The Cognitive Foundations of Brand Reputation: Implicit and Explicit Pathways to Purchase Intention

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Brand reputation is widely recognized as a central driver of consumer choice and long-term competitive advantage. However, branding research typically measures reputation through self-report scales, treating it as the outcome of reflective evaluations. However, they provide limited insight into the cognitive processes underlying reputational judgments. Drawing on associative network theory (Collins & Loftus, 1975; Keller, 1993) and attitude accessibility research (Fazio, 1990), this study examines whether reputational evaluations are partly grounded in the accessibility of brand associations in memory. Sixty-three participants completed an online protocol, including a latency-based Brand Association Reaction Time Test (BARTT) for three brands, and a questionnaire assessing awareness, reputation and purchase intention. Brand-level data were analyzed using linear mixed-effects models and cluster bootstrap mediation. Results show that implicit associative strength predicts brand reputation beyond awareness, and indirectly influences purchase intention through reputational evaluations, highlighting the value of latency-based measures for understanding the cognitive foundations of brand evaluation.

Keywords: brand reputation; implicit brand associations; purchase intention; brand measurement; consumer neuroscience

1. Introduction

Brand reputation is considered a cornerstone of consumer choice and a key source of long-term competitive advantage (Fombrun & Shanley, 1990; Walsh & Beatty, 2007; Ponzi et al., 2011). In consumer research, reputation is typically conceptualized as a global evaluative judgment that integrates perceptions of quality, trustworthiness, responsibility, and emotional appeal (Aaker, 1996; Keller, 1993; Ponzi et al., 2011). Previous studies have operationalized reputation through explicit, self-report measures, implicitly treating it as the outcome of reflective and deliberative cognitive processes (Yoo & Donthu, 2001; Ponzi et al., 2011).

While this measurement tradition has yielded valuable descriptive insights, it offers limited visibility into the cognitive architecture from which reputational judgments arise. To address this gap, this paper investigates the cognitive mechanisms underlying brand reputation. Drawing on associative network theory and attitude accessibility research, the study tests a causal model and mediation analysis.

1.2 Conceptual underpinnings

According to spreading activation theory, knowledge is represented as a network of interconnected nodes linked by associative pathways (Collins & Loftus, 1975). Within this framework, brands can be conceptualized as nodes connected to attribute associations of varying strength and favorability (Keller, 1993). Although brand equity research has documented the role of brand associations (Aaker, 1996; Keller, 1993), most studies focus on their content rather than their accessibility in memory.

Research on attitude accessibility suggests that the speed with which evaluations are retrieved reflects the strength of underlying associations and predicts attitude–behavior consistency (Fazio, 1990; Fazio et al., 1986). Consequently, response latency paradigms have been widely used in social cognition to capture automatic associations

that may not be fully accessible through introspection (Greenwald et al., 1998; Gawronski & Bodenhausen, 2006). In branding research, Till et al. (2011) introduced the Brand Association Reaction Time Test (BARTT), a latency-based paradigm designed to measure the accessibility of brand–attribute associations. Unlike the Implicit Association Test (Greenwald et al., 1998), which relies on comparative categorization, the BARTT directly assesses the accessibility of specific brand-linked attributes. Despite its potential, implicit latency-based approaches have rarely been integrated into explanatory models of brand evaluation.

At the same time, prior research consistently shows that brand reputation influences consumer behavioral outcomes, particularly purchase intention. Reputation can act as a signal guiding consumer decision-making in contexts characterized by uncertainty or information complexity (Walsh & Beatty, 2007; Ponzi et al., 2011), and has been linked to purchase intention across various settings, including sustainability communication, CSR initiatives, and digital platforms (Unal & Taşçıoğlu, 2022; Jufri et al., 2022; Ong et al., 2024).

Taken together, these perspectives suggest that reputational judgments may partly reflect the accessibility of brand associations in memory. However, this possibility has rarely been examined empirically. The present study addresses this gap by integrating a latency-based measure of associative accessibility with explicit measures of brand reputation and purchase intention.

1.3 Research questions

Drawing on prior literature, the study conceptualizes brand reputation as an evaluative construct that may be grounded in automatic associative accessibility, a perspective consistent with dual-process accounts that distinguish associative and reflective systems of judgment (Strack & Deutsch, 2004; Kahneman, 2011). By combining an implicit

latency-based measure of associative accessibility with explicit survey measures within a multilevel framework, the study aims to clarify the cognitive mechanisms underlying brand evaluation and behavioral intention. Thus, the present research addresses three core questions:

(1) RQ1. Does implicit associative strength predict brand reputation?

(2) RQ2. Does brand reputation function as a predictor of purchase intention?

(3) RQ3. Is the relationship between implicit associative strength and purchase intention partially mediated by reputational evaluations?

2. Methodology

2.1 Sample

The study recruited 63 participants in Spain through a professional market research agency. All participants completed the study online via a dedicated iMotions (https://imotions.com) link. The sample included 40 men (63.5%) and 23 women (36.5%). Participants' ages ranged from 26 to over 65 years (M = 50.1, SD = 9.5). After preprocessing and removing incomplete implicit responses, the final analytical sample included 61 participants for descriptive analyses and 60 for inferential mixed-effects models.

2.2 Experimental Design

After providing informed consent in accordance with the ethical principles of the Declaration of Helsinki, participants first completed a brief measure of brand awareness (Yoo & Donthu, 2001), included as a baseline indicator of brand knowledge. The implicit task was then automatically launched. Implicit brand associations were measured using a Brand Association Reaction Time Test (BARTT), a response-latency paradigm designed to assess the accessibility and strength of associations linking brands to specific attributes in memory (Till et al., 2011). The task created using PsychoPy

(Peirce et al., 2019; v2025.2.3) and hosted on Pavlovia (https://pavlovia.org). During the task - in which participants had to indicate as quickly as possible whether each attribute was associated with the brand by pressing "yes" or "no" keys (see Figure 1) - brand logos of three e-commerce brands (Amazon, Shein, and Vestiaire Collective) were paired with positive attribute descriptors derived from established reputation models (e.g., RepTrak). The brands were selected through a familiarity pre-test in which 42 university students rated six candidate brands; the three with the highest familiarity scores were selected as stimuli. Stimulus order was randomized, and reaction time was recorded in milliseconds. [Figure 1 here]

After completing the BARTT, participants were redirected to an online questionnaire administered via LimeSurvey software. The questionnaire measured brand familiarity (Kent & Allen, 1994), included to account for the potential influence of prior brand experience on evaluative judgments (Keller, 1993), brand reputation using the RepTrak™ Pulse scale (Ponzi et al., 2011), and purchase intention (Spears & Singh, 2004). All items were measured on seven-point Likert-type scales. Additional questions measured brand-related constructs, along with demographic information and control variables. All original English scales were translated into Spanish using a standard back-translation procedure to ensure semantic equivalence.

2.3 Data analysis

All analyses were conducted in R on a brand-level dataset in long format, with repeated observations nested within participants. Each participant provided evaluations for three brands (Amazon, Shein, Vestiaire Collective), yielding 183 observations from 61 participants in the raw dataset. Because the implicit predictor (BARTT strength) contained a small number of missing values (14 brand-level rows), inferential analyses

were estimated on a complete-case dataset including 169 observations from 60 participants.

Model fit, reliability, and validity were assessed using standard SEM criteria (χ^2, CFI, TLI, RMSEA, SRMR, omega, AVE, Fornell–Larcker, and HTMT). Based on item diagnostics and validity criteria, a refined three-factor solution (Awareness, Reputation, and Purchase Intention) was retained for subsequent analyses.

Prior to modelling, BARTT data were pre-processed by excluding implausible response latencies (< 0.2 s or > 20 s). The primary implicit predictor, BARTT strength, was computed at the participant × brand level by combining endorsement likelihood and response speed:

$$speed_{ij} = \frac{1}{\text{medianRTyes}_{ij}}$$

$$\text{BARTTstrength}_{ij} = YESrate_{ij}\, Xspeed_{ij}$$

When a participant produced no YES responses for a given brand, BARTT strength was set to zero for that observation. Explicit variables included awareness, reputation, and purchase intention, treated as continuous measures. Descriptive statistics and Pearson correlations were computed for all study variables.

Because each participant provided multiple brand evaluations, hypotheses were tested using linear mixed-effects models with random intercepts for participants. The first model examined whether implicit associative strength predicted brand reputation:

$$Reputation_{ij} = \beta_0 + \beta_1 Strenght_{ij} + \beta_2 Awareness_{ij} + u_{0i} + \varepsilon_{ij}$$

The second model tested whether implicit associative strength predicted purchase intention directly and indirectly through reputation:

$$Purchase_{ij} = \gamma_0 + \gamma_1 Strenght_{ij} + \gamma_2 Awareness_{ij} + \gamma_3 Reputation_{ij} + v_{0i} + \eta_{ij}$$

Models were estimated using restricted maximum likelihood (REML), with Satterthwaite-approximated degrees of freedom via lmerTest. Multicollinearity was assessed using variance inflation factors, and model fit was evaluated using Nakagawa's marginal and conditional R^2. Standardized coefficients were computed to facilitate effect-size interpretation. The indirect effect of BARTT strength on purchase intention via reputation was tested using a cluster bootstrap procedure (5,000 resamples) resampling participants rather than individual observations. For each resample, both mixed-effects models were re-estimated, and the indirect effect was computed as a x b, where a represents the effect of Strength on Reputation and b the effect of Reputation on Purchase controlling for Strength. Percentile-based 95% confidence intervals were derived from the bootstrap distribution.

3. Results

3.1 Measurement model

Before testing the structural hypotheses, the psychometric properties of the self-report measures were evaluated through confirmatory factor analyses (CFAs) estimated separately for each brand. The initial measurement model specified four correlated constructs: Awareness (5 items), Familiarity (3 items), Reputation (4 items), and Purchase Intention (5 items).

Results showed a consistent pattern across brands. The reverse-coded Awareness item (AW5) displayed weak or unstable loadings (e.g., Amazon: $\lambda = .161$; Vestiaire: $\lambda = .050$), while one Familiarity indicator (FAM2) was non-significant in multiple cases. Convergent validity was also insufficient for Awareness and Familiarity (AVE values below .50), and discriminant validity analyses indicated substantial overlap between the two constructs (e.g., HTMT up to 1.317 for Vestiaire Collective). These results indicated that the four-factor specification was not stable.

Based on these diagnostics, a refined three-factor model was estimated excluding the reverse-coded Awareness item and removing Familiarity. The revised model included Awareness (4 items), Reputation (4 items), and Purchase Intention (5 items). Across brands, the refined model showed satisfactory psychometric properties. All retained items loaded strongly on their respective constructs ($\lambda \geq .766$), reliability and convergent validity exceeded recommended thresholds ($\omega \geq .925$; AVE $\geq .732$), and discriminant validity was supported according to Fornell–Larcker and HTMT criteria. Overall model fit ranged from acceptable to excellent across brands (e.g., Shein: CFI = .995, RMSEA = .041).

Taken together, the refined three-factor structure demonstrated adequate reliability and validity and was therefore retained for the subsequent structural analyses.

3.2 Structural analyses

Analyses were conducted on a brand-level dataset in long format, with repeated observations nested within participants. The initial dataset included 183 observations from 61 participants (three brands per participant). Because the implicit predictor (BARTT strength) contained 14 missing brand-level values, inferential analyses were conducted on a complete-case dataset comprising 169 observations from 60 participants. Descriptive statistics and Pearson correlations among the study variables are reported in Table 1. [Table 1 here]

BARTT strength was positively associated with brand reputation (r = .387) and purchase intention (r = .391). Awareness was positively correlated with reputation (r = .496) and strongly associated with purchase intention (r = .733). Reputation was also positively correlated with purchase intention (r = .667).

To test whether implicit associative strength predicts reputational evaluations without and with awareness (RQ1), successive models based on linear mixed-effects

with random intercepts for participants were estimated. Model 1 did not consider awareness, showing that BARTT strength significantly predicted brand reputation (b = 0.804, SE = 0.216, t = 3.723, p = .0003). Awareness also emerged as a significant positive predictor (b = 0.339, SE = 0.057, t = 5.928, p < .001). Results are presented in Table 2. [Table 2 here]

Multicollinearity diagnostics indicated no concerns (VIF ≈ 1.10). The model explained a substantial portion of variance (marginal R^2 = .291; conditional R^2 = .366). Standardized coefficients suggested a moderate effect of BARTT strength (β = .27) and a somewhat stronger effect of awareness (β = .40).

To examine whether implicit associative strength predicts purchase intention directly and/or indirectly through reputation (RQ2), a second mixed-effects model was estimated including awareness and reputation as predictors. Results are reported in Table 3. [Table 3 here]

Awareness (b = 0.425, SE = 0.044, t = 9.744, p < .001) and reputation (b = 0.317, SE = 0.053, t = 5.940, p < .001) were strong positive predictors of purchase intention. The direct effect of BARTT strength was positive but marginally significant (b = 0.293, SE = 0.152, t = 1.922, p = .057).

Model fit indices indicated high explanatory power (marginal R^2 = .624; conditional R^2 = .648). Standardized estimates showed that awareness exerted the strongest influence (β = .52), followed by reputation (β = .33), while the standardized effect of BARTT strength was smaller (β = .10).

To formally test the hypothesized indirect pathway from BARTT strength to purchase intention via reputation (RQ3), a cluster bootstrap mediation procedure implemented in R (5,000 resamples) was conducted, resampling participants rather than individual observations. Results are presented in Table 4. [Table 4 here]

The indirect effect was positive and statistically supported (indirect = 0.2264, 95% CI [0.1046, 0.3984]), indicating that stronger implicit associative strength was associated with higher purchase intention through increased reputational evaluations.

The direct effect of BARTT strength remained positive (direct = 0.3595, 95% CI [0.0853, 0.6600]), suggesting a pattern consistent with partial mediation. The estimated proportion mediated was approximately 0.41 (95% CI [0.1906, 0.7498]), indicating that roughly 40% of the association between implicit associative strength and purchase intention may be transmitted via reputation.

4. Discussion

This study examined whether accessible brand associations shape reputation and purchase intentions. The findings address RQ1, showing that implicit associative strength significantly predicts brand reputation even after controlling for brand awareness. This result suggests that reputational evaluations are not solely driven by consciously reported brand knowledge but are also shaped by the accessibility and fluency of brand–attribute associations in memory. This interpretation is consistent with associative network models, which conceptualize brands as nodes connected to attribute associations that vary in strength and can influence evaluations through automatic activation (Keller, 1993). The results addressing RQ2 confirm that brand reputation plays a central role in shaping purchase intention, supporting previous research that conceptualizes reputation as a signal guiding consumer decision-making (Walsh & Beatty, 2007; Ponzi et al., 2011). Finally, the findings address RQ3, indicating that brand reputation partially mediates the relationship between implicit associative strength and purchase intention. Approximately 40% of this relationship was transmitted through reputational evaluations. At the same time, the persistence of a direct effect suggests that associative strength may also influence behavioral intentions

independently of explicit reputation ratings. This pattern is consistent with dual-process perspectives proposing that both automatic associative activation and reflective evaluations contribute to consumer judgment and behavior (Strack & Deutsch, 2004; Kahneman, 2011).

Taken together, the results support a layered account of brand evaluation in which automatically activated brand associations influence reputational judgments that subsequently shape purchase intentions.

Managerial and theoretical implications

The study links associative memory theory with brand reputation, showing that reputational evaluations may partly depend on the accessibility of brand associations rather than only their content (Aaker, 1996; Keller, 1993). Methodologically, it demonstrates how implicit latency-based measures can be integrated with survey data within multilevel models to capture complementary dimensions of brand evaluation.

From a managerial perspective, the findings suggest that consistent communication reinforcing positive brand attributes may strengthen associative networks and facilitate the activation of favorable brand perceptions.

Limitations and future research

Several limitations should be acknowledged. First, the cross-sectional design limits causal inference, suggesting the value of experimental or longitudinal research. Second, the BARTT represents only one operationalization of implicit brand associations, and future studies could triangulate these findings using alternative neurophysiological measures. Finally, the study examined only three brands and focused on positive associations to maintain a manageable reaction-time task. Future laboratory research could examine a broader set of brands and incorporate both positive and negative associations to assess potential asymmetries in reputation formation.

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Figure 1: Trial sequence and stimulus timing in the BARTT. Each trial began with a fixation cross presented for 700 ms, followed by the brand logo for 3000 ms. A brief fixation cross then appeared for 150 ms, followed by the attribute word for 800 ms. After an additional fixation cross of 100 ms, the response screen ("Responde!") was presented, prompting participants to indicate whether the attribute was associated with the brand by pressing the assigned "yes" or "no" key.



Table 1: descriptive statistics and correlations among study variables. N = 169 brand-level observations (complete-case). Correlations are Pearson's r. All correlations are positive and statistically significant at $p < .001$

Variable	*M*	SD	1	2	3	4
1. BARTT Strength	1.16	0.64	—			
2. Awareness	4.48	2.30	.308	—		
3. Reputation	4.03	1.97	.387	.496	—	
4. Purchase Intention	4.64	1.96	.391	.733	.667	—

Table 2: linear mixed-effects model predicting brand reputation. Model fit: Marginal $R^2 = .291$, Conditional $R^2 = .366$. N = 169 observations nested within 60 participants. Degrees of freedom estimated using Satterthwaite approximation. β = standardized coefficient.

Predictor	*b*	SE	*t*	df	*p*	*β*	95% CI (β)
Intercept	1.691	0.335	5.045	146.68	< .001	—	—
BARTT Strength	0.804	0.216	3.723	122.06	< .001	.27	[.13, .41]
Awareness	0.339	0.057	5.928	151.41	< .001	.40	[.27, .53]

Table 3: linear mixed-effects model predicting purchase intention. Model fit: Marginal R^2 = .624, Conditional R^2 = .648. N = 169 observations nested within 60 participants. Degrees of freedom estimated using Satterthwaite approximation. β = standardized coefficient.

Predictor	b	**SE**	t	**df**	p	β	**95% CI (β)**
Intercept	1.206	0.246	4.910	149.58	< .001	—	—
BARTT Strength	0.293	0.152	1.922	116.60	.057	.10	[.00, .21]
Awareness	0.425	0.044	9.744	159.47	< .001	.52	[.42, .63]
Reputation	0.317	0.053	5.940	164.37	< .001	.33	[.22, .44]

Table 4: cluster bootstrap mediation results. Bootstrap resampling was performed at the participant level (5,000 resamples). Confidence intervals are percentile-based. Proportion mediated is reported for descriptive interpretation.

Effect	**Estimate**	**95% CI Lower**	**95% CI Upper**
Indirect (a × b)	0.226	0.105	0.398
Direct (c′)	0.360	0.085	0.660
Proportion Mediated	0.405	0.191	0.750