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Consumer Responses to Firms' Collaborative Sustainable Behaviour

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SCHOLARONE MANUSCRIPTS

Sustainable Together?

Consumer Responses to Firms' Collaborative Sustainable Behaviour

KEYWORDS:

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RUNNING TITLE:

Sustainable Together

ABSTRACT:

Collaboration among businesses is increasingly viewed as essential for achieving a sustainable future; however, little is known about how consumers interpret such collaborative efforts. Drawing on interdependence theory, this research investigates whether, how, and when firms' collaborative sustainability behaviour influences consumer responses to sustainable products and services. Across three experimental studies, we find that presenting sustainability initiatives as collaborative rather than individual increases preference for sustainable options and willingness to pay, an effect mediated by inferred sustainability effectiveness. However, when explicit effectiveness information is provided, the influence of collaboration is attenuated, indicating that collaboration primarily functions as a cue from which consumers infer sustainability effectiveness. Together, these findings advance our understanding of consumer responses to collaboration for sustainability and offer practical guidance on when firms should emphasise collaboration versus verified impact metrics in their sustainability communications.

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Sustainable Together?

Consumer Responses to Firms' Collaborative Sustainable Behaviour

1. Introduction

Human-caused climate change has profound impacts on nature and society, disrupting biodiversity, limiting access to vital resources such as water and food, and posing one of the most pressing threats to our planet (IPCC, 2023). Addressing these complex challenges requires large-scale efforts from firms, governments, and individuals alike (Amel et al., 2017; White et al., 2019; Wohlgezogen et al., 2020; Mishra et al., 2023).

The World Economic Forum argues that global challenges including climate change require cooperative action among multiple stakeholders and that cooperation enhances resilience and the ability to achieve shared goals (World Economic Forum, 2024). To meet sustainability goals, firms increasingly engage in interorganizational collaboration with suppliers, stakeholders, and even competitors (Yen, 2018; Mishra et al., 2023). For example, Amazon's "Climate Pledge" unites 475 companies across 41 countries in a commitment to reach net-zero carbon emissions by 2040 (The Climate Pledge, 2023). Collaboration is also reinforced by marketing communications and sustainability certifications such as Fairtrade, which legitimize the notion that collaboration drives meaningful environmental and social change (Fairtrade International, 2025). As a result, consumers are frequently exposed to firms' collaborative sustainability efforts. Yet, little is known about whether, how, and when such collaboration influences consumer perceptions and preferences for sustainable options. While prior work has examined how collaboration affects business performance (e.g. Mishra et al., 2023), systematic research on consumer responses to collaboration and underlying mechanisms is lacking.

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To address this gap, we draw on interdependence theory (Thibaut & Kelley, 1959; Van Lange et al., 2013), to explain how consumers interpret collaborative sustainability behaviour of firms. Sustainability challenges inherently involve high levels of interdependence (Majer et al., 2021), in which outcomes depend on the joint actions of multiple actors rather than isolated efforts of single actors (Rusbult & Van Lange, 2008; Van Lange et al., 2013). Under such conditions of interdependence, the effectiveness of sustainability initiatives is likely to depend on coordination and alignment among actors rather than on unilateral firm action alone.

Building on this perspective, we propose that consumers interpret collaborative sustainability initiatives as signals that firms are engaging in coordinated, system-level efforts aligned with the interdependent nature of sustainability challenges. Because interdependence is not directly observable, collaboration serves as a visible cue through which consumers infer whether sustainability efforts are likely to be effective. As a result, collaborative (vs. non-collaborative) sustainability behaviour could increase perceived sustainability effectiveness, which in turn enhances consumer preferences for sustainable offerings.

Furthermore, we identify an important boundary condition: the availability of explicit information about sustainability effectiveness. When consumers have access to information of a product's environmental impact, they can evaluate effectiveness without relying on indirect cues such as collaboration. Under such conditions, the influence of collaboration as a signal is expected to reduce.

This research advances theory by integrating three streams: (1) inter-firm collaboration, (2) sustainability marketing, and (3) consumer sustainable behaviour with three main contributions. First, it extends interdependence theory to the domain of consumer inference by demonstrating how structural features of collective-action problems shape consumer evaluations of sustainability initiatives. Second, it contributes to the sustainability marketing literature by identifying

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collaboration as an inferential signal of effectiveness. Third, it shows that the effect of collaboration depends on the availability of explicit sustainability effectiveness information, highlighting an important boundary condition of collaboration-based sustainability communication. These findings offer guidance on when firms should emphasise collaboration versus verified sustainability impacts in their communications.

2. Conceptual Background

2.1 Firm Collaboration and Consumer Responses

Collaboration refers to working together to achieve shared objectives. In the supply chain literature, collaboration typically involves sharing benefits, risks, and information among firms to reach common performance goals (Barratt, 2004). As Yen (2018, p. 1667) defines it, "Supply chain collaboration is a business process in which supply chain partners work together to plan and execute operations to reach common goals." In marketing, collaboration is often viewed as a strategic approach that is associated with innovation and value creation (Lu & Mintz, 2023).

Prior marketing research provides limited but insightful evidence that collaboration cues can influence consumer perceptions and evaluations across a variety of collaborative contexts (See Table 1 for a review, e.g. Maier et al., 2021; Le et al., 2025). A foundational stream of research on brand alliances and co-branding demonstrates that collaborations generate association spillover effects, enabling the transfer of evaluations across firms and brands as signals of product quality and credibility that reduce consumer uncertainty (Simonin & Ruth, 1998; Rao et al., 1999). Research further suggests that consumer responses to co-branding are strongly shaped by perceived fit and similarity between collaborating entities, with higher congruence enhancing evaluations and lower fit weakening perceived compatibility and positivity toward the collaboration between the brands (Ahn & Sung, 2012).

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Beyond conventional co-branding contexts, collaboration has also been examined in cause-related and social partnerships. Cause–brand alliances can influence consumers' attitudes toward both the brand and the associated cause, with evaluations of the alliance carrying over to evaluations of its partners (Lafferty et al., 2004). Perceived fit between corporate sponsors and nonprofit organizations can also shape consumer responses and the brand-equity effects of socially oriented partnerships (Becker-Olsen & Hill, 2006). However, these effects may vary across consumers: Vock et al. (2013) found that prosocial consumers responded favourably to high-fit business–nonprofit alliances, whereas more self-oriented consumers responded negatively, partly because the alliance influenced perceptions of the company's corporate abilities. More broadly, meta-analytic evidence indicates that responses to cause-related marketing depend particularly on consumers' emotional attachment to the cause and signals of corporate sincerity; poorly executed or communicated initiatives may even have damaging attitudinal effects (Schamp et al., 2023).

More recent research highlights the role of collaboration in shaping perceptions of legitimacy, innovation, and service effectiveness. Company–university collaborations enhance perceived innovativeness and legitimacy by signalling expertise, external validation, and knowledge integration (Maier et al., 2021). In service settings, collaboration between human employees and artificial intelligence agents improves customer satisfaction through greater perceptions of fluency, transparency, and coordination in service delivery (Le et al., 2025). In creative industries, collaborations between brands and artists enhance brand value, generating more positive cognitive and affective responses and strengthening brand differentiation (Kim et al., 2014).

While prior research shows that firm collaboration influences consumer responses, it remains unclear how consumers interpret firm collaboration for sustainability, particularly given that

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sustainability challenges inherently involve high levels of interdependence across actors. To address this, we draw on interdependence theory.

"Please insert Table 1. Literature review on consumer responses to firms' collaboration."

2.2 Collaboration for Sustainability: An Interdependence Theory perspective

A growing area of focus in both research and practice is sustainability collaboration, which can be defined as joint efforts among organizations to promote socially and environmentally responsible practices (Yen, 2018). Collaborative sustainable initiatives have been shown to reduce firms' environmental footprints and enhance economic performance (Mishra et al., 2023). Sustainability challenges such as resource depletion and greenhouse gas emissions are widely recognized as collective-action problems, in which desired outcomes cannot be achieved by individual actors operating in isolation but instead require coordinated efforts across multiple stakeholders (Amel et al., 2017; White et al., 2019). Given the complex, interconnected nature of environmental and societal challenges, collaborative approaches are increasingly encouraged as pathways to achieving sustainable development goals (Amel et al., 2017; UN SDG, 2022; Hailstone, 2022). Recent policy initiatives, such as the EU's sustainability and circular economy action plans (EU Commission, 2022), underscore the critical role of collaboration in enabling the green transition (Köhler et al., 2022).

From a theoretical perspective, interdependence theory provides a foundational lens for understanding collaborative sustainable behaviour. This theory explains how the outcomes of individuals or organizations are shaped by the interplay of their own actions and those of their partners (Thibaut & Kelley, 1959; Rusbult & Van Lange, 2008; Van Lange et al., 2013). Interdependent relationships naturally involve social dilemmas, where short-term self-interest may conflict with long-term collective welfare (Van Lange & Balliet, 2015).

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Although originally developed in interpersonal contexts, interdependence theory has also been applied to organizational and service contexts to explain how interdependent actors coordinate their contributions to achieve joint outcomes (Le et al., 2025). Related research on interfirm collaboration shows that coordination among organizational actors can support shared outcomes, including supply-chain performance and environmental sustainability (Barratt, 2004; Mishra et al., 2023).

A central concept within interdependence theory is mutual control (also referred to as mutual dependence or joint control), referring to the extent to which outcomes are jointly determined by multiple actors rather than by unilateral action (Rusbult & Van Lange, 2008). Mutual control means that each actor's outcomes depend not only on their own actions but also on others' actions. As a result, achieving desirable outcomes requires actors to coordinate, and align their actions (Van Lange et al., 2013; Van Lange & Balliet, 2015).

Importantly, under conditions of mutual control, effectiveness depends less on isolated action and more on coordinated, collective efforts. Coordinated action enables actors to achieve outcomes that would not be possible through unilateral effort, making mutual control particularly relevant in sustainability contexts (Van Lange & Balliet, 2015). Environmental challenges are complex and interconnected, meaning that meaningful progress depends on coordinated action across multiple actors and systems. Under such conditions, individual efforts alone are unlikely to produce substantial impact (Bamberg et al., 2015; Chen, 2015; White et al., 2019). Thus, mutual control shifts effectiveness from isolated action to coordinated, collective efforts. When actors align their efforts, they can generate system-level outcomes that exceed the impact of isolated actions. This makes mutual control a key mechanism through which collaboration signals the potential effectiveness of sustainability initiatives.

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Firms engaging in collaborative sustainable initiatives acknowledge their mutual dependence and shared responsibility for addressing systemic challenges. Because sustainability inherently involves social and temporal interdependencies (Majer et al., 2021), collaboration for sustainability reflects a commitment to long-term, collective well-being over short-term, individual gains. Recent research in sustainability transitions and socio-technical systems further emphasizes that environmental outcomes emerge from system-level coordination across multiple actors, including firms, institutions, and consumers, reinforcing the relevance of interdependence as a defining feature of sustainability challenges (Köhler et al., 2022; Geels, 2020; Amel et al., 2017).

Taken together, these findings highlight that collaboration for sustainability can serve as a signal that shapes consumers' interpretations of a firm's effectiveness in achieving broader goals. However, we still lack a systematic empirical understanding of how consumers perceive collaborative sustainable behaviour, specifically, that is, when a firm's efforts toward sustainability involve working jointly with others. This research seeks to fill this gap by examining when and why such collaborative sustainability efforts influence consumer evaluations of effectiveness of firms' sustainable options and consumption decisions related to them.

2.3 Hypotheses

Building on the interdependence theory outlined above, we argue that consumers interpret firm collaboration for sustainability as a signal of mutual control and collective action in addressing complex sustainability challenges. Because sustainability outcomes depend on coordinated action across actors, consumers may infer that collaborative efforts are more capable of generating system-level impact than unilateral firm action.

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From an interdependence theory perspective, collaboration signals that firms acknowledge their mutual dependence and shared responsibility for sustainability outcomes (Rusbult & Van Lange, 2008; Van Lange et al., 2013). Under conditions of mutual control, effectiveness is achieved not through isolated action but through coordination and alignment among actors (Van Lange & Balliet, 2015). Given that consumers recognize sustainability challenges as collective-action problems that no single firm can solve alone (White et al., 2019), collaborative sustainability initiatives are likely to be interpreted as impactful.

Accordingly, when a firm engages in sustainability initiatives jointly with other organizations, consumers could infer that the firm's products or services are more effective in contributing to sustainability goals than when similar initiatives are pursued independently.

Inferred sustainability effectiveness plays a central role in translating collaboration signals into consumer responses. When consumers believe that a product or service can meaningfully contribute to reducing environmental harm or advancing social goals, they are more likely to view their consumption choice as a valuable contribution to collective efforts addressing sustainability challenges (Chan, 2016; Herrmann et al., 2022).

Because such perceptions signal that individual consumption can contribute to broader societal goals, they drive positive consumer responses, including stronger preferences for and greater willingness to pay for sustainable options. Thus, collaboration-induced perceptions of sustainability effectiveness enhance favourable responses to sustainable options.

H1: A *Firm's collaborative, compared with non-collaborative, sustainable behaviour increases favourable consumer responses to sustainable offerings.*

H2: *Inferred sustainability effectiveness mediates the effect of collaborative versus non-collaborative sustainable behaviour on favourable consumer responses to sustainable offerings.*

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Consumers often rely on various cues when making decisions. Among these cues, product's effectiveness is generally considered important to induce initial purchase (Zhu et al., 2012; White et al., 2019). As such, when consumers are provided with information about a product's effectiveness in achieving sustainability goals, this information will likely become the primary driver of their preferences. For instance, when consumers are given data about how much carbon emissions are reduced per product or how much plastic waste is avoided, they are more likely to base their decisions on the objective evidence of a product's sustainability impact rather than relying on the collaborative nature of its production. Thus, by making sustainability effectiveness information available, the influence of the collaboration cue is reduced because consumers will focus on the direct sustainability outcomes of the product. Thus, we propose:

H3: *The positive effect of a firm's collaborative, compared with non-collaborative, sustainable behaviour on favourable consumer responses to sustainable offerings is attenuated when explicit information about the sustainability effectiveness of the product or service is available.*

===== *Please insert Figure 1* =====

3. Study 1

Study 1 aimed to test H1, which proposes that firms' collaborative, compared with non-collaborative, sustainable behaviour increases consumers' likelihood of choosing a sustainable rather than a conventional option. To examine this effect, we employed an incentive-compatible design in which participants made an actual choice between sustainable and conventional shipping options. This design allowed us to capture consequential choice behaviour rather than hypothetical intentions.

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3.1 Methods

Participants. Responses from one hundred eighty participants were used for data analysis. The final sample consisted of United States residents and was 48.9% female and 50.6% male, with a mean age of 33.1 years.

Design and Procedure. The study used a two-condition between-subjects experimental design in which the type of firm sustainable behaviour was manipulated as either collaborative or non-collaborative. The experimental materials consisted of two fictitious news articles about Amazon's Climate Pledge initiative. We chose this example to enhance external validity, as Amazon's Climate Pledge initiative has been described as a role model for corporate action on sustainability (McKinsey, 2023). The two articles were identical except for how they described Amazon's sustainability efforts. In the non-collaborative condition, the article stated that Amazon aimed to reduce its carbon emissions over the next two decades independently. In the collaborative condition, the article stated that Amazon, together with other companies, aimed to reduce its carbon emissions collectively. To reinforce the collaboration cue, the collaborative version displayed the logos of the collaborating companies beneath the article text, whereas the non-collaborative version displayed only Amazon's logo. Figure 2 provides the experimental stimuli.

===== *Figure 2* =====

Participants were randomly assigned to one of the two experimental conditions and read the corresponding fictitious news article. After reading the article, participants made a choice using an incentive-compatible design. Specifically, participants were informed that, as a token of appreciation for their participation, they would be entered into a lottery for $35. Of this amount,

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\$25 was dedicated to the purchase of a book, and the remaining \$10 would be paid to the winner's account. Participants were asked to select one of four books from Amazon's book portfolio in case they won the lottery. They then indicated their preferred shipping option by choosing between shipping with reduced CO_2 emissions and conventional shipping. Participants who selected the reduced-emissions shipping option were informed that this option required a small additional fee of \$2.50, which would be deducted from the remaining \$10 if they won the lottery. After the choice task, participants completed the questionnaire. They answered attention checks, rated a manipulation-check statement, and indicated their gender and age.

3.2 Results

Manipulation Check. A one-way ANOVA showed that participants perceived the firm's sustainable behaviour as more collaborative in the collaborative condition ($M_{collaborative}$ = 5.15, SD = 1.54) than in the non-collaborative condition ($M_{non\text{-}collaborative}$ = 2.97, SD = 1.43); F(1, 178) = 96.57, $p < .001$. Hence, the manipulation was successful.

Effect on Sustainable Shipping Choice. A Pearson chi-square test of independence showed a significant association between firm sustainable behaviour type and shipping choice, $\chi^2(1, N = 180) = 4.178$, $p = .041$, $\varphi = .15$. Participants in the collaborative sustainable behaviour condition were more likely to choose reduced-CO_2 shipping than participants in the non-collaborative sustainable behaviour condition. Specifically, 61.7% of participants in the collaborative condition selected reduced-CO_2 shipping, compared with 46.5% in the non-collaborative condition. These results support H1.

4. Study 2

Study 2 aimed to test whether firms' collaborative, compared with non-collaborative,

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sustainable behaviour increases consumers' willingness to pay a premium for sustainable products and services, thereby testing the proposed main effect (H1). In addition, Study 2 examined whether this effect is explained by consumers' inferences about the sustainability effectiveness of the firm's products and services, thereby testing the proposed mediation effect (H2).

4.1 Methods

Participants. Responses from two hundred twenty-eight participants were used for data analysis. All participants were United States residents. The sample was 51.8 % female and 48.2 % male, with a mean age of 41.8 years.

Design and Procedure. Study 2 used a two-condition between-subjects experimental design. The independent variable was firm sustainable behaviour type, manipulated as either collaborative sustainable behaviour or non-collaborative sustainable behaviour. We used the same stimulus materials as in Study 1. Specifically, participants read one of two fictitious news articles about Amazon's Climate Pledge initiative. The articles were identical except for whether Amazon's sustainability efforts were described as implemented collaboratively with other companies or independently by Amazon. Participants were randomly assigned to one of the two experimental conditions. After reading the assigned article, participants indicated their willingness to pay a premium for Amazon's shipping service using a single item: "I am willing to pay a higher price for this shipping service than for other shipping services" [Sarkar et al., 2021].

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Next, participants rated the inferred sustainability effectiveness of Amazon's shipping service using three items: "Amazon's shipment service will reduce the use of fossil fuels for deliveries," "Amazon's shipment service will decrease the climate impacts of companies" and "Amazon's

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shipment service will increase the use of renewables in companies' operations" (inspired by Nordlund et al., 2018; Wan et al., 2015). The three-item scale showed good internal consistency, α = .883. Participants rated the items on a seven-point Likert scale ranging from 1 = strongly disagree to 7 = strongly agree. As part of the questionnaire, participants also completed attention checks, responded to manipulation-check items, and indicated their gender and age. In addition, we measured participants' attitudes toward Amazon and familiarity with Amazon using one item each. These variables were included as covariates in the analysis.

4.2 Results

Manipulation Check. A one-way ANOVA showed that participants perceived the firm's sustainable behaviour as more collaborative in the collaborative condition (M = 5.73, SD = 1.46) than in the non-collaborative condition (M = 4.33, SD = 1.92); $F(1, 226) = 38.11$, $p < .001$. Thus, the manipulation was successful.

Effect on Inferred Sustainability Effectiveness. We examined whether firm sustainable behaviour type influenced participants' inferred sustainability effectiveness of Amazon's shipping service. A one-way ANOVA revealed a significant effect of firm sustainable behaviour type on inferred sustainability effectiveness, $F(1, 226) = 21.62$, $p < .001$. Participants in the collaborative sustainable behaviour condition perceived Amazon's shipping service as more effective in contributing to sustainability (M = 5.67, SD = 1.07) than participants in the non-collaborative sustainable behaviour condition (M = 4.91, SD = 1.38). The effect remained significant when attitude toward Amazon and familiarity with Amazon were included as covariates, $F(1, 224) = 15.61$, $p < .001$.

Effect on Willingness to Pay. We tested whether firm sustainable behaviour type influenced participants' willingness to pay a premium for Amazon's shipping service. A one-way ANOVA

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showed a significant effect of firm sustainable behaviour type on willingness to pay a premium, $F(1, 226) = 6.15$, $p = .014$. Participants in the collaborative sustainable behaviour condition reported higher willingness to pay a premium ($M = 4.48$, $SD = 2.10$) than participants in the non-collaborative sustainable behaviour condition ($M = 3.81$, $SD = 1.99$). This effect also remained significant when attitude toward Amazon and familiarity with Amazon were included as covariates, $F(1, 224) = 4.89$, $p = .028$. The results support H1.

Mediation Analysis. We conducted a mediation analysis using PROCESS Model 4 with 10,000 bootstrap samples to test whether inferred sustainability effectiveness mediated the effect of firm sustainable behaviour type on willingness to pay a premium. Firm sustainable behaviour type was coded as 0 = non-collaborative sustainable behaviour and 1 = collaborative sustainable behaviour. Inferred sustainability effectiveness served as the mediator, and willingness to pay a premium served as the dependent variable. The total effect of firm sustainable behaviour type on willingness to pay a premium was significant, $b = 0.67$, $SE = 0.27$, $t = 2.48$, $p = .014$, 95% CI [0.1383, 1.2076]. Collaborative sustainable behaviour also had a significant positive effect on inferred sustainability effectiveness, $b = 0.76$, $SE = 0.16$, $t = 4.65$, $p < .001$, 95% CI [0.4368, 1.0794]. In turn, inferred sustainability effectiveness positively predicted willingness to pay a premium, $b = 0.59$, $SE = 0.10$, $t = 5.65$, $p < .001$, 95% CI [0.3823, 0.7914]. When inferred sustainability effectiveness was included in the model, the direct effect of firm sustainable behaviour type on willingness to pay a premium was no longer significant, $b = 0.23$, $SE = 0.27$, $t = 0.86$, $p = .393$, 95% CI [−0.2968, 0.7530]. Importantly, the indirect effect through inferred sustainability effectiveness was positive and significant, $b = 0.44$, $SE = 0.12$, 95% bootstrap CI [0.2241, 0.7174]. These results support H2 and indicate that inferred sustainability effectiveness mediates the effect of firm sustainable behaviour type on willingness to pay a premium for sustainable offers.

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5. Study 3

Study 3 aimed to test H3, which proposes that the availability of information about the sustainability effectiveness of products and services weakens the effect of firms' collaborative, compared with non-collaborative, sustainable behaviour on consumers' purchase intentions. Study 3 therefore also provides a robustness test of the mediating role of inferred sustainability effectiveness identified in Study 2. Following a mediation-as-moderation logic, or moderation-of-process design (Spencer et al., 2005), we experimentally manipulated the availability of sustainability-effectiveness information and examined whether this information attenuated the effect of firm sustainable behaviour type on purchase intention. This approach is commonly used to test proposed psychological processes by manipulating process-relevant information and examining whether it moderates the focal effect.

5.1 Methods

Participants. Responses from three hundred ninety-six participants were used for data analysis. All participants were United States residents. The sample was 57.1 % female and 41.2 % male (i.e., the remaining participants indicated another gender identity or preferred not to disclose their gender), with a mean age of 42.5 years.

Design and Procedure. Study 3 used a 2 × 2 between-subjects experimental design. The first factor was firm sustainable behaviour type, manipulated as either collaborative sustainable behaviour or non-collaborative sustainable behaviour. The second factor was sustainability-effectiveness information availability, manipulated as either available or unavailable. The stimulus materials described a fictitious online retailer called HomeEssence. Participants first read a short description of HomeEssence and its product portfolio in the home essentials category. They then received information about the retailer's sustainability efforts in business

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operations. The descriptions were identical except for whether the retailer's sustainability efforts were described as conducted collaboratively with other companies or independently by the retailer. In the sustainability-effectiveness information available condition, participants additionally received information about the sustainability effectiveness of HomeEssence's products. In the sustainability-effectiveness information unavailable condition, participants did not receive this additional information. Figure 3 provides the experimental stimuli.

===== *Figure 3* =====

Participants were asked to imagine that they were considering purchasing home essentials and came across the website of HomeEssence, a fictitious online retailer. After reading a short description of the retailer and its product portfolio, participants were randomly assigned to one of the two firm sustainable behaviour type conditions. Participants were then randomly assigned to one of the two sustainability-effectiveness information availability conditions. Participants in the information available condition received additional information about the sustainability effectiveness of HomeEssence's products, whereas participants in the information unavailable condition did not receive this additional information. Afterward, participants indicated their purchase intention as the dependent variable in this study. Purchase intention was measured using three semantic differential items adapted from Spears and Singh (2004): "probably would not buy/probably would buy", "definitely would not buy/definitely would buy", and "low interest in buying/high interest in buying". The three items were averaged to form a purchase intention index, with higher values indicating greater purchase intention. The scale showed high internal consistency, $\alpha = .959$. As part of the questionnaire, participants answered attention checks, responded to manipulation-check items, and indicated their gender and age. In addition, participants reported the perceived duration of the study and the perceived realism of the

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information. These measures were included to assess whether the experimental conditions differed on unintended aspects of the study experience.

5.2 Results

Manipulation and Robustness Checks. A one-way ANOVA showed that participants perceived the firm's sustainable behaviour as more collaborative in the collaborative sustainable behaviour condition ($M = 5.94$, $SD = 1.25$) than in the non-collaborative sustainable behaviour condition ($M = 3.53$, $SD = 1.98$); $F(1, 394) = 209.07$, $p < .001$. Thus, the manipulation of firm sustainable behaviour type was successful. Another one-way ANOVA showed that participants perceived the products as more sustainability-effective when sustainability-effectiveness information was available ($M = 6.05$, $SD = 1.78$) than when such information was unavailable ($M = 4.25$, $SD = 1.92$), $F(1, 394) = 440.79$, $p < .001$. Thus, the manipulation of sustainability-effectiveness information availability was also successful. Finally, we examined whether the experimental conditions differed in unintended aspects of the study experience. Participants did not report significant differences in perceived study duration, $F(1, 394) = 1.05$, $p = .307$, or perceived realism of the information, $F(1, 392) = 2.13$, $p = .145$. These results suggest that the manipulations did not systematically affect participants' perceptions of study duration or information realism.

Effect on purchase intention. We tested whether sustainability-effectiveness information availability moderated the effect of firm sustainable behaviour type on purchase intention. A 2 × 2 ANOVA with firm sustainable behaviour type and sustainability-effectiveness information availability as independent variables and purchase intention as the dependent variable revealed a significant interaction, $F(1, 392) = 6.76$, $p < .010$. Simple effects analyses showed that when sustainability-effectiveness information was unavailable, participants reported higher purchase

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intention in the collaborative sustainable behaviour condition (M = 2.38, SD = 1.06) than in the non-collaborative sustainable behaviour condition (M = 2.04, SD = 0.98), $F(1, 392) = 4.55$, p = .034. However, when sustainability-effectiveness information was available, purchase intention did not differ significantly between the collaborative sustainable behaviour condition (M = 3.50, SD = 1.27) and the non-collaborative sustainable behaviour condition (M = 3.75, SD = 1.16), $F(1, 392) = 2.37$, p = .124. These findings indicate that the effect of firm sustainable behaviour type on purchase intention depends on whether information about the products' sustainability effectiveness is available. When such information was unavailable, collaborative sustainable behaviour increased purchase intention relative to non-collaborative sustainable behaviour. When such information was available, however, firm sustainable behaviour type no longer significantly affected purchase intention. Thus, making sustainability-effectiveness information available appears to attenuate the effect of collaborative versus non-collaborative sustainable behaviour on consumer purchase decisions.

6. Discussion

Across three studies, the results consistently indicate that collaborative sustainable behaviour by firms positively shapes favourable consumer responses to sustainable offerings. Study 1 provided initial behavioural evidence: consumers were more likely to choose a sustainable option when a firm's sustainability efforts were presented as collaborative rather than individual. Study 2 extended this finding by demonstrating that collaboration also increased consumers' willingness to pay for sustainable services. This effect was mediated by consumers' inferred sustainability effectiveness of the products or services, suggesting that collaboration functions as an inferential cue of sustainability effectiveness which in turn increases monetary valuation of sustainable option. Study 3 clarified this mechanism by introducing a boundary condition: when

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explicit effectiveness information was provided, the advantage of communicating collaboration attenuated. When no explicit information was provided, collaboration improved purchase intentions; however, when information about the products' sustainability effectiveness was made available, the advantage of collaboration attenuated. This pattern indicates that collaboration primarily influences consumer preferences by shaping inferences about the sustainability effectiveness of the products or services. Once that information is explicit, collaboration adds little value. Collectively, these findings reveal that firms' collaborative sustainable behaviour functions as an inferential cue that strengthens consumers' inferences of sustainability effectiveness of firms' offerings, especially when explicit cues about sustainability effectiveness are absent.

6.1 Theoretical Contribution

This research contributes to the literature on, inter-firm collaboration, sustainability communication and consumer inference processes by explaining how firms' collaborative sustainable behaviour shapes consumer decisions concerning sustainable products and services. Existing sustainability communication research has primarily focused on how consumers respond to firms' sustainability claims and reported outcomes. Our findings extend this research by showing that consumers also respond to information about how sustainability is pursued by firms, specifically, whether a firm acts collaboratively or individually to achieve its goals. Collaboration is therefore not merely an organisational arrangement; when communicated to consumers, it can influence how they evaluate the resulting sustainable offering.

Our research contributes to interdependence theory and sustainable consumption by explaining the underlying psychological mechanism through which collaborative sustainable behaviour affects consumer responses to sustainable offerings. Across different collaborative

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contexts, prior research suggests that collaboration cues can shape consumer evaluations through several inferential pathways, including perceived product quality and credibility (Simonin & Ruth, 1998; Rao et al., 1999), scientific legitimacy (Maier et al., 2024), corporate ability and sincerity (Vock et al., 2013; Schamp et al., 2023), and team cohesiveness, process fluency, and transparency (Le et al., 2025), which can subsequently influence brand attitudes, product attractiveness, willingness to pay, and customer satisfaction. However, little is known about how consumers interpret collaboration in sustainability contexts, where achieving outcomes depend on coordinated action across multiple actors. Consumers associate collaboration with greater sustainability effectiveness because sustainability challenges are inherently interdependent across firms and over time (Majer et al., 2021; Rusbult & Van Lange, 2008). Drawing on interdependence theory, our findings show that consumers use collaboration as a cue from which they infer the sustainability effectiveness of the resulting products or services. This extends the application of interdependence theory by showing that interdependence is relevant not only to how firms coordinate their actions, but also to how consumers interpret and evaluate those actions. While prior conceptual work has theorized the importance of collective action in motivating sustainable consumption (e.g., White et al., 2019), the present research provides empirical evidence of how communicating collaboration among firms translates into stronger consumer preferences and willingness to pay through inferred sustainability effectiveness.

Finally, the finding that the availability of sustainability effectiveness information attenuates the incremental effect of collaboration identifies an important boundary condition for the proposed mechanism. It suggests that collaboration serves as an inferential cue, particularly when other cues about sustainability effectiveness are ambiguous or absent. This finding complements prior collaboration marketing research, which has largely documented positive consumer responses to collaborations but has provided limited insight into when collaboration cues become

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influential. This boundary condition further aligns with and extends prior evidence on the power of effectiveness information in promoting sustainable choices (e.g., Zhu et al., 2012). Together, these findings advance our understanding of how and when collaboration influences consumer responses to sustainable offerings by identifying inferred sustainability effectiveness as the underlying mechanism and the availability of explicit effectiveness information as an important boundary condition.

6.2 Practical Implications

This research offers several actionable insights for managers seeking to design and communicate sustainability strategies. First, the findings demonstrate that communicating collaborative sustainability efforts can have a positive influence on consumer evaluations of sustainable offerings. When firms communicate that they are working with other actors, consumers are more likely to view the resulting products or services as effective in addressing sustainability challenges, which translates into stronger preferences and greater willingness to pay for sustainable offerings. Collaboration thus functions as an inferential cue of sustainability effectiveness, especially when consumers lack concrete knowledge about the actual impact of a firm's sustainability actions. Managers can apply this insight by making substantive collaborative efforts visible and explaining how the participating actors contribute to the intended sustainability outcome. Beyond environmental contexts, similar principles may apply to other societal challenges that require collective effort, such as social inclusion or ethical sourcing, where demonstrating coordination and partnership could potentially enhance perceived effectiveness and impact, although this possibility remains to be tested empirically.

Second, while collaboration-based sustainability communication can strengthen positive consumer responses, managers should avoid relying on symbolic or superficial collaboration

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claims alone. Although the present studies did not examine responses to misleading or superficial partnership claims, overstating collaboration without demonstrating substantive cooperation or measurable sustainability outcomes may create credibility risk. Firms should therefore ensure that communicated partnerships reflect meaningful and coordinated sustainability efforts.

Third, providing transparent information about actual sustainability effectiveness remains essential. Collaboration serves as a valuable signal under uncertainty; however, when explicit effectiveness information is available, the additional influence of collaboration is reduced because consumers can evaluate the offering using more direct evidence. Collaboration should therefore support rather than substitute for information about actual sustainability performance. Where reliable evidence is available, firms should communicate it clearly through comprehensible impact measures, third-party verification, or concrete explanations of how an initiative reduces emissions or produces other sustainability outcomes.

Market researchers and consumer insight professionals can support this decision by assessing what consumers already know about the sustainability impact of an offering and which information they find understandable and relevant. When research reveals uncertainty about effectiveness, communication can foreground the collaborative process and explain how the participating actors contribute to the intended outcome. When consumers understand and trust available impact evidence, communications should give greater importance to those results. Consumer insight can therefore help firms determine whether to emphasise collaboration, effectiveness information, or a combination of the two.

Together, these insights suggest that collaboration can be a valuable communication cue whose influence depends on the information available to consumers. Managers could thus combine substantive collaborative action with transparent communication of results, ensuring that collaboration cues support rather than replace credible evidence of genuine sustainability impact.

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6.3 Limitations

While this research provides valuable insights into the benefits of promoting firms' collaboration in jointly pursuing sustainability goals, it is not without limitations. The studies rely on fictitious, online experimental designs, which, although suitable for internal validity, may not fully capture the complexities of real-world consumer decision-making. Future research could therefore extend these findings by employing more naturalistic methods, such as field studies or analyses of actual market behaviour.

Furthermore, although the present research focuses on inferred sustainability effectiveness as the primary mechanism underlying consumers' responses to collaborative sustainable behaviour, collaboration may also serve as a cue for other inferences, such as the scale of potential impact, credibility, legitimacy, trust, or authenticity. Future research could experimentally disentangle these related mechanisms and examine their relative importance in shaping consumer evaluations of collaborative sustainability initiatives.

Additionally, future studies could investigate different types of collaborations, including partnerships with non-governmental organizations, governmental bodies, or public–private coalitions, to assess whether the nature of the partner alters consumer perceptions of credibility and impact. As the present research focused on private-sector collaborations, examining cross-sector partnerships would provide a more comprehensive understanding of how collaboration type and institutional context shape consumer trust in sustainability initiatives.

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Figures

Figure 1. Research model

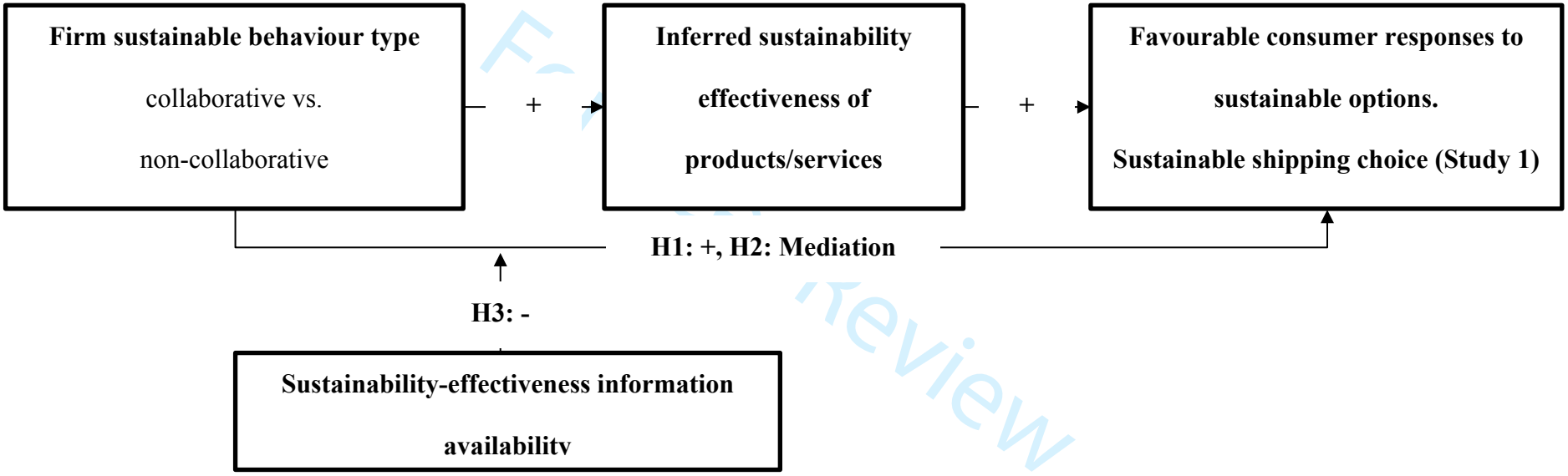


Figure 2. Stimulus Studies 1 and 2

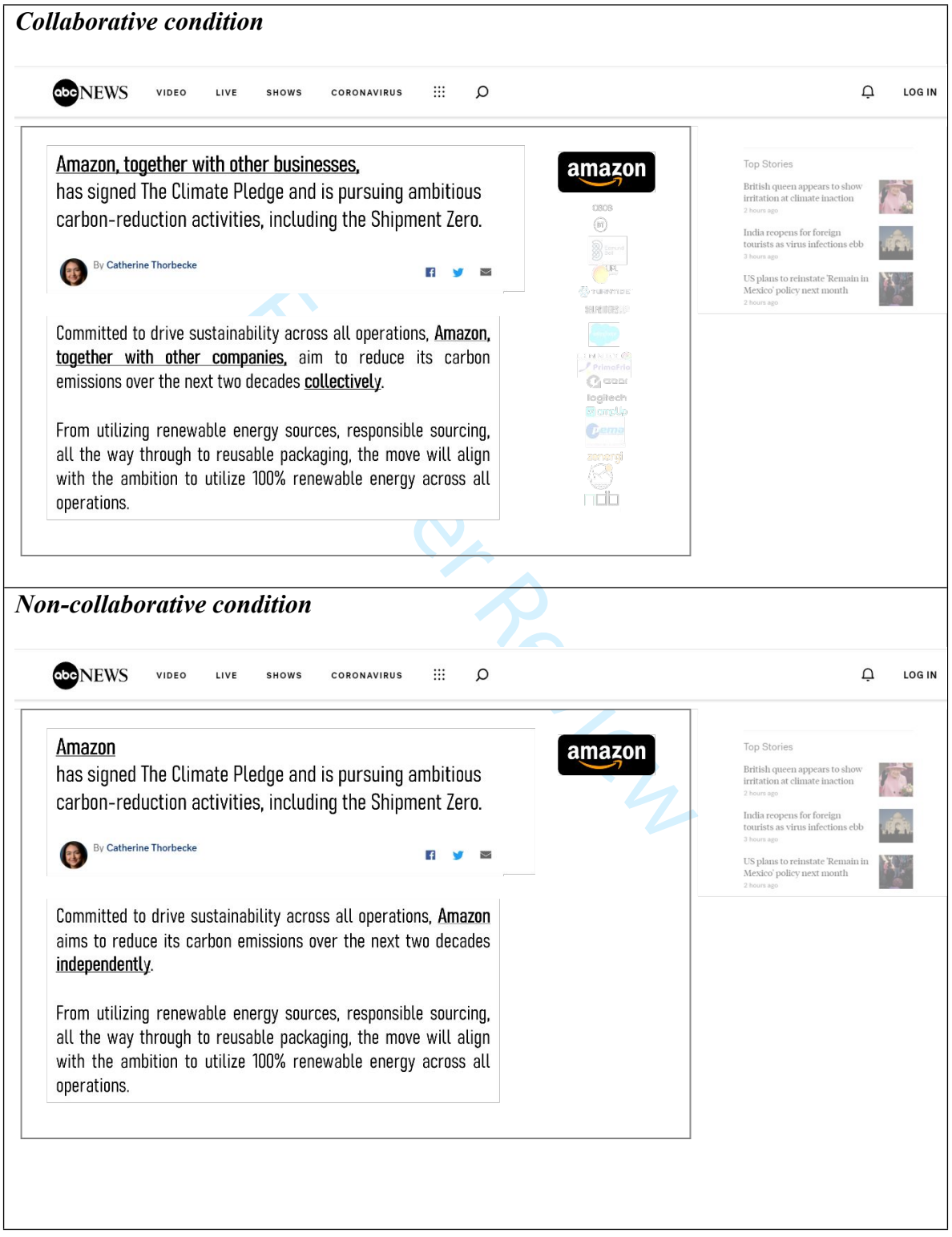
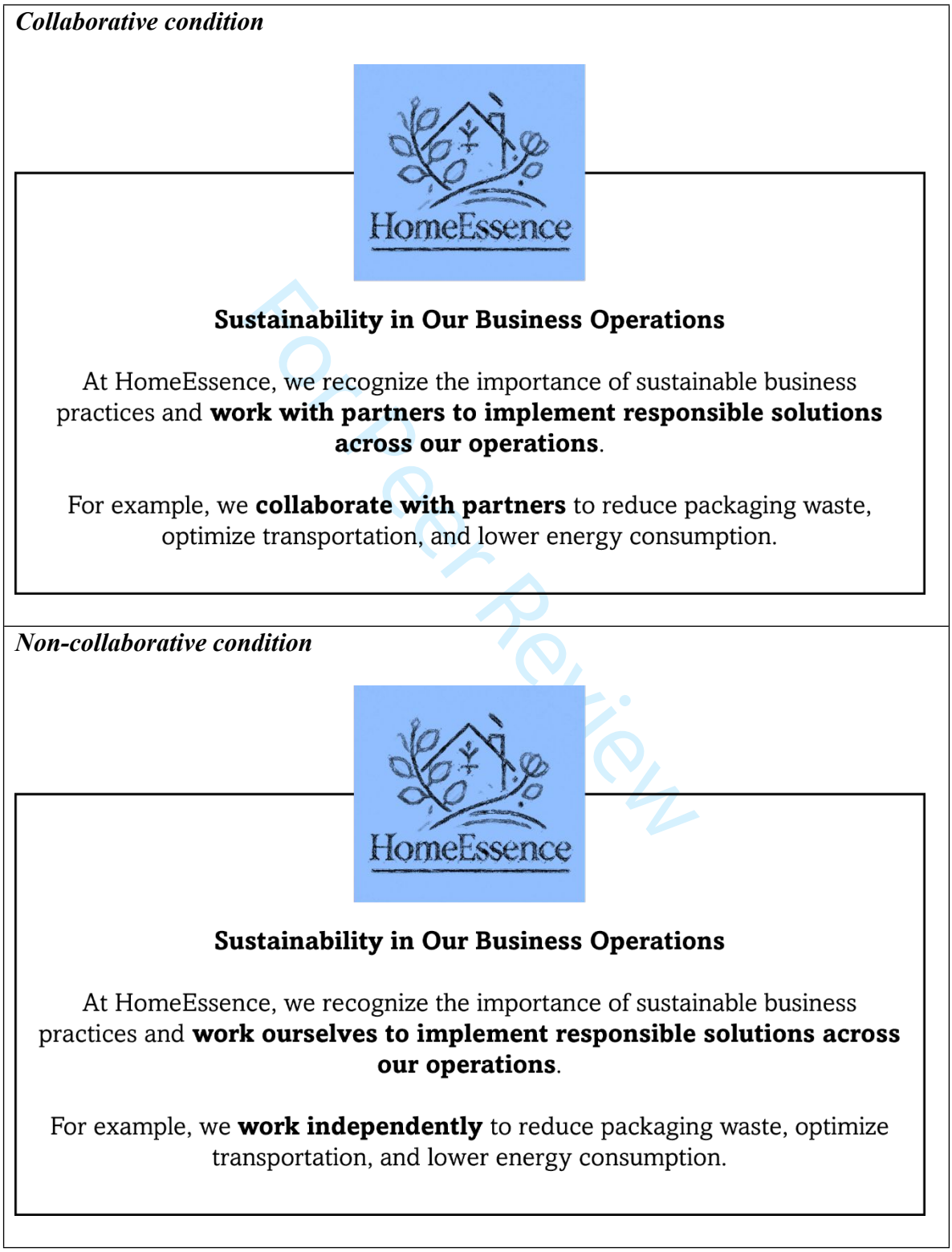


Figure 3. Stimulus Studies 3



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Information about the products' sustainability effectiveness is available

Sustainability and Our Products

While we focus on providing high-quality, practical household essentials, we recognize that every product has an impact on the environment and larger society. Therefore, crafting sustainable products is key for us.

Our products are very effective when it comes to achieving sustainability goals:

Our products contribute to a 30% reduction in plastic waste.
Our products cut CO_2 emissions by 40,000 tons annually.
[…]

Information about the products' sustainability effectiveness is unavailable

Sustainability and Our Products

While we focus on providing high-quality, practical household essentials, we recognize that every product has an impact on the environment and larger society. Therefore, crafting sustainable products is key for us.

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Table

Table 1. Literature review on consumer responses to firms' collaboration.

Collaboration Context	Key References	Main Findings on Consumer Responses
Brand alliances and co-branding	Simonin & Ruth (1998); Rao et al. (1999)	Brand alliances generate association spillover effects, enabling the transfer of evaluations across firms, and function as signals of product quality and credibility that reduce consumer uncertainty.
Collaborative product evaluation and partner fit	Ahn & Sung (2012)	Consumer responses are shaped by perceived fit and similarity between collaborating entities, with higher congruence enhancing evaluations and lower fit weakening perceived compatibility and positivity.
Cause–brand alliances and social partnerships	Lafferty et al. (2004); Becker-Olsen & Hill (2006)	Collaborations between firms and social causes influence trust, credibility, and attitudes, with effects depending on perceived authenticity and congruence, while low fit may trigger scepticism and negative evaluations.
Firm–nonprofit social alliances	Vock et al. (2013); Schamp et al. (2023)	Firm–nonprofit collaborations influence consumer responses through inferences about sincerity, credibility, and organizational motives. Perceived authenticity strengthens consumer support, whereas perceptions of opportunism can undermine the effectiveness of such collaborations.
Firm–university collaborations	Maier et al. (2021)	Company–university collaborations enhance perceived innovativeness and legitimacy through external validation and perceived expertise.
Human–AI service collaboration	Le et al. (2025)	Human–AI collaboration improves customer satisfaction through greater perceptions of fluency, transparency, and coordination in service delivery.
Brand–artist collaborations	Kim et al. (2014)	Collaborations between brands and artists enhance novelty and symbolic value, generating more positive cognitive and affective responses and strengthening brand differentiation.

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