

**UNVEILING CONSUMER BIASES THAT SHAPE THEIR PERCEPTIONS OF  
SUSTAINABILITY**

A THESIS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

FOR THE DOCTORAL PROGRAMME IN MANAGEMENT

INDIAN INSTITUTE OF MANAGEMENT, INDORE



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## Institutional review board (IRB) approval certificate



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### Institutional Review Board Indian Institute of Management Indore

#### Certificate of Approval

Title of the study: Consumer Bias Towards Product's Eco-friendliness over Conservation Methods.

Principal Investigator(s): **Aiswarya Nair**

This is to certify that the above proposal has been reviewed by the Institutional Review Board (IRB) at the Indian Institute of Management Indore (IIM Indore), and it meets the requirements of the IRB. The proposal has been APPROVED on 04/04/2025, with IRB Approval No. **IRB/DPM/04042025/01**.

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The principal investigator(s) is/are responsible for adhering to the conditions of the approval.

The principal investigator(s) is/are required to submit a completion report to the IRB after the conclusion of the study.

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Title of the study: Claiming or forsaking: How individuals divide sunk utility

Principal Investigator(s): **Prof. Sanjeev Tripathi**  
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#### **Certificate of Approval**

Title of the study: Impact of firm effort on consumer intentions to act sustainably.

Principal Investigator(s): **Prof. Sanjeev Tripathi**  
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## **Abstract**

The importance of sustainability is now being recognized by many stakeholders (Sheth et al., 2010), and the increasing amount of attention to this issue is primarily due to several global crises: climate change, environmental degradation, and the depletion of natural resources. As the awareness of these crises grows, the awareness among both consumers and companies also increases, regarding the environmental implications of their choices and initiatives (Nielsen, 2022). However, even well-intentioned consumers do not always behave in accordance with the sustainability values they wish to hold. Their choices are often influenced by subtle factors and emotions, leading them to be inconsistent and, at times, contradictory in their behavior. Therefore, understanding these psychological processes is essential in developing interventions that will help consumers to make more responsible and sustainable consumption behaviors.

This thesis examines how certain self-related cues lead consumers to prioritize maintenance of a positive self-image over any environmental benefit. These cues evoke feelings of anticipated guilt in customers, an emotion felt by individuals prior to acting in a way that could evoke feelings of guilt, which in turn impacts consumers' sustainability decision-making (White et al., 2019). Throughout three essays, this study will examine the decision-making process used by consumers when deciding whether to reuse or replace products based on their level of eco-consciousness and moral emotions, how consumers perceive and evaluate environmental impact information, and what subtle cues companies can use to promote more sustainable consumption behaviors. Overall, the essays provide evidence that consumers' sustainability decisions are influenced by a dynamic interaction of moral emotions, identity issues, perceptual biases, and contextual cues, resulting in

consumers selecting options that are symbolic of their commitment to the environment, rather than substantively contributing to its betterment.

*Essay 1*, titled "*Replace Over Reduce, Reuse and Recycle: The Hidden Preference of Eco-Conscious Consumers*," identifies a paradox in sustainable consumption. Specifically, it is demonstrated that even environmentally conscious consumers may unknowingly act in ways that damage the planet. The Environmental Protection Agency (2012) established a clear hierarchical structure of strategies for conserving the environment, emphasizing that reducing one's consumption and waste should be prioritized first, followed by reusing products and finally, recycling. However, even consumers who exhibit a high level of eco-consciousness do not follow this hierarchical structure. Rather, they demonstrate a preference for early replacement behaviors, choosing to dispose of functional plastic and/or non-biodegradable products in favor of purchasing new items believed to be more environmentally friendly. This is particularly concerning given that reusing plastic products has been shown to reduce ocean waste by approximately 50%, underscoring the environmental cost of unnecessary replacement (World Economic Forum, 2021). This tendency appears to be driven by anticipated guilt and moral incongruence, as consumers, especially eco-conscious consumers, feel conflicted about using products that are seen as non-eco-friendly (Shukla et al., 2024). Ironically, such behaviour can lead to greater waste and environmental impact due to unnecessary production and resource use. In contrast, non-eco-conscious consumers may act more sustainably by continuing to use their products throughout their full lifespan. We demonstrate that this effect is attenuated when consumers receive educational information (Bollinger et al., 2021) that clarifies both the sunk environmental costs of existing products and the actual environmental consequences of reusing rather than replacing them.

In the second essay of this thesis, **Essay 2**, titled “*Consumer Downstream Bias: Shaping Perceived Environmental Friendliness and Consumer Choice*”, investigates how consumers evaluate products that have identical total environmental impacts but differ in the distribution of those impacts across upstream (i.e., pre-consumer, production and distribution-related environmental impact) and downstream (i.e., post-consumer, use- and disposal-related environmental impact) stages. Across a series of studies, the essay reveals a robust downstream-weighting bias: consumers systematically overestimate the environmental consequences that occur during the downstream phase, perceiving them as more severe than the impact that occurs earlier in the supply chain. This behavior continues to occur when clear sustainability metrics show that overall environmental impact is still the same. The essay states that "downstream" harm seems more psychologically and morally close to the consumer because it happens "in the consumer's hands." When consumers think about causing environmental damage through direct actions related to using or disposing of a product, they report increased anticipated guilt (Steenhaut & Kenhove, 2006). This anticipated guilt, in turn, affects consumers' perceptions of environmental-friendliness, so they tend to choose products with lower "downstream" impacts, even though their choices are not optimal for the environment. The impact of positive and negative framing (Tversky & Kahneman, 1986) of the environmental information is studied. Additionally, the degree of individualism exhibited by the consumer (Triandis, 1995; Hofstede, 2001) is also studied: those with stronger individualistic orientations place more emphasis on "downstream" impact.

The final essay of the thesis, **Essay 3**, titled “*Impact of Firm Effort on Consumer Intention to Act Sustainably*,” examines how perceptions of the amount of effort firms put into creating their offerings affect consumers’ intentions to behave in a sustainable manner and how anticipated guilt plays a major role in shaping those reactions. The essay demonstrates that across both product and service contexts, when consumers perceive a firm has devoted considerable

time, care, or labor to developing or delivering a particular offering, consumers do not only feel a higher level of moral obligation (Morales, 2005; Kruger et al., 2003; Mohr & Bitner, 1995), but they also anticipate feeling guilty should they disregard the effort exerted by the firm. This response is based upon the social norms of reciprocity (Gouldner, 1960): If another person's effort benefits the consumer, the thought of failing to be responsible and wasting resources or carelessly treating the product increases the anticipated feelings of guilt (Steenhaut & Kenhove, 2006). Therefore, consumers feel obligated to reciprocate by acting responsibly and reducing unnecessary waste. The essay also identified other important boundary conditions. For example, when consumers believe they have reciprocated for the efforts of the firm, such as by paying a premium for the effort the firm expended, then they feel less of an obligation to reciprocate. This can lead to a decrease in moral obligations and subsequently a decrease in the desire to conserve resources (Khan & Dhar, 2006). Regardless of whether consumers believe the firm has expended significant amounts of effort into producing the offering, consumers who hold strong intrinsic environmental values and are eco-conscious (Haws et al., 2014) consistently exhibit environmentally sustainable behavior, whereas those who are non-eco-conscious depend on these external cues to behave sustainably.

**Keywords:** Sustainability, Anticipated Guilt, Conservation Hierarchy, Consumer Behaviour, Firm Effort, Moral Licensing, Reciprocity, Sunk Cost, Environmental Framing, Sustainable Consumption.

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