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Perceived Greenwashing, Brand Trust, and Brand Loyalty: A Systematic Literature Review and Integrative Moderated-Mediation Research Agenda.

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ABSTRACT

In the sustainability era, one the most consequential threat to brand-consumer relationship is the corporate Greenwashing. From just being perceived as an ethical concern to impacting brands commercial success this threat has evolved which requires serious attention.

While the threat is real, the literature that connects perceived greenwashing to the two constructs that ultimately determine a brand's commercial survival - brand trust and brand loyalty - remains fragmented across disciplines, industries, and theoretical traditions.

The research results presented in this study were obtained through a systematic literature review that is conducted on 87 papers indexed in Scopus from 2014 to 2026 following the methodology of PRISMA. It describes the bibliography of the field and a review of the literature regarding the relationship between greenwashing perceptions, brand trust and brand loyalty, as well as identifies a set of moderating variables (transparency, authenticity, capability reputation, generational cohort) and mediating variables (skepticism, cynicism, guilt, perceived hypocrisy) that have been previously found. What the synthesis shows is that there is an under-theorized gap which is structurally significant. It indicates, while the erosive impact of greenwashing perception on brand trust is well documented and while brand trust is known to be an antecedent to brand loyalty, fewer than 6% of the entire corpus of the literature actually model brand loyalty as a trust-based end outcome of greenwashing perception. So, there's a huge research miss, people know about the negative effects of greenwashing on brand trust and they know at least from general marketing that brand trust translates to brand loyalty. However, when you examine the studies on ‘greenwashing' very few (fewer than 6%) make this kind of leap and pair brand loyalty as the ultimate goal with brand trust as the connecting link. Most studies cut short and end the story when the customer is making a purchasing decision, when they are satisfied, or even when they are speaking favourably about the product. This study takes a step to fill that gap, which we refer to as the Greenwashing-Trust-Loyalty (GTL) Cascade. In this context, brand trust is the centrepiece that connects the perception of greenwashing and the realization of loyal customers, both in their thinking, feeling and doing. The framework also considers some factors that could modify this process, such as the transparency of a brand's communication, the authenticity of people thinking of a brand and even the age of its consumers. We present 12 specific research propositions along with and a future research agenda spanning methodological, contextual, and measurement priorities. The review contributes a theoretically integrative, empirically substantiable roadmap for scholars seeking to close the loyalty-outcome gap in the greenwashing literature...

Keywords: perceived greenwashing; brand trust; brand loyalty; green marketing; systematic literature review; moderated mediation; greenwashing skepticism; sustainable branding..

INTRODUCTION

Claims made in corporate communication are increasing much faster than the institutional processes to substantiate them. With the growing importance of environmental issues to markets, an increasing number of environmental signals are recognized by consumers, employees, investors and other stakeholders as 'greenwashed' (Nyilasy et al., 2014; Szabo & Webster, 2021), that is, as exaggerated, selective, or outright false. The distinction between "objective" greenwashing (where a discrepancy exists between the firm's action and claimed action and this is verified by third parties) and "perceived" greenwashing (a discrepancy between the firm's action and claimed action, but the gap is not confirmed by third parties) is a subjective, stakeholder-based construct because it captures the degree to which an audience perceives a gap between a firm's environmental communication and its actual action, even if the communication is true (Nyilasy et al., 2014). This subjective framing can be analytically valuable as it has a direct bearing on how downstream psychological and behavioral reactions (trust, skepticism, loyalty, etc.) manifest and not objective actions.

The downstream effects of Greenwashing are among the most impactful, such as brand trust and brand loyalty. In the marketing literature, brand trust- the consumer's assurance that a brand will act dependably and for the consumer's benefit has been well known as a near cause of brand loyalty. It is the deeply held, repeat-purchase-provoking commitment that forms the foundation of a brand's ongoing profitability. In the sustainability field, there is an extensive and increasing literature base that has investigated the impact of perceived greenwashing on green trust and green brand trust (Chen et al., 2019; Rahman et al., 2024; Policarpo et al., 2023; Malik et al., 2025). A smaller (but still significant) number of studies has looked at greenwashing and the link between greenwashing and brand loyalty or its close variants, such as green brand loyalty, repurchase intention, or green advocacy (Arslan & Uz, 2024; Nguyen et al., 2026b). The lack of attention, however, is to the theories that explicitly incorporate the two models that make brand trust a mediating variable between perceived greenwashing and brand loyalty into one coherent and theoretically coherent and testable framework.

This disparity is important both academically and practically. Brand trust and brand loyalty are two outcomes of the greenwashing perception which, on the theoretical level, are presented as two different and loosely connected properties. According to a lot of theory, the perception of greenwashing is closer to the cause of brand loyalty than brand trust, as brand trust is not simply correlated with greenwashing perception, but is predicted by it. In reality, brand managers and policy makers need to understand not only that greenwashing affects trust, nor that greenwashing is related to lower loyalty, but how much of the decrease in loyalty is due to a decrease in trust and how much is due to other factors, and under which conditions (transparency of communication, perceived authenticity of green claims, and generational differences in skepticism, to mention a few).

Three trends act in perfect synchrony to make the need to close this gap more urgent. The first is that regulatory authorities in the EU, the UK and elsewhere have been quick to introduce regulatory rules that require substantiation of environmental marketing claims, so that the risk of perceived greenwashing is becoming a real compliance and legal risk – one that can have a direct impact on value of customer relationships. Second, the greenwashing-trust-loyalty paradigm has been brought from end consumers to investors, fund screeners, and other financial stakeholders who are expected to be loyal by investing and staying invested. Third, the generational cohort makeup of both consumer and employee markets is shifting towards a mix of generations that are characterized by increased skepticism building and greater receptivity to repairing trust—one that the literature reviewed suggests that would produce qualitatively distinct patterns of skepticism formation and trust-repair receptivity than what has been documented in previous, pre-digital-native samples. In this context, a review not only summarises the current body of knowledge, but also suggests a specific and testable integrative framework of the interconnections between perceived greenwashing, brand trust and brand loyalty is of significant value beyond a typical descriptive synthesis.

This paper aims to fill this gap by conducting a systematic literature review (SLR) of literature from the Scopus database on the relationship between perceived greenwashing, brand trust and brand loyalty. The Review has four goals. First, it charts the bibliometric profile of the discipline as a whole - both publication trends and the scope of the leading outlets, as well as geographical and industry settings and methodological orientations. Second, it synthesizes the substantive empirical and theoretical results of these constructs as they relate to the three focal constructs, as well as the constructs which were used as mediators and moderators of the three focal constructs that have been tested with them. Third, it systematically examines the theories that have been applied to the relationships to which the papers refer, such as the attribution theory, the cognitive dissonance theory, the signaling theory, the dual-process persuasion models, and others, evaluating the complementarity and their limitations. Most importantly, and to the paper's novel claim, it suggests an integrative moderated-mediation model, the Greenwashing-Trust-Loyalty (GTL) Cascade, and a series of propositions that could be tested to address the identified gap in the loyalty-outcome chain and provide a common conceptual framework for future researchers.

The rest of the paper is organized as follows. The methodology behind the systematic review is described in Section 2. The descriptive and bibliometric profile of the corpus under study are reported in Section 3. The thematic synthesis is provided in section 4. The research gaps are summarized in section 5. The integrative conceptual framework and propositions are developed in section 6. A research agenda for the future is outlined in Section 7. Theoretical and managerial implications are discussed in Section 8, and limitations are recognized in Section 9, before a conclusion in Section 10.

2. METHODOLOGY

2.1 Review protocol and design

The review process is systematic, replicable, and formulates a review that is based upon the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines, but adapted from a marketing conceptual (not a meta-analytic) literature synthesis. Because the literature on greenwashing and trust in loyalty is spread across several disciplinary homes (marketing, organizational behaviour, corporate social responsibility, hospitality management, tourism, finance and environmental psychology), a systematic review approach was selected, as it requires an explicit and traceable screening and selection process to avoid selection bias and ensure the comprehensiveness of the review. The study's design is not a strictly quantitative meta-analytic approach, but instead a qualitative, theory-building synthesis, leading to a new integrative framework. There is a conceptual, rather than statistical, contribution here; we aren't interested in estimating an effect size for a particular bivariate relationship from a pooled sample of studies. Additionally, because many constructs of trust and loyalty have been operationalized in different ways as summarized in Section 5, any formal meta-analysis at this juncture would be premature and possibly invalid.

2.2 Data source and search strategy

The Scopus database was chosen as the only bibliographic database used for two reasons: firstly, its extensive multidisciplinary journal coverage compared to other databases like Web of Science Core Collection is beneficial, as greenwashing literature is cross-disciplinary; secondly, it is the indexing standard most commonly cited by the target journal outlets that this review is designed for. The search string was built by combining the focal constructs with the use of Boolean operators between the title, abstract, and keywords of the articles and included three conceptual blocks: (i) greenwashing terms ("greenwashing" OR "perceived greenwashing" OR "green washing"), (ii) trust terms ("brand trust" OR "green trust" OR "green brand trust"), and (iii) loyalty and closely related relational-outcome terms ("brand loyalty" OR "green brand loyalty" OR "customer loyalty"). There was no restriction on publication year, so that foundational works of the field as well as more recent works could be retrieved, and only articles published in English-language, peer-reviewed journals and articles-in-press and book chapters appearing as the final stage of publication in Scopus were included.

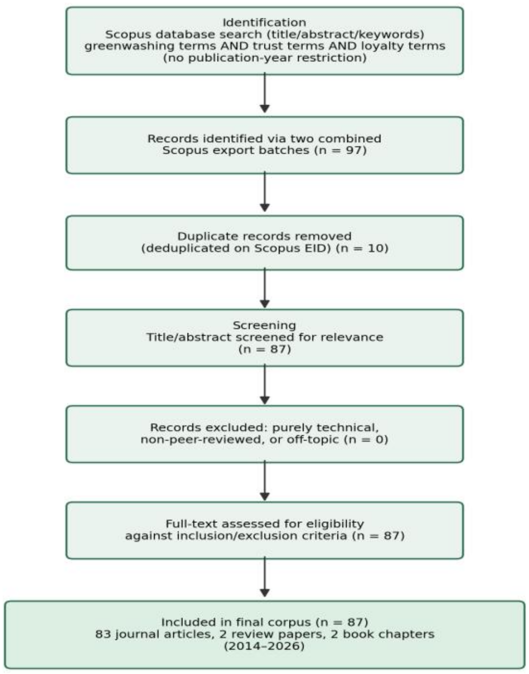
2.3 Inclusion and exclusion criteria

Documents were considered if they (a) appeared in Scopus, (b) empirically or conceptually referred to perceived greenwashing (or an operational equivalent like greenwashing skepticism, greenwashing risk, or corporate environmental deception) as related to at least one of the variables brand trust, green trust, brand loyalty, or a closely related relational-marketing variable, and (c) provided sufficient methodological or conceptual detail to be thematically coded. Documents were excluded if they were purely technical (e.g., life-cycle-assessment or engineering studies using "greenwashing" only incidentally), were non-peer-reviewed (conference abstracts without full text, editorials), or were duplicated across the two export batches retrieved from Scopus.

2.4 Screening and final corpus

Two batches of Scopus exports (n = 87, n = 10) were combined and subsequently deduplicated on the basis of Scopus EID identifier leading to the final, non-duplicated corpus of 87 documents to be reviewed. Screening was done at the title-abstract level and as needed at the full-text level using the above inclusion and exclusion criteria. The final set of articles consist of 83 journal papers, 2 review papers, and 2 book chapters published in journal outlets such as Journal of Business Ethics, Business Strategy and the Environment, Journal of Cleaner Production, Journal of Retailing and Consumer Services, Sustainability, Corporate Social Responsibility and Environmental Management, Journal of Advertising, and Social Responsibility Journal published from 2014-2026. This cross-disciplinary spread, found in marketing, ethics, environmental management, and hospitality outlets, supports the cross-disciplinary framing of the review and a decision to use Scopus as the data source for the review.

Figure 1. PRISMA-style flow diagram of the literature identification and screening process.



3. DESCRIPTIVE AND BIBLIOMETRIC PROFILE

3.1 Publication trend

From 2021 onward, however, the increase in the number of documents becomes obvious: there are 8 documents from 2023, 15 documents from 2024 and 27 documents from 2025, along with an additional 24 documents from 2026 already listed in the database at the time of data extraction for this review. In such a way, the relational implications of greenwashing perception become one of the fastest-developing sub-fields in the sphere of sustainability marketing, likely fuelled by the combination of increasingly stringent anti-greenwashing legislation in the European Union and elsewhere, ESG disclosure becoming mainstream and the climate change preoccupation of Generation Z consumers.

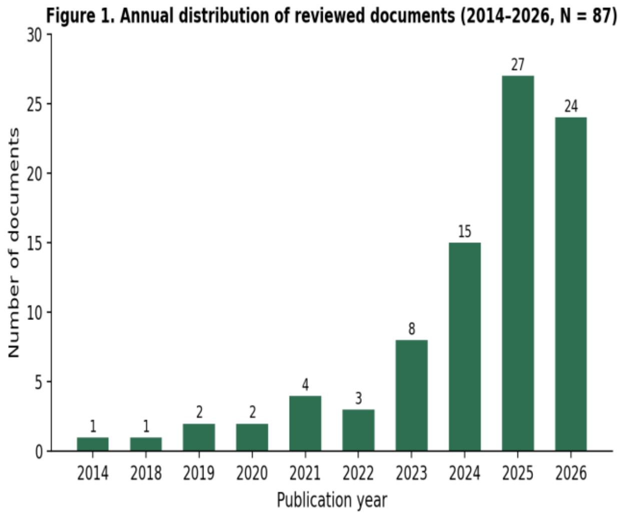


Figure 2. Annual distribution of reviewed documents (2014–2026, N = 87).

3.2 Leading outlets and disciplinary spread

The most common journals are Business Strategy and the Environment (6 documents), Journal of Cleaner Production (5), Journal of Retailing and Consumer Services (4), Sustainability (4) and Corporate Social Responsibility and Environmental Management (4) followed by the Social Responsibility Journal (3), Journal of Business Ethics (2) and Journal of Advertising (2). This spread reinforces the fact that literature is not in the realm of one discipline only - of environmental management, marketing communications or business ethics- and that this is also one of the reasons that an integrative review that brings together the threads of trust and loyalty has not come to the fore more quickly.

Table 2. Leading journals and outlets in the reviewed corpus (N = 87).

Journal / Outlet	Documents
Business Strategy and the Environment	6
Journal of Cleaner Production	5
Journal of Retailing and Consumer Services	4
Sustainability	4
Corporate Social Responsibility and Environmental Management	4
Social Responsibility Journal	3
Journal of Business Ethics	3
Journal of Advertising	2

3.3 Methodological orientation

The bulk of the literature is quantitative, with the bulk of the studies using survey-based structural equation modeling (SEM), typically PLS-SEM, to test the hypothesized relationships between the perceived greenwashing, the mediators (relating to trust) and the behaviors. A smaller, but not unimportant, cluster uses controlled experiments, often with varying levels of advertising appeal, type of claim or transparency of information, to isolate causal effects on perceived greenwashing and consequent downstream evaluations

(Schmuck et al., 2018; Neureiter et al., 2024a; Neureiter et al., 2024b). A minority of studies use a qualitative and/or mixed method design, such as grounded-theory interviews along with PLS-SEM or literature-review/bibliometric approach per se (Malik et al., 2025; Fatemi et al., 2023). This methodological profile indicates that this field is already empirically mature enough to enable the performance of a meta-analytic synthesis, although no meta-analysis of the trust-loyalty cascade in particular exists, in relation to specific bivariate relationship between constructs (e.g., perceived greenwashing and green trust).

3.4 Geographic and industry contexts

Geographically, the corpus has a wide, yet unevenly distributed, international profile with frequent study situations in China, Vietnam, the United Kingdom and Malaysia, in India and Turkey, as well as in the United States of America, South Korea, Indonesia and continental Europe (in the latter two cases only one or two studies). Industry-wise, the single most studied context is hospitality and hotel contexts (Chen et al., 2019; Bernard et al., 2024; Font et al., 2025), followed by aviation and airline contexts (Neureiter et al., 2024a; Neureiter et al., 2024b; Arslan & Uz, 2024), sustainable packaging contexts (Malik et al., 2025), retail and FMCG contexts, tourism, banking and finance contexts and, increasingly, contexts of ESG-labeled investment and cause-related marketing contexts directed at investors, rather than at consumers (Kumcu & Bhushan, 2026). This industry heterogeneity is important from an analytical perspective because as the thematic synthesis below demonstrates the degree of the moderating effects (e.g., prior experience, capability reputation) and even their direction will vary systematically across these contexts.

3.5 Keyword co-occurrence and thematic clustering

The author-provided keywords of the corpus are subject of a supplementary keyword analysis, which goes to reinforce the bibliometric picture above. The two terms most often mentioned are the terms "greenwashing" and "perceived greenwashing", which are used in a majority of the 87 documents. In addition to these anchor terms, the second most common key word cluster is green advertising, sustainability communication and environmental knowledge in combination, which is referred to as a "communication-antecedents" cluster. The second one, smaller in size, is a cluster that focuses on brand trust, green trust and PLS-SEM as a common methodological imprint, a "trust-mechanism" cluster. A third and distinctly smaller group of keywords are brand loyalty and green brand loyalty, which are only found in a small minority of the corpus' keywords lists, along with other adjacent but distinct concepts like corporate reputation, brand image and green brand image. This is a finding in itself, at the keyword level, and it confirms the thematic finding which follows in Section 4: whereas brand loyalty is a concept important both theoretically and managerially, it has not yet been as developed in the literature, nor has it been as frequently keyworded as brand trust.

4. THEMATIC SYNTHESIS

4.1 Conceptualizing perceived greenwashing

Perceived greenwashing throughout the corpus is consistently theorized as a subjective judgment of the stakeholders and not a firm’s objective attribute. The basic definition of the construct, as developed by Nyilasy et al. (2014) and expanded upon by Szabo and Webster (2021) conceptualizes perceived greenwashing as the result of a disclosure product of a firm's green advertising intensity and its actual (or perceived) environmental performance: in the event that disclosure exceeds performance, the resulting perceived greenwashing leads to a "backfire effect" on both environmental and product-quality perceptions. Building on this, Schmuck et al. (2018) suggested an affect-reason-involvement account, by which greenwashed ads evoke a combination of cognitive counter-arguing and affective reactance, which each and every by itself lowers evaluation of the brand. More recent additions to the chain of antecedents of the construct include organizational-level decoupling between CSR-committee structures and actual conduct (Bothello et al., 2023), profit-motive attributions, (Løhre et al., 2024), replicating and extending earlier work by de Vries and colleagues), and consumers' own experiential learning about a firm's claims over time (Rinaldi et al., 2026). In sum, this stream has robustified the construct of perceived greenwashing and moved its measurement towards relatively stable multi-item scales, and can provide the psychometric building blocks for extensions of the construct related to trust and loyalty, as proposed later in this review.

4.2 Perceived greenwashing and brand trust

The most frequently reproduced finding in the reviewed corpus is a negative relationship between perceived greenwashing and brand/trust. In the hospitality context, Chen et al. (2019) showed the effect of perceived greenwashing on green trust and revisit intention, participation intention and negative word-of-mouth using an Attribution Theory and Trust-Based Marketing framework in two real hotel-practice scenarios. Policarpo et al. (2023) found that in the context of apparel retailing, the social cynicism personality trait causes a decrease in green brand trust by increasing the perceived greenwashing, which is moderated by conspicuous consumption (in this study, it acts as an attenuating variable). Rahman et al. (2024) synthesized signalling theory, attribution theory, and cognitive dissonance theory to demonstrate how non-deceptive brand policies and brand-nature experiences contribute to the development of green brand trust, and how greenwashing suspicion undermines green brand trust, which in turn acts as a complete mediator between these antecedents and purchase intention. In the banking industry, where greenwashing studies are traditionally limited, Malik et al. (2025) reported that greenwashing erodes green trust and green value, while increasing perceived green risk, which results in a customer dissatisfaction and the newly coined term of ‘service co-destruction' — a contradiction in which seemingly green banking services actually destroy the relationship. In both an influencer-marketing and digital-communication setting, Balaskas and Yfantidou (2026) and Poulis et al. (2026) also observe that exposure to greenwashing by an influencer or algorithmically recommended content negatively impacts the perceived brand authenticity, which in turn decreases brand trust and purchase intent. Reviewing this sub-body of literature as a whole, there is little doubt that the perceived greenwashing is a powerful, cross-contextual and cross-industry predictor of reduced brand trust.

4.3 Brand trust and brand loyalty: the underused bridge

While the general relationship between trust and loyalty is one of the most tested tenets of relationship marketing in general, the plentiful literature on greenwashing-to-trust is contrasted by the relative scarcity of direct tests of the trust-to-loyalty link within a greenwashing frame in this specific corpus. Where the bridge is tested, the trend is the same as the marketing literature in general: Chen et al. (2019) find that green trust positively predicts behavioral loyalty-proxies (revisit and participation intentions); Rahman et al. (2024) find that green brand trust fully mediates the path from ethical brand practices to purchase intention, a proximal antecedent of repeat-purchase loyalty; and D. Y and Moodbidri (2026), in their TRUST-PACT model of sustainable-packaging willingness-to-pay, position brand trust as the key "partial mediator" between environmental awareness/perceived benefits/perceived green values and purchase behavior, with perceived greenwashing risk counteracting the trust-outcome chain. What is interesting is that few of these studies have measured the outcome variable to a validated and multidimensional brand loyalty construct (cognitive, affective, and conative/behavioral loyalty); most have measured it only to a narrow proxy of behavior like purchase intention, willingness to pay or revisit intention. This gap is exactly the one that the review's proposed framework (created in Section 6) aims to fill.

4.4 Direct and trust-mediated paths from perceived greenwashing to brand loyalty

There is a smaller set of studies that aim at directly examining brand loyalty (or green brand loyalty) as an outcome of perceived greenwashing. Arslan and Uz (2024) investigating airline passengers, find that perceived greenwashing has a significant direct negative effect on green brand image and green brand loyalty but, interestingly, neither perceived greenwashing nor green brand image has a significant direct effect on green purchasing behavior, suggesting that there might be additional unmeasured mediators between the image-loyalty and the loyalty-behavior links. Nguyen et al. (2026a) remind us that the trust-loyalty cascade that is central to this review's framework is more applicable to consumer and investor-facing relationships, and can be adapted when applied to internal stakeholders like employees, in that perceived greenwashing negatively influences employee loyalty, an effect mediated by two emotional factors (guilt and frustration) but not exclusively by cognitive trust itself. In the realm of investments, Kumcu and Bhushan (2026) propose a moderated-mediation model in which multidimensional brand loyalty (explicitly modelled as affective, cognitive, trust-based and behavioural brand loyalty- this is one of the very few studies in the corpus to operationalize brand loyalty as an explicitly multidimensional, trust-inclusive construct, and thus serves as a template for the proposed model in this review) translates into sustainable capital-market value, with the strength of this path being conditioned by investor screening style and ESG-integration mandates.

4.5 Mediating mechanisms between perceived greenwashing and relational outcomes

The reviewed literature reveals that in addition to trust itself, there are possible psychological mediators through which the impact of perceived greenwashing on trust and loyalty related consequences is channelled. One mechanism is perceived corporate hypocrisy: Ioannou et al. (2023), experimentally testing and analyzing longitudinal data from the American Customer Satisfaction Index (ACSI), demonstrate that greenwashing in connection to green product innovation has a negative effect on customer satisfaction because they perceive it as corporate hypocrisy. Similarly, organizational cynicism plays an analogous mediating role in the employee-outcome literature: Li et al. (2022) perceived greenwashing reduces Chinese employees' task performance and organizational citizenship behavior by increasing organizational cynicism, and that this effect is magnified (not moderated) for employees who are high in personal green values, so that the engagement-disengagement impact of greenwashing is, if anything, stronger for personally green values than for less green values. Consumer scepticism, be it generally or more specifically towards green advertising claims, is a third widespread mediator: Rinaldi et al. (2026) attribute scepticism to consumers' experiential learning about a company's green claims over time, while Balaskas et al. (2025) demonstrate that, in a Gen Z ESG-advertising context, advertising scepticism is the most direct determinant of purchase intention among a range of dual process persuasion variables, and that persuasion knowledge and scepticism work both jointly and partially between perceived greenwashing, advertising literacies and source credibility. The mediation effect of guilts and frustrations (Nguyen et al., 2026a), mentioned above, is between the greenwashing and employee loyalty, and the mediation effect of the perceived green risk is between the greenwashing and dissatisfaction in banking contexts (Malik et al., 2025). This variety of mediators—hypocrisy, cynicism, skepticism, guilt, frustration, and risk—suggests that brand trust, although being a central mediator, should be viewed as being the dominating but not the exclusive channel of mediation and that an expanded model of the relationship between greenwashing and loyalty should also integrate these parallel or serial mediators where brand trust is the primary channel of mediation.

4.6 Moderating mechanisms

There are a number of boundary conditions that is repeated through literature. The most theoretically central is communication transparency, which, for instance, is shown to modernise the mediation effect of perceived greenwashing between influencer-advertising fit and purchase related engagement such that greenwashing's mediation is only activated when communication transparency is low Wu and Li (2026), and, in another apparent paradox, information-sharing pressure within green supply chains is found to strengthen the negative impact of greenwashing on sustainability performance Santos et al. (2025), likely because of the differences between business-to-business information sharing and business-to-consumer transparency. A second key moderator is perceived brand or claim authenticity, which (Thao et al., 2025; Poulis et al., 2026) as an outcome variable in its own right as well as a moderator. Olk (2021) in a study of EasyJet's carbon-offset communication reveals that self-congruence between the consumer and the brand contributes to the strengthening of perceived claim authenticity and a weakening of perceived greenwashing. Capability reputation acts as a firm-level buffer: Ioannou et al. (2023) demonstrate that the pre-existing reputation of the firm for operational capability buffers the impact of hypocrisy perceptions on customer satisfaction, suggesting that there is a bank of benefit-of-the-doubt which cannot be used by less capable firms. In the context of the hospitality industry, prior green hotel experience is another type of moderator; Chen et al. (2019) are able to conclude that green-trust-to-behavioral-intention relationships are weaker among consumers with prior green hotel experience than among first-time consumers, but only in one of the two scenarios that they tested. Last, generational cohort frequently turns out to be a moderator of skepticism and persuasion-resistance; in several studies that specifically target Generation Z consumers, (D. Y & Moodbidri, 2026; Balaskas et al., 2025; Baek & Lee, 2025) find unique patterns of environmental awareness, digital-advertising literacy and skepticism that influence whether greenwashing perceptions lead to downstream trust and behavioral consequences, indicating that the age-cohort effect is not simply a control variable but rather a substantively important boundary condition.

4.7 Theoretical lenses

The corpus is based on a diversity of interrelated and complementary theoretical traditions. The most common lens is attribution theory which explains the causal understanding that consumers develop about the discrepancy between environmental claims and firm actions (Chen et al., 2019; Ioannou et al., 2023). The theory of cognitive dissonance is the discomfort that consumers, employees and even sustainability managers feel when faced with the incongruence of a firm's declared and enacted values (Rahman et al., 2024; Westerman et al., 2021).Signaling theory considers green claims as high-cost (or, in the case of greenwashing, low-cost and hence less credible) signals of environmental quality (Rahman et al., 2024). Social identity and person-organization fit theories also account for the existence of disproportionate attitudinal and performance costs when perceived organizational greenwashing occurs for sustainability managers whose personal environmental identity is higher than their organization's identity (Westerman et al., 2021). Experience-based scepticism formation is related to Theory of Planned Behaviour, and the dual process persuasion models (Rinaldi et al., 2026) (elaboration likelihood and related models) explain how advertising literacy, source credibility and persuasion knowledge work together to filter out the perception of greenwashing among digitally native consumers (Balaskas et al., 2025). This theoretical diversity is a strength of the field, but it also creates its fragmentation in the sense that by attaching to different theoretical tradition, different studies of what appear to be substantively similar relationships have been slower in comparison and cumulative theory-building than the volume of empirical output would suggest — a further motivation for the integrative framework proposed in Section 6.

4.8 Industry and contextual heterogeneity

The relationships above are of varying strength and in some cases the sign is different and meaningful depending on industry. In the context of greenwashing, the trust mediated link between greenwashing and loyalty-relevant behavioral intentions is already established in the hospitality and hotel industry, but is dependent on the green practice that is communicated (towel-reuse versus energy-saving initiatives have different moderation patterns; (Chen et al., 2019) and on the information environment: too much sustainability information can paradoxically increase the perception of greenwashing through information overload (Font et al., 2025). In the airline sector, greenwashed advertising hurts the brands and leads to "flight shame," but the extent to which is dependent on the type of claim (compensation claims versus claims of efficiency) effect (Neureiter et al., 2024a; Neureiter et al., 2024b). For apparel and fashion retailing, the two variables – conspicuous consumption and environmental knowledge – interact with each other, and moderated mediation models reveal a higher likelihood of perceiving greenwashing and of responding to a strong sustainability signal among environmentally knowledgeable consumers (Zhang et al., 2024; Apaolaza et al., 2023). In the financial services and ESG-labelled investment products, the customer is no longer the end consumer, but the investor or fund screener, and the consequences of interest no longer lie in repurchase behavior, but in the effect on capital allocation and costs of capital, although the underlying trust-loyalty logic is structurally similar (Kumcu & Bhushan, 2026; Balaskas et al., 2025). This heterogeneity highlights the need for some level of abstraction in the specification of any integrative framework so as to not assume uniform effect sizes across contexts, but rather consider industry specific boundary conditions.

4.9 Synthesis overview

The review's thematic findings are summarized here in Table 1 (due to the descriptive nature of this narrative synthesis and how the evidence was presented). The overall perceived-greenwashing-to-brand-trust relationship is dominated by attribution theory (intervening theory in signaling theory), studies by Chen et al. (2019), Rahman et al. (2024), Policarpo et al. (2023), and Malik et al. (2025), and the direction of the effect consistently reported is negative. In the brand-trust-to-loyalty-proxy relationship, the most prevalent perspective is that of relationship-marketing and trust-commitment theory; the most commonly used studies are D. Y and Moodbidri (2026) and Rahman et al. (2024); and the most commonly reported direction of the relationship is positive, although the most typical outcome is either purchase intention or willingness to pay—not a validated brand loyalty scale. In terms of the perceived-greenwashing-to-brand-loyalty relationship directly, the dominant theory is social identity and organizational-disidentification theory in employee contexts, and attribution theory in consumer contexts, the representative studies are Arslan and Uz (2024), Nguyen et al. (2026a), and Kumcu and Bhushan (2026), and the directionality of the effect is negative, with an important caveat noted in the section 4.4 that at least one study (Arslan & Uz, 2024) finds this negative loyalty effect does not further propagate into an equally significant behavioral-purchase effect, suggesting a possible loyalty-behavior gap parallel to the well-known attitude-behavior gap in green consumption research. This synthesis overview is a primary impetus for the integrative framework devised in Section 6 as no one study in the reviewed corpus estimates all three relationships, along with parallel mediators and moderators in one coherent model.

Table 1. Thematic synthesis summary of the greenwashing–trust–loyalty literature.

Relationship	Dominant theoretical lens	Representative studies	Direction	Key caveat
Perceived greenwashing → Brand trust	Attribution theory (with signaling theory)	Chen et al. (2019); Rahman et al. (2024); Policarpo et al. (2023); Malik et al. (2025)	Negative	Consistently replicated across hospitality, apparel, and banking contexts
Brand trust → Loyalty proxy	Relationship-marketing / trust-commitment theory	D. Y & Moodbidri (2026); Rahman et al. (2024)	Positive	Outcome is typically purchase intention or willingness-to-pay, not a validated multidimensional loyalty construct
Perceived greenwashing → Brand loyalty (direct)	Social identity / organizational-disidentification (employee contexts); attribution theory (consumer contexts)	Arslan & Uz (2024); Nguyen et al. (2026a); Kumcu & Bhushan (2026)	Negative	Arslan & Uz (2024) find no significant downstream effect on purchasing behavior — a possible loyalty–behavior gap

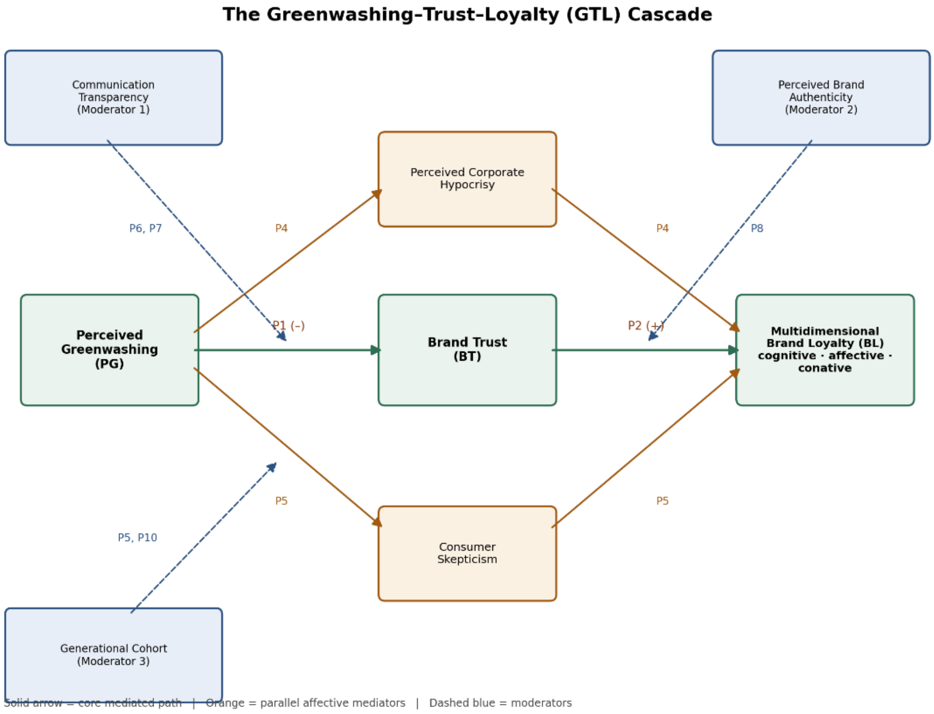
5. RESEARCH GAPS

Thematic synthesis resulted in five major gaps in knowledge. The first – and most important - is the loyalty-outcome truncation gap; most studies in the corpus measure brand loyalty with a purchase intention, satisfaction or single item behavioral intention, and only a few studies have an explicit outcome measured in a validated, multidimensional brand loyalty construct that combines a cognitive, affective, and conative component, mediated by trust (Arslan & Uz, 2024; Kumcu & Bhushan, 2026; Nguyen et al., 2026a (the employee-loyalty adaptation). Second is a mediator-fragmentation gap—the individual studies typically test one mediator at a time (trust, or skepticism, or cynicism, or hypocrisy or guilt) and there has so far been no testing of the weight of each of these mediators or of whether they operate in a serial or parallel way in a single model. Third, the integration of the moderators is missing: some part of the greenwashing-trust-loyalty chain has been shown to be moderated by transparency, authenticity, capability reputation and prior experience, but only the latter two moderators are tested simultaneously in a single study in the corpus, and the relative and interactive strength of the moderators is not clear. Fourth is the lack of research across industries, a generalizability gap, as there is comparatively little research conducted in the banking and financial services, business-to-business and investor-facing contexts even though some of the more theoretically novel constructs are in these contexts (e.g., service codestruction, multidimensional investor-facing brand loyalty). Fifth is a measurement-consistency gap – the constructs used in the corpus, as well as brand trust and green trust, are related to but not identical with each other, and so are the constructs of brand loyalty and green brand loyalty, repurchase intention, advocacy and willingness to pay – without an obvious nomological hierarchy, which makes a meta-analysis and testing of cumulative theory difficult.

6. AN INTEGRATIVE CONCEPTUAL FRAMEWORK: THE GREENWASHING-TRUST-LOYALTY (GTL) CASCADE

To fill the gap in the loyalty-outcome of perceived greenwashing identified above, this review suggests the Greenwashing-Trust-Loyalty (GTL) Cascade, which is an integrative, moderated-mediation model where brand trust is the core mechanism that mediated the relationship between perceived greenwashing and multidimensional brand loyalty, and where three theoretically and empirically validated moderators are placed at different stages of the model to condition their effectiveness.

Figure 3. The Greenwashing–Trust–Loyalty (GTL) Cascade: core mediation path, parallel affective mediators, and three cascading moderators.



6.1 Core structural logic

The central part of the framework indicates that perceived greenwashing (PG) has a negative direct impact on brand trust (BT) and that brand trust has a positive direct impact on brand loyalty (BL) modelled as a second-order construct consisting of cognitive loyalty (belief-based commitment to the brand's environmental credibility), affective loyalty (emotional attachment to the brand), and conative/behavioral loyalty (repurchase intention, advocacy, and resistance to switching). Building on the reviewed literature, brand trust is incorporated into the model as the key mediator between PG and BL (Chen et al., 2019; Rahman et al., 2024; D. Y & Moodbidri, 2026); this is because of the known mediating role of brand trust in the smaller (purchase-intention and revisit-intention) outcomes already found in the literature.

6.2 Parallel affective mediators

The framework includes two parallel affective-cognitive mediators (i.e., perceived corporate hypocrisy as conceptualized by Ioannou et al., 2023; and consumer skepticism toward green claims as conceptualized by Rinaldi et al., 2026 and Balaskas et al., 2025) in addition to brand trust. The parallel mediators are posited to act in parallel to, not in place of, brand trust; they are suggested to jointly account for variance in brand loyalty that brand trust alone would not account for and the relative weight of each of the mediators (cognitive evaluative vs dispositional) can be estimated by future empirical research.

6.3 Moderators

There are three cascading moderators at three theoretically different points in the cascade. Consistent with the information overload results of Wu & Li (2026) and Font et al. (2025) (which mean that the positive effects of transparency are contingent on message clarity and not just disclosure quantity), the model proposes that communication transparency is modeled as a first stage moderator, weakening the PG-to-BT path when transparency is high. To align with the literature on authenticity as a trust-enhancing signal in the influencer-marketing literature as well as literature on self-congruence (Olk, 2021; Poulis et al., 2026; Thao et al., 2025), perceived brand authenticity is modeled as a second-stage moderator and is expected to strengthen the BT to BL path when authenticity is high. The moderator Consumer generational cohort (operationalized as a categorical variable, distinguishing Generation Z from the rest of the generations) is included to represent the differences in the digital-advertising literacy, environmental awareness and disposition to scepticism across generational cohorts (D. Y & Moodbidri, 2026; Balaskas et al., 2025; Baek & Lee, 2025).

6.4 Research propositions

The review then proposes 12 propositions to be tested empirically in the future.

Proposition 1: Brand trust is negatively related to perceived greenwashing for all three stakeholder groups: consumers, investors and employees; this negative relationship will be weaker for stakeholder groups with lower personal environmental identity salience.

Proposition 2: There is a positive relationship between brand trust and multidimensional brand loyalty and the strongest sub-path relationship is between brand trust and cognitive loyalty, followed by conative/behavioral and attitudinal loyalty.

Proposition 3: Perceived greenwashing is negatively associated with multidimensional brand loyalty, with brand trust being the mediator of their relationship.

Proposition 4: The perceived greenwashing-to-brand loyalty relationship will be mediated by perceived corporate hypocrisy, and at the same time stand in parallel to, and independently of, brand trust.

Proposition 5: Consumer skepticism toward green claims is related to and parallels brand trust because the relationship between the greenwashing-to-brand loyalty connection is stronger through the consumer skepticism pathway than through the brand trust pathway, and the consumer skepticism pathway is stronger among digitally-native (Generation Z) consumers.

Proposition 6: Communication transparency acts as a moderator between the perceived greenwashing-to-brand trust path, with the negative impact of perceived greenwashing on brand trust being weaker when firm communication is perceived to be highly transparent.

Proposition 7: Proposition 6 is not necessarily linear but curvilinear: When sustainability disclosure is very high, the transparency-moderation effect is likely to re-intensify the perceived greenwashing as a result of information overload as suggested by Font et al. (2025).

Proposition 8: Perceived brand authenticity mediates the relationship between brand trust and brand loyalty, where the perceived brand authenticity was high, the positive relationship between brand trust and brand loyalty was strengthened.

Proposition 9: The relationship between “greenwashing” and brand trust is mediated by the company's capability reputation; a high level of perceived “greenwashing” on high capability reputation companies is less likely to result in a low level of brand trust than a high level of perceived “greenwashing” on low capability reputation companies.

Proposition 10: The overall strength of the greenwashing-trust-loyalty cascade varies across consumer generations, with the Generation Z consumers showing a stronger direct relationship between the effects of greenwashing and the outcomes of skepticism and a comparatively weaker cognitive brand trust than older generations.

Proposition 11: The relative explanatory weight of the trust-mediated pathway relative to the hypocrisy- and skepticism-mediated pathways is systematically different depending on the industry context: Trust-mediated pathways have greater weight in relationally intensive contexts with high contact (hospitality, banking) and skepticism-mediated pathways have greater weight in low-contact contexts with high advertising (fast moving consumer goods, digital influencer marketing).

Proposition 12: There is no support for the difference in direction of the structural parameters of the GTL Cascade between the two stakeholder groups (B2C and B2I) while the trust-to-loyalty path was found to be positive and significant in both stakeholder groups, and moderated by ESG-integration mandates and screening style in the B2I stakeholder group (as posited by Kumcu & Bhushan, 2026).

Together, these twelve propositions make the central new contribution of the review come alive: a concrete and testable explanation for why brand trust would be a mediator in the relationship between perceived greenwashing and multidimensional brand loyalty, and the moderated-mediation it proposes that should be integrated with the parallel mediators and contextual moderators that past research has explored individually.

7. FUTURE RESEARCH AGENDA

In addition to the specific testing of the GTL Cascade and its twelve propositions, there are several additional research priorities that come from this synthesis. Methodologically, there is a need for more longitudinal and panel designs that could determine the temporal ordering of perceived greenwashing, trust erosion and loyalty decrease because the vast majority of studies reviewed are cross sectional surveys where reverse causal or reciprocal causal explanations (e.g. that a decrease in loyalty fuels a better ability to detect greenwashing) could not be ruled out. More causal identification of the moderating effect specified by Propositions 6-9 could be achieved with experimental designs that manipulate transparency and authenticity in orthogonal ways, as done by Schmuck et al. (2018) and extended by Neureiter et al. (2024a, 2024b). Measurement-wise, it would be beneficial to have a consolidated and validated scale measuring brand trust and green trust and green brand trust as well as another consolidated scale to measure brand loyalty and its narrower proxies of behavior, to address the measurement-consistency gap identified in Section 5. In terms of applications, business-to-business, financial-services and investor-facing applications of the greenwashing-trust-loyalty cascade are still comparatively under-researched relative to consumer-facing hospitality and retail contexts and have a high-value potential extension in the face of increasing regulatory and market pressure on ESG-labeled financial products. Finally, if replicated across both high (European Union) and low (several Asian and Middle Eastern contexts in the reviewed corpus) regulatory environments, the GTL Cascade would reveal if the level of regulation is another boundary condition for the strength of the cascade, or not.

Another focus is the digital-mediation-layer with which greenwashing perception formation is more and more surrounded. Social-media narratives, algorithmically curated content as well as virtual and human influencer marketing are among the new media routes that are becoming increasingly significant in shaping and disseminating perceptions of greenwashing, as indicated by several recent studies in the reviewed corpus (Rabah et al., 2025; Balaskas & Yfantidou, 2026; Wu & Li, 2026). Future studies that use the GTL Cascade in the context of the aforementioned digitally mediated communication should include the strength of the parasocial relationship as another, digitally-specific moderator in the stage of forming trust, along with the transparency of the algorithmic content curation embedded in the platform communication, which was included in Proposition 6 for firm-initiated corporate communication. Further, an inside-out version of the GTL Cascade (a trust factor replacing the customer factor, and employee commitment instead of consumer commitment, operationalised as retention intentions and organisational citizenship behaviour, respectively; and an affective mediator of guilt instead of skepticism, and organisational cynicism instead of consumer cynicism) may or may not be structurally similar to the outside-out version, and this is an empirical question with very relevant implications for internal communications and human-resource practice in sustainability committed organisations. Finally, as the investor-facing and ESG-labeled financial applications of the greenwashing construct have grown rapidly in recent times (Kumcu & Bhushan, 2026; Balaskas et al., 2025), a new and investor specific brand loyalty scale should be developed and validated, focusing on the analogues of holding-duration, capital-reallocation resistance, and advocacy (e.g., recommending the security to other investors) as analogues to conative-loyalty.

8. THEORETICAL AND MANAGERIAL IMPLICATIONS

8.1 Theoretical implications

The main conceptual contribution of this review is to shift the focus of brand trust from one of the many loosely related outcomes of perceived greenwashing towards the explicit and central mediating mechanism between greenwashing perception and the most commercially important relationship outcome, brand loyalty. In doing so, it draws on theoretical traditions (attribution theory, cognitive dissonance, signaling theory and dual process models of persuasion) that have until now been largely used in isolation from each other across separate empirical studies. This integration is important because, when used in isolation, each tradition shows only a partial picture of the cascade: Attribution theory accounts for why consumers assign blame to the claims–conduct gap, but does not explain why or how this blame erodes trust in different ways – cognitive trust as opposed to affective loyalty; dual process persuasion models explain how greenwashing perceptions form as a function of varying levels of processing motivation and ability, but do not naturally extend to the relational, repeat interaction context in which loyalty is built and lost over time. The GTL Cascade's contribution is to preserve these traditions in a single structural frame, where each provides a causal segment of the phenomenon, instead of competing for an overall explanation. The second implication, which is related, is the construct proliferation in the field. The framework in this paper explicitly distinguishes between brand trust and green trust and green brand trust as well as between brand loyalty and its narrower behavioral proxies, within a single nomological structure, which can serve as a template for future researchers to position the constructs they choose to investigate relative to one another and, in turn, reduce the measure-ment-consistency gap found in Section 5.

8.2 Managerial implications

The synthesis and suggested framework in the review has a number of concrete practical implications for managers. First, companies are not able to only repair trust when it comes to greenwashing perceptions in order to manage the brand loyalty risk. Hypocrisy perceptions and consumer skepticism act as parallel (not just sequential) mediators, which means that communication strategies that strengthen cognitive trust (e.g. third party verification, transparency of claims) need to be combined with strategies that directly confront hypocrisy perceptions (e.g. taking action, as emphasized by Ioannou et al., 2023, and reinforcing claims through policy) and consumer skepticism (e.g. strengthening long-run advertising credibility especially among younger, digitally-literate consumers as emphasized by Balaskas et al., 2025). Secondly, the curvilinear transparency proposition (Proposition 7) suggests that an intuitive approach to sustainability disclosure – to disclose as much as possible – can be counterproductive because information overload can ironically re-create the very 'greenwashing' perceptions that transparency is meant to eliminate (Font et al., 2025); the practical upshot of the curvilinear transparency proposition is that sustainability disclosure quality, clarity, and verifiability should be emphasized over quantity. Three, the relationship between greenwashing and trust depends on the existing operational capability reputation of a firm (Ioannou et al., 2023): firms with weaker existing operational capability reputations should expect their green claims to be more closely examined, and should thus, invest more in third-party verification, than more reputable firms making similar claims. Fourth, for the hospitality industry and the banking industry (and all other high-contact relational service industries), the strategies to strengthen the cascade are particularly important and are focused on trust-repairing mechanisms like the ability for consumers to independently verify the eco-label or provide more transparency for algorithms. Fifth, companies that invest in communicating with investors based on ESG mandates should be aware that the loyalty construct relevant to their stakeholder is clearly a multidimensional one that includes four components: trust-based, cognition, affective, and behavioural (Kumcu & Bhushan, 2026), and should communicate with investors accordingly, rather than simply viewing investor relations as a green marketing activity.

9. LIMITATIONS OF THE REVIEW

There are a number of limitations associated with systematic reviews of this type. First, because of its multidisciplinary nature, only work indexed in a single database (Scopus) is included, and other relevant work indexed in other databases (Web of Science, ABI/INFORM, or regional databases) may not be captured. Second, the inclusion of the specific terms "brand trust", "green trust", "brand loyalty" and variants thereof in the search string may have overlooked studies that examine conceptually similar constructs with different terms (e.g. "customer commitment" or "relationship quality"), although this risk was somewhat reduced by the inclusion criteria by allowing for the inclusion of closely related relational-marketing terms. Thirdly, the proposed GTL Cascade and its 12 propositions are conceptual and have not yet been tested empirically, in this review; they are potentially useful for providing a falsifiable, integrative structure for future empirical research, but are not new primary data. Fourth, the overrepresentation of the corpus in publications from 2023 to 2026 represents a valid growth of the field, but could also imply that the description of the "established" findings is overly reliant on very recent studies that have not yet been replicated on a broad scale.

10. CONCLUSION

Perceived greenwashing has been now well established as a strong determinant of loss of brand and green trust among consumer, employee and investor stakeholder groups and a relatively small but increasing stream of research links it to brand loyalty and brand loyalty proxies. What has been missing in the literature is an explicit and integrative model, that sees brand trust as a central mediator between perceived greenwashing and multidimensional brand loyalty, as well as two parallel mediators in the form of perceived hypocrisy and consumer skepticism and two moderators in the form of communication transparency, brand authenticity and generational cohort. The systematic synthesis of 87 documents indexed in Scopus that were analyzed in this review confirms this gap and offers an empirically tractable and theoretically grounded roadmap (the Greenwashing-Trust-Loyalty (GTL) Cascade) as well as 12 testable propositions for closing this gap. Knowing exactly how - and when - greenwashing perceptions turn into trust and go on to loyalty will only become more significant in both research and business practice, especially as the extent of scrutiny for environmental claims is becoming more intense and younger, more skeptical consumer generations gain more influence on the market. The 12 propositions put forward in this article are designed to be independently falsifiable; that is, it is possible to gain partial validation from the empirical results and to gain a meaningful incremental advance over the current fragmentized literature, even if, for example, the core trust-mediation path (Propositions 1-3) were supported but the generational and industry-contingent propositions (Propositions 10-12) were not. In this sense, the review can be best viewed as an open-ended theoretical template which can serve to structure, compare and add-on to the otherwise fragmented empirical work in this field.

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