumers to rely more on emotional reassurance rather than purely logical evaluation when interpreting brand efforts.

The mediation analysis further clarifies the pathways through which stimuli affect responses. Brand community engagement significantly mediated the impact of relationship investment on affective attitude, which subsequently influenced both loyalty and recommendation. This aligns with the work of (Sethi et al., 2024), who emphasized that trust and emotional warmth generated through community dynamics serve as catalysts for brand advocacy. Similarly, the multi-step indirect effects (e.g., CRI → BCE → AA → BL) affirm that creating interactive spaces for consumers not only fosters engagement but facilitates the internalization of brand values and emotional identification, as supported by (Chernev, 2025) and (Kaur et al., 2020).

Interestingly, several mediation paths through cognitive attitude, such as CRI → CA → BL and CRI → CA → BR, were not statistically significant. This highlights the possibility that relationship investment alone is insufficient to trigger critical thinking or brand evaluation processes in consumers. These findings support the assertion by (Chu & Liao, 2025) that emotional fulfillment may have a stronger behavioral impact than cognitive evaluations in high-involvement services. In line with (Saoula et al., 2024), trust-based services like insurance require emotional congruence more than analytical justification to drive behavioral loyalty.

The results also emphasize the differentiated yet complementary roles of affective and cognitive brand attitudes. Affective attitude had a direct positive influence on both brand loyalty and recommendation, reinforcing the idea that consumers who "feel right" about a brand are more likely to continue supporting it and advocate for it. This confirms prior findings suggesting that emotional proximity and brand love are predictors of long-term consumer engagement (Caruana & Vella, 2024; Wang & Yang, 2025). Meanwhile, cognitive attitude exerted a slightly stronger effect on brand recommendation than on brand loyalty, implying that logical assessments, such as policy clarity or competitive pricing, are influential when consumers recommend insurance brands to others. This dichotomy is consistent with the dual-attitude approach in brand management literature (Liao et al., 2024; Liu et al., 2020).

Moreover, the overall strength of the model was validated by acceptable R^2 values and medium-to-strong Q^2 predictive relevance scores. This indicates the model's capability to accurately predict brand performance based on consumer-brand interactional factors. The Goodness-of-Fit (GOF) score of 0.463 signifies a strong fit, highlighting the robustness of the proposed structural relationships and confirming the theoretical soundness of applying the S-O-R framework in this domain. This reinforces similar findings from studies exploring digital brand engagement models (Kumar & Kumar, 2020; Oklevik et al., 2024).

From a strategic branding perspective, the results highlight the primacy of emotional connection over rational appraisal in driving insurance customers' brand behaviors. Relationship-building efforts, such as consistent engagement within brand communities and personalized content sharing, appear to influence affective attitudes more than cognitive ones. This supports the argument that in emotionally uncertain contexts—like financial planning or health coverage—consumers tend to respond more strongly to feelings of security, empathy, and belonging than to service features or price comparisons (Alfian et al., 2024; Asthana, 2020).

It is also worth noting that the digital nature of the brand community analyzed in this study adds further nuance. Digital engagement allows for persistent, bidirectional interaction, enhancing the immediacy and personalization of communication. Studies have shown that digital brand communities improve customer retention and emotional loyalty by offering real-time feedback, co-creation opportunities, and a sense of collective identity (Jashari-Mani et al., 2024; Kiran et al., 2024). Moreover, through social media, brand messages are amplified and contextualized by peer opinions, accelerating the development of both cognitive and affective evaluations (Liao & Wu, 2024; Szabla & Blommaert, 2020).

Lastly, the inclusion of relationship investment as a predictor variable adds a critical managerial dimension. Although its direct impact on cognitive attitude was limited, it significantly influenced brand community engagement and affective attitude, reinforcing previous claims that perceived relational effort from companies plays a foundational role in shaping customer perceptions and emotional bonds (Nelson et al., 2024; Saoula et al., 2024). This supports the findings by (Fahlevi et al., 2024) and (Cerchione, 2025), who argued that intangible investment in relational infrastructure (e.g., transparency, social value) drives brand value beyond transactional benefits.

While the present study offers significant insights, it is not without limitations. First, the research is limited to one specific insurance company in Iran and may not be generalizable to other sectors or cultural contexts. Consumer-brand interactions are influenced by broader sociocultural and regulatory environments, and different patterns may emerge in Western or emerging markets. Second, the cross-sectional design restricts the ability to infer causal relationships with certainty. Longitudinal studies could better capture the evolution of brand attitudes over time. Third, while the model integrates both cognitive and affective attitudes, other mediators such as brand trust, perceived risk, or customer empowerment could offer additional explanatory power. Lastly, the reliance on self-reported data through online questionnaires may introduce response biases, particularly social desirability or acquiescence bias.

Future studies should consider expanding the scope of investigation to multiple insurance companies across different geographical regions to enhance external validity. Cross-cultural comparisons would also be valuable to explore how collectivist versus individualist cultures interpret and respond to brand community engagement. Additionally, future research could adopt a longitudinal or experimental design to observe temporal changes in brand attitudes and test the causal strength of model relationships. It would also be worthwhile to explore the moderating effects of demographic variables such as age, digital literacy, and risk aversion on the relationship between brand community engagement and brand attitudes. Further exploration of other psychological variables such as trust, perceived transparency, and customer empowerment may deepen understanding of the S-O-R mechanism.

Managers in the insurance industry should prioritize the development of vibrant, emotionally engaging brand communities as strategic assets. Investments in community infrastructure—such as responsive customer support, gamified participation, and peer recognition—can significantly elevate affective attachment to the brand. Brands should emphasize relational, not just transactional, marketing by creating personalized experiences that resonate emotionally with policyholders. Moreover, companies must align their messaging, actions, and values consistently across all touchpoints to reinforce both emotional and rational brand evaluations. Finally, marketers should regularly monitor and assess the health of brand communities using both behavioral analytics and attitudinal metrics to adaptively manage customer experience and maximize brand performance.

Ethical Considerations

All procedures performed in this study were under the ethical standards.

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Conflict of Interest

The authors report no conflict of interest.

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