

Research Article

A Diffusion-Discontinuance Sustainability Framework Integrating Economic Orientations and Theoretical Positions

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ABSTRACT

This article introduces the Diffusion-Discontinuance Sustainability Framework, a model that integrates innovation dynamics with economic orientations and theoretical positions to guide sustainable innovation strategies. While diffusion has been extensively studied in marketing, discontinuance, defined here as the deliberate phase-out of harmful products, services, and infrastructures whose life-cycle impacts materially contribute to ecological boundary transgression or undermine social well-being and equity, remains conceptually and managerially underdeveloped. The Diffusion-Discontinuance Sustainability Framework addresses this gap by linking these dynamics across sustainable growth, degrowth, ecological economics, and environmental economics. The framework organizes sustainability approaches along two axes: economic orientation (growth vs. degrowth) and theoretical focus (ecological vs. environmental economics), yielding four quadrants. Each reflects a distinct logic: efficiency-oriented innovation and market-mediated phase-outs in Sustainable Growth + Environmental Economics; boundary-compatible technological transitions in Sustainable Growth + Ecological Economics; reduction-oriented transitions under market-based instruments in Degrowth + Environmental Economics; and sufficiency-oriented innovation with planned discontinuance in Degrowth + Ecological Economics. By connecting innovation dynamics to economic reasoning, the Diffusion-Discontinuance Sustainability Framework offers a strategic lens for alignment with planetary boundaries and social equity. It provides a conceptual structure for research on sustainable innovation strategies, capabilities for managing discontinuance, and the implications of diffusion and discontinuance for sustainable marketing theory.

KEYWORDS

Diffusion of Innovations, Sustainable Marketing Strategy, Degrowth, Discontinuance, Ecological Economics, Environmental Economics, Sustainable Growth

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1. Introduction

Marketing is not neutral. It reflects dominant logics and can either reinforce or challenge unsustainable business orientations (Papadas et al., 2017; Papadas et al., 2019). Product life cycle and innovation diffusion decisions are key elements of strategic orientation (Peres et al., 2010). Over time, diffusion theory has consistently attracted scholarly attention across disciplines such as marketing, management, and economics among others. Notably, analytical models have been developed to describe and forecast innovation adoption, most prominently the Bass diffusion model (Bass, 1969) and the diffusion of innovations theory by Rogers (2003).

Yet, in the face of escalating ecological and social challenges, its strategic application demands critical reevaluation to better align marketing with stakeholder orientation and societal well-being (Ferrell et al., 2010). In particular, despite growing interest, sustainability orientation remains conceptually fragmented and lacks a broadly accepted framework for examining its wider implications across economic systems, environmental outcomes, and social structures (Khizar et al., 2022). Furthermore, limited attention has been given to how sustainability orientation interacts with other strategic orientations, such as marketing orientation or innovation orientation (Khizar et al., 2021).

Diffusion theory has been applied across a wide range of sectors and adopted by firms such as IBM, Kodak, and AT&T to support innovation strategies (Guidolin, 2023). In economics, several subfields have drawn on diffusion theory to examine how social structures shape the adoption of innovations. In particular, the role of networks has been recognized as critical in determining the dynamics of diffusion, highlighting how the structure and quality of interactions within a system influence the spread of innovations across communities and markets (Jackson, 2008).

Recent research shows that our understanding of innovation diffusion continues to evolve, contributing to more strategic marketing decisions. For example, studies have explored how various factors influence diffusion in real-world contexts. Agent-based models simulate how innovations spread through social interactions in complex systems (Rand & Stummer, 2021), while stochastic models examine how uncertainty and randomness affect the adoption process, particularly in market-driven environments (S. Singh, 2024).

At the same time, the growing influence of digital platforms and online reviews has become central to understand-

ing consumer adoption behavior, as user-generated content and social influence not only shape decision-making but also affect brand and corporate image in consumers' minds, as illustrated by companies such as Apple, Google, Microsoft, and Dell (Sun et al., 2023). This growing complexity in diffusion research underscores the need to complement adoption-focused strategies with mechanisms for responsible withdrawal, understood as the planned phase-out of harmful products, services, and infrastructures in coordination with viable alternatives and measures to mitigate burdens on affected workers, consumers, and communities (Kivimaa & Kern, 2016; McCauley & Heffron, 2018). In this article, products, services, and infrastructures are considered harmful when their life-cycle impacts materially contribute to ecological boundary transgression or undermine social well-being and equity (Raworth, 2018; Steffen et al., 2015).

In the face of the global climate crisis and growing recognition of planetary boundaries, sustainability has become a core strategic priority for many organizations in the fields of marketing and innovation (Griffith, 2021; Verma & Diwan, 2025). As a result, firms and researchers are increasingly recognizing that advancing sustainability does not only require promoting the adoption of environmentally responsible products, but also critically reassessing and phasing out those products, practices, and technologies that generate negative environmental or social impacts. That is, a dual approach becomes both urgent and essential, one that combines the diffusion of sustainable innovations with the concept of discontinuance (Lehmann & Parker, 2017).

Discontinuance, or disadoption, focuses on how and when consumers and organizations abandon unsustainable solutions. In this sense, the diffusion-discontinuance duality offers a useful lens for sustainable marketing theory that aligns closely with the principles of the circular economy and with emerging perspectives of sustainable economic development (Androniceanu et al., 2021; Corvellec et al., 2021; Khatriwal & First, 2012). With further research and theoretical development, it holds the potential to become a critical component of sustainability strategies, which could evolve into a strategic tool to support a more comprehensive and ethically grounded approach to sustainability. In doing so, it could enable organizations, through a structured framework, to withdraw from harmful practices in a way that is both socially and ecologically responsible (Alem et al., 2014; Palacios-Fenech & Vrain, 2024). Nevertheless, for these dynamics to inform coherent sustainability strategies, they must be embedded within economically grounded

and context-sensitive models that translate principles into clear and actionable strategies supported by aligned public policies and business decision-making frameworks.

To address this need, this research presents a conceptual framework that integrates the processes of diffusion and discontinuance of innovations to advance sustainable marketing theory, drawing on degrowth, sustainable growth, ecological economics, and environmental economics (Engler et al., 2024; Polewsky et al., 2024). By examining the systematic interaction between diffusion and discontinuance, the framework provides a comparative lens for evaluating sustainable marketing strategies across different economic orientations and theoretical positions, while also offering a holistic perspective on both adopting sustainable innovations and phasing out harmful practices to enable sustainable transitions (A. Singh et al., 2024).

The four concepts - degrowth, sustainable growth, ecological economics, and environmental economics - can be structured along two axes to highlight their distinctions. The Economic Orientation axis spans from *Degrowth*, which emphasizes reducing consumption to respect ecological limits, to *Sustainable Growth*, which broadly focuses on innovation within planetary boundaries (van den Bergh, 2010). The Theoretical Focus axis ranges from *Ecological Economics*, a holistic view embedding the economy within the biosphere, to *Environmental Economics*, which addresses externalities by designing market-based mechanisms such as taxes, subsidies, or cap-and-trade systems to internalize the environmental costs or benefits of economic activities.

Aligning innovation processes with logics such as degrowth, sustainable growth, ecological economics, and environmental economics reinforces Elkington's (2018) call to transcend traditional frameworks like the Triple Bottom Line and pursue deeper systemic transformation. In the absence of such alignment, there is a risk that well-intentioned innovations, disconnected from coherent economic foundations, may inadvertently perpetuate unsustainable dynamics, echoing the logic of the "tragedy of the commons" (Hardin, 1968).

Inspired by Ostrom's (1990) insight that well-informed institutions can effectively govern shared resources, this study proposes a conceptual framework that integrates diffusion and discontinuance dynamics with key economic orientations and theories. This integration aims to overcome structural barriers to sustainability transitions by fostering clearer, more strategic conversations grounded in a systemic, context-sensitive approach and coherent economic principles (Venkatachalam, 2025). To address this

gap, the paper introduces the Diffusion-Discontinuance Sustainability Framework (DDSF), an integrative conceptual contribution that unifies diffusion and discontinuance within a single analytical lens.

The article contributes to sustainable marketing theory by offering a model that links innovation adoption and strategic discontinuance to foundational economic logics, while grounding these dynamics in core marketing theories. The DDSF engages directly with stakeholder theory (Ferrell et al., 2010), as diffusion and discontinuance decisions shape relationships with consumers, regulators, communities, and other stakeholders. It also draws on legitimacy theory (Handelman & Arnold, 1999), treating strategic discontinuance as a mechanism through which firms maintain institutional credibility and social license to operate. Furthermore, insights from sustainability-oriented consumer behavior (Sheth et al., 2011) help explain how changing value orientations shape consumers' responses to both new sustainable offerings and the withdrawal of harmful ones. Together, these perspectives situate the DDSF within sustainable marketing by clarifying how firms navigate adoption and discontinuance in ways aligned with broader economic orientations and stakeholder expectations.

The remainder of the article proceeds as follows. Section 2 reviews the theoretical foundations of innovation diffusion, discontinuance, and sustainability-oriented economic perspectives. Section 3 develops the DDSF. Section 4 examines its theoretical and practical implications and illustrates its use through four illustrative real-world cases. Section 5 concludes.

2. Theoretical Framework

This theoretical framework aims to situate innovation diffusion and discontinuance processes within economic orientations and theories that can guide sustainable marketing strategies in times of systemic transition. It unfolds in two parts. First, it revisits and expands on recent advances in the understanding of diffusion and discontinuance dynamics. Second, it introduces four key economic configurations - ecological economics, environmental economics, sustainable growth, and degrowth - each offering a distinct point of view on how innovation should be assessed and managed in light of environmental and social constraints.

2.1. Diffusion and discontinuance of innovations

The theory of innovation diffusion has served for decades as a foundational framework for understanding how ideas,

products, and technologies spread throughout society. Through its characterization of adoption profiles, innovators, early adopters, early majority, late majority, and laggards, this theory has guided marketing strategies, technological innovation processes, and organizational change (Rogers, 2003). However, Rogers himself pointed to an inherent bias within this approach: the tendency to assume that all innovations are positive, desirable, and should be adopted universally. This pro-innovation bias has limited the development of frameworks that examine, with equal depth, the reverse process, namely the abandonment, rejection, or replacement of previously accepted innovations (Libai et al., 2009; Prins et al., 2009; Singhal et al., 2025).

This reverse process is generally described as disadoption or discontinuance (Altrichter & Benoit, 2025; Palacios-Fenech & Longford, 2014). The notion of *discontinuance*, understood as the voluntary or involuntary decision to abandon an innovation, introduces a critical dimension that completes the product and technology life cycle (Chandrasekaran et al., 2020). In this direction, more recent work has proposed the concept of *consumer discontinuousness* (or disadoption) to describe consumers' propensity to abandon products, even when those products have become fully integrated into daily life. This perspective also allows for the segmentation of consumers based on their speed and disposition toward abandonment, enriching sustainable marketing strategies with a more dynamic and context-sensitive lens (Lehmann & Parker, 2017; Palacios-Fenech & Cervera-Itarte, 2025).

For sustainable marketing, this dual perspective is particularly relevant for portfolio, communication, and transition strategies (Mahajan & Peterson, 1978). Understanding not only how to encourage the adoption of responsible solutions but also how to promote the discontinuation of environmentally or socially harmful products is essential to accelerating necessary transitions (Altrichter & Benoit, 2025; Chandrasekaran et al., 2020). Instead of focusing solely on innovation and its promotion, sustainable marketing strategies must also incorporate the active management of obsolescence, detachment, and substitution (Palacios-Fenech & Tellis, 2016). For instance, the success of an eco-friendly product depends not only on its value proposition but also on the market's ability to let go of its more polluting alternative.

Integrating adoption and discontinuance processes offers a more coherent transition strategy by aligning the uptake of sustainable innovations with the responsible withdrawal of harmful offerings (Vrain et al., 2022). This dual perspective

enables more effective campaigns, supports better planning of product life cycles, and enhances resource allocation across sectors such as energy, mobility, and consumer goods, where innovation must go hand in hand with the managed phase-out of obsolete systems (Palacios-Fenech & Vrain, 2024).

Nonetheless, understanding these processes is not enough unless they are situated within an economic framework compatible with the planet's biophysical limits and today's ecological challenges (Kennedy, 2022; Li et al., 2021; Sovacool et al., 2020). For this reason, it is essential to explore how diffusion and discontinuance models can be aligned with economic logics that support structural transformation toward sustainability-oriented strategies (Adams et al., 2015; Claro & Esteves, 2021). In this context, four approaches become particularly relevant: ecological economics, environmental economics, sustainable growth, and degrowth. Each offers a distinct vision of how innovation should be managed in relation to natural resources, social well-being, and systems of production and consumption (Kallis et al., 2012; Venkatachalam, 2025). The following sections develop the principles and tensions that define these four economic perspectives.

2.2. Degrowth vs. Sustainable Growth

The debate between degrowth and sustainable growth lies at the heart of contemporary sustainability discourse (Kallis et al., 2018; Sandberg et al., 2019). While both economic orientations aim to align human development with ecological integrity, they differ fundamentally in their assumptions about economic expansion, their interpretations of environmental limits, and the roles they assign to businesses and consumers within the sustainability transition (Kallis et al., 2012; Lopez et al., 2022; Skare & Porada-Rochoń, 2022).

Proponents of sustainable growth contend that economic development can proceed in harmony with environmental protection, provided it is steered by innovation, resource efficiency, and smart policy instruments. This orientation builds upon theoretical frameworks such as ecological modernization theory (Mol & Spaargaren, 2000), a sociological approach to environmentally driven societal transformation. It emphasizes the integration of ecological rationality into institutional design, the advancement of science and technology for cleaner production and consumption, and the active role of state, market, and civil society in environmental reform. While sustainable growth shares with ecological economics a concern for environmental limits, in its mainstream formulations, it generally remains grounded

in the logic of continued economic expansion, setting it apart from the more systemic, scale-sensitive perspective of ecological economics (Venkatachalam, 2007). Nonetheless, there are formulations where both economic orientations can be partially reconciled, particularly when growth is re-defined in qualitative terms, such as well-being, education, or low-entropy services, and is pursued strictly within ecological boundaries. In such cases, sustainable growth aligns with certain principles of ecological economics, emphasizing resilience, sufficiency, and the long-term preservation of natural capital (Raworth, 2018; van den Bergh, 2011).

However, in practice, it is often operationalized within the framework of environmental economics, through instruments such as carbon pricing, emissions trading schemes, and environmental taxation (Blanchard et al., 2023). These market-based mechanisms aim to internalize externalities while preserving economic momentum. However, if not embedded in broader systemic change, these tools risk reinforcing narrow or overly simplistic technology-centered interpretations of sustainability transitions. For example, some interpretations of the Environmental Kuznets Curve (Grossman & Krueger, 1995) reflect this optimism by suggesting that environmental degradation initially rises during early stages of economic growth but eventually declines as societies become wealthier and better equipped to invest in cleaner technologies and regulatory frameworks. Yet, this discourse is increasingly challenged by degrowth scholars, particularly regarding biophysical limits.

Degrowth scholars argue that indefinite global growth is fundamentally incompatible with the finite capacity of Earth's ecosystems (Kallis, 2018; Latouche, 2009). Evidence of absolute decoupling between economic activity and environmental impact remains limited at the global scale (Hickel & Kallis, 2019). The planetary boundaries framework adds a biophysical perspective to this debate, identifying critical thresholds, such as those related to climate stability, biodiversity, and nitrogen cycles, whose transgression may increase the risk of abrupt or irreversible ecological change (Rockström et al., 2009; Steffen et al., 2015). For example, whereas the Kuznets Curve suggests that growth may eventually reduce certain environmental pressures, the planetary boundaries concept warns that growth beyond ecological limits can precipitate systemic ecological risks, regardless of technological advancement.

Within a sustainable growth orientation, marketing serves as a vehicle to accelerate the diffusion of eco-innovations, encouraging the adoption of green products, services, and behaviors (Karakaya et al., 2014). Firms are urged to scale

up low-carbon technologies, circular business models, and sustainable consumption patterns. However, such efforts may remain insufficient if they fail to address the strategic discontinuance of harmful products, practices, and infrastructures (Vrain et al., 2022). Without planned phase-outs of fossil fuels, single-use plastics, or overproduction logics, "green" innovations risk functioning as incremental adaptations rather than transformative shifts, thereby enabling greenwashing (Forlano et al., 2025).

A key characteristic of degrowth-aligned strategies is their focus on strategic discontinuance, understood as a central mechanism of change rather than a residual outcome of product adoption or market failure (Benton, 2022; Roux, 2025; Scaraboto et al., 2025). Companies operating under this logic may intentionally reduce product offerings, design for longevity and repair, or actively promote sufficiency and demarketing, moving away from driving ever-expanding consumption (Lawrence & Mekoth, 2023). Within this marketing orientation, resilience, equity, and ecological regeneration become relevant markers of value (Sen et al., 2024).

Crucially, inequality sits at the core of this debate (Schneider et al., 2010). Rammelt et al. (2022) show that satisfying the basic needs of the world's poorest third would result in a climate impact comparable to that of the wealthiest 1%, who account for a disproportionate share of global environmental impacts. Similarly, growth without redistribution can exacerbate intra-national inequality, even as global poverty may decline (Chancel & Piketty, 2021; Piketty, 2013; Sala-i-Martin, 2006). Together, these findings highlight that without redistribution, growth may struggle to deliver equitable and environmentally sustainable outcomes. For business and marketing, this presents a strategic and ethical challenge: promoting green innovation while neglecting elite consumption patterns risks reproducing the very inequalities and impacts such innovation seeks to mitigate.

The question is not whether to grow or shrink, but how to strategically redefine prosperity within planetary boundaries. In high-income countries, degrowth strategies may be necessary in selected sectors to safeguard ecological thresholds, while in low- and middle-income countries, economic growth may remain essential to securing basic rights, yet must proceed within a globally equitable and environmentally safe operating space (Raworth, 2018). In this context, sustainable marketing increasingly extends the promotion of innovation to incorporate the strategic discontinuance of unsustainable products, practices, and narratives (Alden, 2023; Kemper & Ballantine, 2023). Its role

Table I | Comparative Diffusion and Discontinuance Strategies Under Growth-Oriented Versus Sufficiency-Oriented Approaches

Orientation	Diffusion	Discontinuance
Sustainable Growth	Scaling up eco-innovations through technology, efficiency, and market incentives. Examples: electric vehicles, smart cities, circular supply chains.	Gradual market-driven phase-out of unsustainable practices via carbon pricing, environmental taxes, or regulation of outdated technologies.
Degrowth	Promotion of sufficiency-based, low-impact innovations (e.g., repairable products, community renewable energy, local exchange networks).	Intentional reduction of consumption and dismantling of harmful systems. Emphasis on decommodification, sufficiency, and strategically planned phase-outs.

is not only to accelerate adoption of responsible solutions, but to guide businesses and consumers through transitions that align market behavior with ecological limits and social justice considerations.

Table I presents a comparative overview of their dominant approaches to diffusion and discontinuance. While sustainable growth tends to emphasize technological scaling and market-driven transitions, degrowth promotes sufficiency-oriented innovation and strategically planned phase-outs. This typology illustrates how economic orientation influences the strategic balance between adoption and discontinuance in sustainability transitions.

Yet economic orientation alone does not fully determine innovation pathways. Equally critical is the underlying vision of how the economy relates to the biosphere. This leads us to a second axis of distinction, which contrasts Ecological Economics and Environmental Economics. These two orientations differ fundamentally in their ontological assumptions and operational logics for sustainability.

2.3. Ecological Economics vs. Environmental Economics

A fundamental distinction within sustainability-oriented economic paradigms lies in the contrast between Ecological Economics (ECE) and Environmental Economics (ENE) (Venkatachalam, 2007; Venkatachalam, 2025). Unlike degrowth and sustainable growth, which are best understood as economic orientations rather than full paradigms, ECE and ENE rest on distinct ontological and epistemological foundations. While ENE assumes that ecological problems can be addressed by integrating environmental variables into economic systems, often through pricing mechanisms and market-based instruments, ECE inverts this logic. It conceives the economy as a subsystem fully embedded within the biosphere, constrained by ecological boundaries and governed by biophysical laws such as thermodynamics and entropy (Daly, 1973; Georgescu-Roegen, 1971; Passet,

1979). These contrasting worldviews reflect fundamentally different assumptions about what the economy *is* (ontology) and what counts as valid knowledge for addressing sustainability (epistemology) (See Figure 1).

This core distinction has significant implications for how each paradigm approaches the dual processes of diffusion and discontinuance (Palacios-Fenech & Tellis, 2016). Strategically, ENE typically focuses on incentivizing the diffusion of eco-efficient technologies (e.g., electric vehicles, carbon capture, or energy-saving devices) using instruments such as subsidies, environmental taxes, and emissions trading (Blanchard et al., 2023; van den Bergh, 2010). Discontinuance in this framework is generally seen as a market-driven outcome: unsustainable technologies are phased out when they become unprofitable or heavily taxed (Barbier et al., 1991). However, this approach may be constrained by the inertia embedded in infrastructures, consumer behavior, and institutional settings, thus slowing or weakening the pace and equity of ecological transitions (Røpke, 2015).

ECE, by contrast, promotes the diffusion of regenerative, systemic practices, such as agroecological farming, repairable products, cooperative networks, and circular models grounded in ecological design (Geissdoerfer et al., 2017; Korhonen et al., 2018; Kotabe, 2023). In this perspective, discontinuance is viewed as a deliberate and normative process, rather than a passive market adjustment. The strategic removal of environmentally and socially harmful practices is treated as a key pillar of sustainability-oriented transformation (Duchin & Lange, 1994), including the dismantling of infrastructures, reduction of throughput, and contraction of ecologically damaging sectors (Ryberg et al., 2020).

ENE operates within a largely Cartesian and linear tradition, based on atomistic analysis and the principle of marginal utility (Thampapillai & Ruth, 2024). ECE adopts a complex systems view (van den Bergh, 2001), conceptualizing sustainability as an emergent outcome of interdependencies

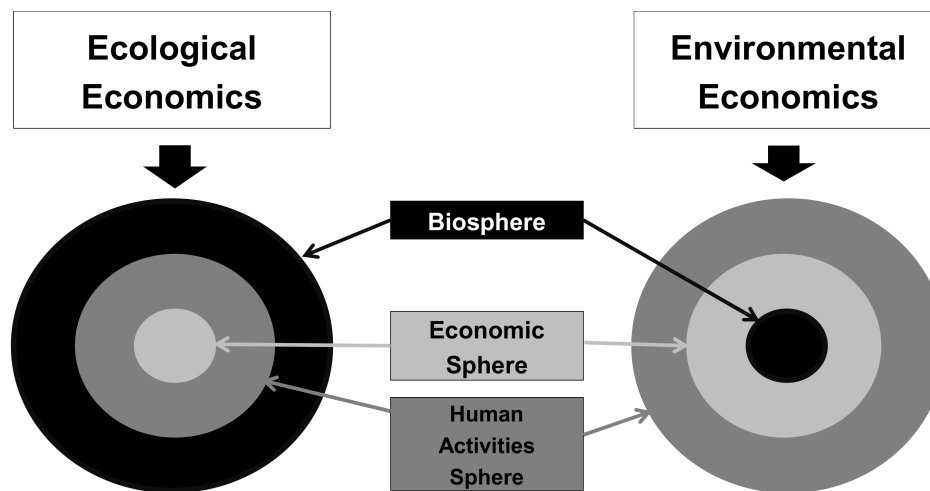


Figure 1 | Theoretical Focus: Predominant Sphere (Economic/biosphere) Implications for Entropy Variation.

Note: The figure shows how the predominant sphere (economic vs. biosphere) differs across theoretical perspectives and its implications for entropy variation.

Source: Authors' own elaboration.

across ecological, social, and economic domains, with an emphasis on long-term resilience, distributive justice, and ecological thresholds. Although both paradigms may share some analytical tools and overlapping contributors, they embody fundamentally distinct ontological and epistemological foundations. ENE remains primarily rooted in neoclassical assumptions, seeking to internalize environmental costs via market mechanisms (Ma & Stern, 2006). ECE, in contrast, reframes the economy as biophysically constrained, advocating for strong sustainability and systemic interdependence (Costanza et al., 2004).

Entropy, rarely central in ENE, is a foundational concept in ECE (Georgescu-Roegen, 1971). From this perspective, economic processes are inherently entropic, transforming high-quality energy into degraded waste, making restorative, low-throughput, and more circular strategies essential for aligning economic activity with planetary functioning. In contrast, ENE tends to prioritize economic efficiency, often with less emphasis on biophysical coherence, proposing incremental change within production-consumption systems that remain largely linear.

These contrasting assumptions shape distinct approaches to managing innovation. Table 2 summarizes the diffusion and discontinuance logics across both paradigms. While ENE tends to rely on market signals to drive adoption and phase-outs, ECE calls for proactive, regenerative innovation and the strategic dismantling of harmful infrastructures. This comparison reveals how foundational views on the

economy–nature relationship shape the strategic horizons of sustainability transitions and the transformative scope of sustainable marketing (Bendle, 2023; Griffith, 2021; Kemper & Ballantine, 2023).

Taken together, these dimensions illuminate the epistemological, strategic, and operational contrasts that underpin contemporary debates on sustainable innovation. These analytical foundations enable the construction of a conceptual model that systematically integrates diffusion and discontinuance across economic orientations and theoretical positions. This integrative approach is developed in the following section, which presents the Diffusion–Discontinuance Sustainability Framework (DDSF).

3. Conceptual Foundations of the Diffusion-Discontinuance Sustainability Framework for Economic Orientations and Theoretical Positions

This section introduces the DDSF, developed through a theory-building and conceptual synthesis process (Jabareen, 2009). Following MacInnis's (2011) criteria for conceptual contributions, the DDSF identifies a previously unarticulated link between diffusion and discontinuance, differentiates sustainability orientations via two analytical axes (economic orientation and theoretical focus), and integrates insights from innovation studies and sustainability economics into a coherent lens. This provides a theory-generative contribution to sustainable marketing theory.

The DDSF extends the diffusion of innovations tradition

Table 2 | Comparative Strategic Approaches to Diffusion and Discontinuance Across Two Economic Paradigms with Contrasting Views on Sustainability

Paradigm	Diffusion	Discontinuance
Environmental Economics	Promotion of eco-efficient technologies through economic incentives such as subsidies, taxes, or emissions trading. Examples include electric vehicles, carbon capture systems, and efficient appliances.	Market-driven phase-out of unsustainable products and practices as they become unprofitable or overregulated (e.g., fossil fuels via carbon taxes).
Ecological Economics	Diffusion of regenerative, systemic innovations rooted in circularity and resilience (e.g., agroecology, repairable goods, local production systems).	Strategic and equitable dismantling of harmful infrastructures and consumption patterns based on ecological thresholds and thermodynamic constraints.

(Rogers, 2003) by incorporating discontinuance, an increasingly relevant but underexplored process in sustainability transitions (Palacios-Fenech & Vrain, 2024). It then maps adoption and discontinuance across four sustainability-oriented economic perspectives: degrowth, sustainable growth, ecological economics, and environmental economics (Engler et al., 2024; Polewsky et al., 2024), clarifying how different economic logics shape innovation pathways.

Following the logic of integrative thinking, the DDSF reveals how innovation dynamics interact with the economic orientations and theoretical positions that structure sustainability transitions. This synthesis results in a framework that is both theoretically robust and strategically actionable, responding to the growing need for systemic, multidimensional models that can overcome siloed approaches to sustainable innovation (Elkington, 2018; A. Singh et al., 2024). By embedding both diffusion and discontinuance within broader economic worldviews, the framework offers a more holistic perspective through which businesses and policymakers can align innovation strategies with diverse sustainability priorities and ecological considerations (Griffith, 2021; van den Bergh, 2010).

3.1. Analytical Structure of the DDSF

To structure these relationships, the DDSF organizes its logic around two intersecting analytical axes, each capturing a fundamental dimension of sustainability-oriented thought:

Economic Orientation (horizontal axis): This axis spans from Degrowth to Sustainable Growth, reflecting contrasting assumptions about the role of economic expansion. While degrowth emphasizes planned reductions in consumption and production to stay within ecological limits, sustainable growth promotes technological innovation and market instruments to achieve relative decoupling from environmental degradation (Polewsky et al., 2024; van den Bergh,

2010).

Theoretical Focus (vertical axis): This axis contrasts Ecological Economics, which embeds the economy within the biosphere and prioritizes biophysical limits and systemic interdependence, with Environmental Economics, which assumes that market-based mechanisms (e.g., carbon pricing, cap-and-trade) can internalize environmental externalities, thereby prioritizing correction within existing economic structures over structural transformation (Engler et al., 2024; A. Singh et al., 2024).

By crossing these axes, the framework generates a 2×2 matrix that distinguishes four strategic quadrants. Each quadrant combines a specific economic orientation with a theoretical logic, producing a typology of approaches to diffusion (the promotion of sustainable innovations) and discontinuance (the phase-out of harmful practices). This matrix supports the identification of innovation strategies aligned with diverse visions of sustainability and enables a more nuanced understanding of how economic worldviews shape both the direction and pace of transition.

3.2. Transition Mechanisms and Boundary Conditions

The shift between DDSF positions occurs when changes in stakeholder pressure, legitimacy risk, regulatory expectations, consumer value orientations, or cost structures redefine the attractiveness of maintaining or discontinuing practices, technologies, or behaviors (Ferrell et al., 2010; Handelman & Arnold, 1999; Suddaby et al., 2017). These dynamics work through institutional mechanisms, such as legitimacy management, stakeholder expectations, value-based decisions, and resource reallocation, that explain how economic logics guide firms’ movement within the DDSF.

These transition mechanisms operate under several structural and institutional boundary conditions that constrain or enable movement across DDSF configurations. Technologi-

cal and infrastructural lock-ins associated with established systems and sunk investments can limit firms' ability to discontinue unsustainable products, services, or business models, even when stakeholder pressure or legitimacy risks increase (Chandrasekaran et al., 2020; Geels, 2011; Voulvoulis et al., 2022). Regulatory environments also function as boundary conditions when policy frameworks delay, weaken, or strategically postpone discontinuance incentives, allowing incumbent offerings to persist despite the availability of more sustainable alternatives (Blanchard et al., 2023). In such contexts, discontinuance tends to unfold as a gradual and contested process rather than a discrete managerial decision, leading to prolonged coexistence between incumbent and emerging market solutions (Altrichter & Benoit, 2025; Sardo & Pfothenauer, 2025; Vrain et al., 2022). Conversely, stronger regulatory signals, shifts in stakeholder pressures, or changes in consumer value orientations can accelerate repositioning across DDSF configurations by altering the perceived legitimacy and market viability of diffusion and discontinuance strategies.

One possible transition scenario may emerge when a firm situated in a Sustainable Growth + Environmental Economics position shifts toward a Degrowth + Ecological Economics logic, because rising stakeholder pressure and legitimacy concerns reveal that incremental eco-efficiency is no longer sufficient. In such cases, the firm may discontinue a resource-intensive product line and redirect resources toward sufficiency-based value propositions, potentially strengthening its legitimacy and aligning its market strategy with deeper ecological commitments. Across DDSF configurations, key boundary conditions recur, particularly technological and infrastructural lock-ins, regulatory timing and strength, and misalignment between stakeholder value orientations and prevailing market incentives. Together, these conditions shape whether diffusion and discontinuance unfold as coordinated transitions, delayed coexistence, or contested phase-outs.

3.3. Quadrant Logic and Propositions

Figure 2 provides a visual synthesis of the DDSF matrix, illustrating how the two analytical axes intersect to generate four distinct strategic quadrants. Each quadrant represents a unique combination of economic orientation and theoretical focus, resulting in differentiated logics of diffusion and discontinuance.

The bottom-left quadrant (Degrowth + Ecological Economics) emphasizes sufficiency-oriented innovations and planned discontinuance of resource-intensive systems under

explicit ecological constraints.

Proposition 1. Degrowth + Ecological Economics configurations are likely to generate sufficiency-oriented innovation and planned discontinuance aligned with ecological limits.

The bottom-right quadrant (Sustainable Growth + Ecological Economics) supports regenerative technologies and circular systems with attention to biophysical constraints within a growth-compatible logic.

Proposition 2. Sustainable Growth + Ecological Economics configurations are expected to promote regenerative and circular innovations while pursuing transitions compatible with biophysical boundaries.

The top-right quadrant (Sustainable Growth + Environmental Economics) emphasizes market-led diffusion of eco-efficient solutions and gradual phase-outs driven by economic signals, such as carbon pricing.

Proposition 3. Sustainable Growth + Environmental Economics configurations tend to favor efficiency-oriented eco-innovation and gradual, market-led phase-outs incentivized by economic signals.

Finally, the top-left quadrant (Degrowth + Environmental Economics) represents a theoretically tensioned configuration. While both approaches may promote reduction-oriented strategies, they differ in purpose and logic. Degrowth emphasizes broader socio-ecological transformation beyond market-centered rationality, whereas Environmental Economics is grounded in neoclassical principles that prioritize economic efficiency and incremental adjustment.

In this quadrant, diffusion may take the form of policy-induced adoption of regulatory and technological solutions, such as emissions caps or bans, that trigger unintended reduction effects (e.g., industrial closures, unemployment) without addressing deeper structural reform (Blanchard et al., 2023). Discontinuance, induced by ENE instruments like taxes, regulations, or divestment, may result in abrupt sectoral reductions when alternatives, compensation mechanisms, or transition supports are limited. When these measures are implemented without adequate transition planning, they can generate serious transition problems, including supply shortages, public backlash, or deepening inequality.

Proposition 4. Degrowth + Environmental Economics configurations are likely to produce strategic tensions and potentially disruptive phase-outs when reduction-oriented discontinuance is pursued through market-centered instruments without adequate alternatives or transition planning.

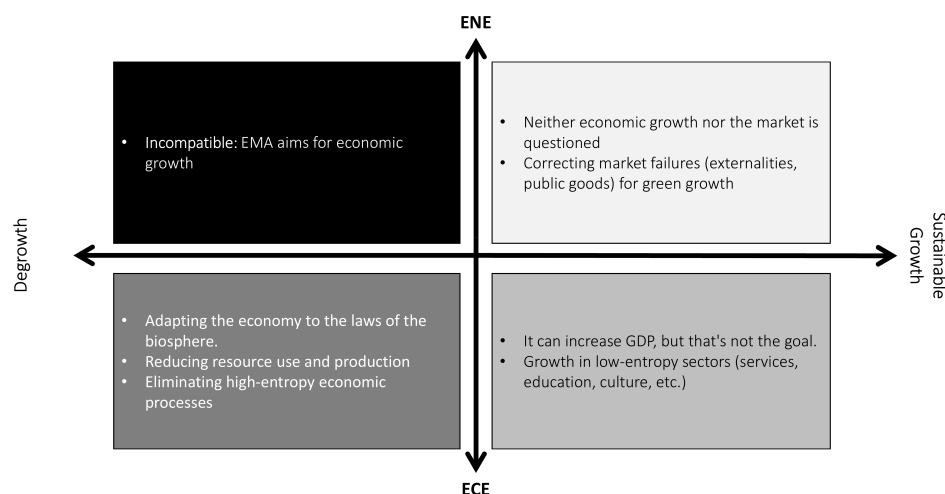


Figure 2 | Diffusion-Discontinuance Sustainability Framework

Note: The figure illustrates the conceptual structure of the DDSF, depicting the four configurations generated by the intersection of two axes: Theoretical Focus (Environmental Economics vs. Ecological Economics) and Economic Orientation (Sustainable Growth vs. Degrowth). Firms may shift between positions over time, or combine elements of adjacent configurations, as stakeholder pressures, legitimacy risks, regulatory signals, and resource conditions evolve. Innovation variables: Diffusion vs. Discontinuance.

Source: Authors' own elaboration.

This quadrant illustrates the coordination challenges that may arise when market-centered instruments are used to pursue reduction-oriented transition outcomes. It can be understood as a theoretically tensioned configuration in which policy-induced discontinuance depends on the availability of transition support, credible alternatives, and institutional legitimacy. When these conditions are weak, implementation and legitimacy risks may arise (See Figure 3).

Although the four propositions describe distinct outcome patterns across DDSF configurations, they are grounded in a shared set of transition mechanisms introduced earlier in this section. These mechanisms include stakeholder pressure, legitimacy management, value-based decision-making, regulatory signals, and resource reallocation. Table 3 summarizes how these mechanisms connect to each proposition and clarifies the explanatory logic of the framework.

This typology offers a strategic compass for organizations and policymakers to situate their current sustainability logic, identify underlying tensions, and explore more coherent and effective pathways for transformation. By integrating both the directional axis (growth vs. degrowth) and the structural axis (ecocentric vs. market-centric), the DDSF provides a strategic lens for navigating complex innovation landscapes within ecological limits and social imperatives.

Crucially, by pairing the dynamics of diffusion and discontinuance, the DDSF goes beyond the traditional focus

on innovation adoption to incorporate the equally strategic need to phase out harmful products, practices, and infrastructures. This dual perspective equips sustainable marketing with the tools not only to accelerate responsible innovation, but also to actively manage obsolescence, shaping transitions that are not only efficient, but ethically grounded and ecologically coherent.

4. The Strategic Relevance of the DDSF: From Theory to Practice

This section outlines the dual contribution of the DDSF to both theory and practice. It first explores how the model advances sustainable marketing theory by integrating innovation dynamics within broader economic orientations and theoretical positions. Then, it examines its practical implications for organizations and policymakers, illustrating its strategic utility through four real-world cases.

4.1. Theoretical Implications

The DDSF makes a distinct contribution to sustainable marketing theory, and more broadly to strategic and innovation-oriented marketing, by integrating two interrelated yet historically underexamined dynamics, diffusion and discontinuance, within a comparative economic framework. While diffusion has long been studied in marketing (Bass, 1969; Peres et al., 2010; Rogers, 2003), research has mostly focused on the adoption of innovations, often overlooking the

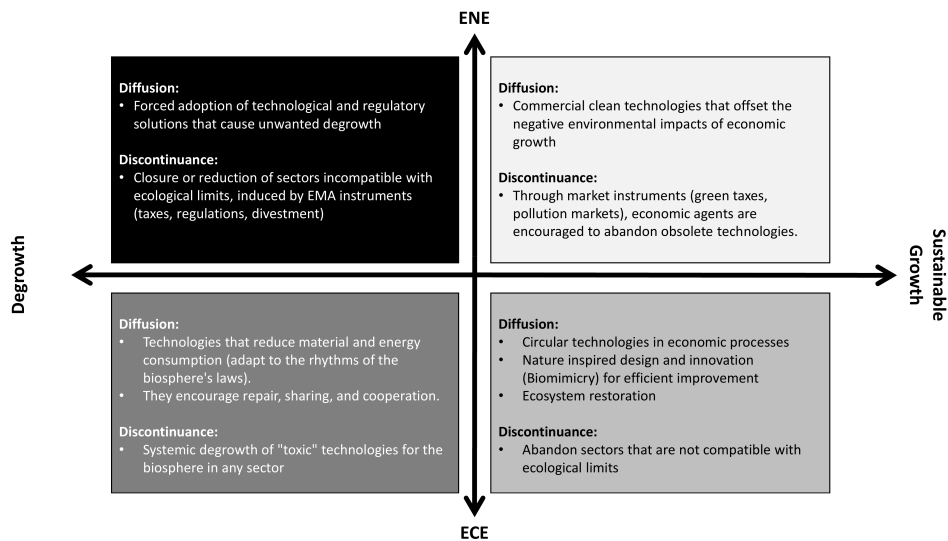


Figure 3 | Diffusion and Discontinuance Dynamics Across DDSF Configurations

Note: The figure illustrates the innovation dynamics associated with each DDSF configuration, highlighting how diffusion and discontinuance strategies vary across the four quadrants. Theoretical Focus: Environmental Economics vs. Ecological Economics; Economic Orientation: Sustainable Growth vs. Degrowth; Innovation Variables: Diffusion vs. Discontinuance.

Source: Authors’ own elaboration.

Table 3 | Transition Mechanisms and Boundary Conditions Across DDSF Configurations

DDSF configuration	Key mechanisms	Boundary conditions	Strategic outcome
Degrowth + Ecological Economics (P1)	Value-based decisions; stakeholder and legitimacy pressure	Cultural support for sufficiency; low technological lock-in	Sufficiency-oriented innovation and deliberate discontinuance of resource-intensive offerings
Sustainable Growth + Ecological Economics (P2)	Resource reallocation; ecological legitimacy management	Technological feasibility of circular solutions; supportive regulatory frameworks	Regenerative and circular innovation within ecological constraints
Sustainable Growth + Environmental Economics (P3)	Market incentives; regulatory signals	Stable market institutions; availability of efficiency-enhancing technologies	Eco-efficiency innovation and gradual phase-out of harmful practices
Degrowth + Environmental Economics (P4)	Regulatory pressure; policy enforcement	Institutional misalignment between market logics and degrowth objectives	Policy-driven discontinuance generating potentially unstable transition dynamics

Note: The table links the transition mechanisms and boundary conditions to the outcome patterns described in the DDSF propositions. While multiple factors may operate simultaneously, the table highlights the dominant drivers shaping each configuration.

equally strategic process of discontinuing harmful products, technologies, or behaviors (Lehmann & Parker, 2017; Vrain et al., 2022).

By explicitly incorporating discontinuance into the strategic equation, the DDSF challenges the pro-innovation bias (Chandrasekaran et al., 2020; Rogers, 2003), advancing a more balanced approach to creating and marketing new sustainable products. This is particularly relevant in sustainability contexts, where letting go of environmentally damaging

systems and offerings is as critical as adopting eco-innovations (Altrichter & Benoit, 2025; Palacios-Fenech & Vrain, 2024).

Moreover, by including innovation strategies within broader system-level perspectives, the DDSF situates strategic marketing decisions within systemic worldviews (Kallis et al., 2012; van den Bergh, 2010). This approach aligns with recent calls to expand sustainable marketing’s theoretical scope beyond firm-level actions to engage more

fully with ecological limits, structural inequalities, and socio-technical transitions (Adams et al., 2015; Bendle, 2023; Claro & Esteves, 2021). Therefore, the DDSF contributes to positioning sustainable marketing by integrating innovation strategy, marketing decision-making, and economic reasoning. It encourages researchers to adopt multi-level, interdisciplinary perspectives that address not only *what to adopt*, but also *what to discontinue*, and *why*. In relation to competing economic orientations and theoretical positions, and informed by the concept of planetary boundaries, this enables more informed discussions about firms' contributions to sustainability (Hickel & Kallis, 2019; Rockström et al., 2009; Steffen et al., 2015).

In doing so, the DDSF contributes to advancing a stakeholder-oriented view of sustainable marketing (Ferrell et al., 2010; Hult et al., 2011), wherein discontinuance is not simply a managerial decision, but a response to evolving demands for corporate accountability from regulators, consumers, employees, and communities. By reframing withdrawal from unsustainable products as a legitimacy-building practice (Handelman & Arnold, 1999), the DDSF engages marketing theory with the institutional logics that govern firm-stakeholder relations, and positions discontinuance as a mechanism for maintaining reputational trust and social license to operate. This shift has particular relevance in sustainability-oriented industries, where maintaining brand legitimacy increasingly depends not only on innovation adoption, but on the public visibility and ethical credibility of corporate withdrawal strategies (Mish & Scammon, 2010).

The framework also accommodates consumer behavior dynamics, recognizing that individuals navigate sustainability both by adopting responsible alternatives and by discontinuing options they perceive as harmful (Lehmann & Parker, 2017). The DDSF enables researchers to examine how these behavioral changes align with different economic orientations and theories and how they express deeper environmental, economic, and societal values (White et al., 2019).

Movement across DDSF positions occurs when changes in stakeholder pressure, regulatory expectations, legitimacy risk, consumer value orientations, or cost structures alter the relative attractiveness of maintaining or discontinuing existing market offerings (Handelman & Arnold, 1999; Mish & Scammon, 2010). These dynamics operate through mechanisms such as legitimacy management, stakeholder expectations, value-based decision-making, and opportunity structures, which help explain how economic worldviews shape firms' transitions within the framework (Hult et al.,

2011; Suddaby et al., 2017). They are further conditioned by broader system-level factors, as sustainability transitions depend on interconnected changes in technologies, markets, behaviors, and institutions (Voulvoulis et al., 2022). This systemic perspective clarifies how economic orientations shape firms' diffusion and discontinuance decisions by highlighting the market rigidities and behavioral path dependencies that limit movement across DDSF positions.

4.2. Practical Implications

For business leaders and policymakers, the DDSF offers a strategic tool to assess the coherence, depth, and systemic relevance of their sustainability strategies. It allows organizations to situate their current logic of action and to identify potential misalignments between innovation diffusion and the discontinuance of unsustainable practices (Altrichter & Benoit, 2025; Kemper & Ballantine, 2023; Lehmann & Parker, 2017).

By encouraging the integration of both dynamics, the framework supports the design of more coherent strategies that promote sustainable innovations while guiding the responsible withdrawal from harmful products, behaviors, or infrastructures. This is especially critical in sectors such as energy, mobility, and consumer goods, where neglecting discontinuance can dilute or offset the gains from green innovation (Alem et al., 2014; Chandrasekaran et al., 2020; Vrain et al., 2022). Moreover, the DDSF makes visible how inconsistencies between a stated sustainability orientation and the economic logic guiding decision-making can give rise to inefficiencies, stakeholder resistance, and unintended consequences, ranging from job losses and public backlash to symbolic or superficial sustainability initiatives (Barbier et al., 1991; Corvellec et al., 2021; Forliano et al., 2025). By situating marketing and innovation choices within broader economic and theoretical logics, the DDSF supports more coherent strategies and enables more stable and institutionally supported transitions.

To illustrate the strategic relevance of the DDSF, we briefly examine four real-world cases where sustainability strategies reveal tensions between innovation diffusion and discontinuance. Each case highlights how alignment among economic orientations, theoretical positions, and innovation logic shapes the outcomes of sustainability transitions.

Case 1: Digital services and circular apps. Digital services and circular apps often promote eco-efficiency through rapid innovation diffusion, supported by market incentives and behavioral nudges (Vrain et al., 2022). However, they rarely incorporate the deliberate discontinuance

of harmful practices, such as data extraction or overconsumption. Such initiatives can unintentionally reinforce extractive or efficiency-oriented models while maintaining a sustainability-oriented market narrative, as highlighted in critical perspectives on digital marketing and data-driven business models (Chintalapati & Pandey, 2021; Miller & Skiera, 2024).

Case 2: Renewable-energy expansion without fossil-fuel phase-out. While global energy strategies have expanded renewables, they often fall short in phasing out fossil fuels, leaving most consumers dependent on both systems (Chandrasekaran et al., 2020). These policies tend to remain diffusion-dominant and rooted in environmental economics, placing them in the Sustainable Growth + Environmental Economics quadrant. The DDSF shows that without planned discontinuance, green growth may be additive rather than transformative, expanding capacity without reducing harm (Karakaya et al., 2014).

Case 3: Wind-energy deployment in Wayúu Territory, La Guajira, Colombia. The DDSF helps reframe sustainability challenges through diverse cultural and economic perspectives, as shown by the wind energy deployment in La Guajira, Colombia (Ramírez et al., 2024; Ulloa, 2023). Large-scale renewable projects were introduced through technocratic diffusion and international investment, with limited consideration for local autonomy or the discontinuance of fossil infrastructures. Within the DDSF, these initiatives reflect a Sustainable Growth + Environmental Economics logic, prioritizing expansion over local socio-ecological considerations. A shift toward Sustainable Growth + Ecological Economics would retain clean-energy expansion while embedding it within biophysical limits and just transition principles. From the Indigenous Wayúu worldview, rooted in ecological balance and territorial self-determination, a Degrowth + Ecological Economics approach may represent a more coherent configuration. The case thus highlights potential misalignments between innovation strategies and socio-ecological contexts and supports more place-sensitive transitions. These dynamics resonate with broader critiques of technocolonial sustainability interventions, where externally imposed technologies undermine local autonomy and reinforce historical inequalities (Madianou, 2024).

Case 4: Ecuador's 2019 fuel-subsidy reform. In 2019, Ecuador attempted to eliminate fuel subsidies abruptly through Decree 883, applying price liberalization as a discontinuance-only measure (Montenegro-Casa & Ramírez-Álvarez, 2025). Without viable alternatives, compensation

mechanisms, or participatory governance, the policy provoked massive social unrest and was ultimately reversed. This case illustrates a discontinuance-dominant strategy rooted in Environmental Economics, positioned within the *Degrowth + Environmental Economics* quadrant of the DDSF. Here, environmental goals were pursued through withdrawal and price correction, but without adequate social safeguards or sufficient ecological coherence. The framework highlights that ENE-based discontinuance approaches require conditions for responsible withdrawal, such as transition support, participatory governance, and credible alternatives to avoid backlash when implemented under weak institutional or social conditions. When such tensions arise, firms and policymakers may need to selectively combine elements from different DDSF logics, pairing discontinuance with diffusion-oriented support to make transitions socially legitimate and environmentally durable.

These cases show how the DDSF operates as a strategic tool for business leaders, policymakers, and marketers, promoting integrated strategies that combine the diffusion of sustainable innovations with the discontinuance of harmful practices. The framework enables managers or policymakers to assess whether organizational practices align with their economic and theoretical positions; identify barriers, such as symbolic sustainability without discontinuance, inconsistencies between stated goals and operational routines, or portfolio lock-ins that limit investment in substitutive innovations; and adjust marketing and market strategies accordingly.

By mapping current practices onto diffusion-discontinuance dynamics, the DDSF helps reveal structural misalignments and governance gaps that obstruct coordinated sustainability transitions. In doing so, it strengthens sustainable marketing's capacity to navigate complexity and support coordinated sustainability transition pathways (Adams et al., 2015; Papadas et al., 2017). In this way, the model extends the notion of the Triple Bottom Line toward a more systemic framework that connects values, actions, and outcomes for the common good, rather than treating it as a single undifferentiated outcome (Elkington, 2018; Kallis et al., 2012; Rockström et al., 2009).

The cases discussed are intended as illustrative analytical scenarios rather than traditional empirical evidence. They offer a way to visualize how the tensions within the DDSF unfold in practice. By highlighting these dynamics, the examples show that systems operating across inconsistent positions within the framework are more likely to face coordination failures in the alignment of economic, societal,

and environmental value (Elkington, 2018). Rather than reflecting tragedy-of-the-commons dynamics, the DDSF is positioned within the Triple Bottom Line space, where these value dimensions are intentionally coordinated. Such failures include situations where innovation diffusion progresses without a parallel phase-out of harmful practices, resulting in delayed or stalled discontinuance processes.

The DDSF also opens a wide range of empirical research avenues that can deepen our understanding of sustainable transitions. Key questions include: (1) how firms operating under different economic perspectives balance innovation diffusion and discontinuance (Polewsky et al., 2024); (2) what organizational capabilities are required to manage these processes effectively under different institutional conditions (Altrichter & Benoit, 2025); (3) how marketing narratives vary between diffusion and discontinuance-oriented approaches (Bendle, 2023; Verma & Diwan, 2025); (4) whether aligning these dynamics with underlying economic orientations and theoretical positions enhances stakeholder trust and long-term brand legitimacy (Ferrell et al., 2010), and (5) how public policy enables or obstructs such alignment (Barbier et al., 1991; Blanchard et al., 2023).

These research directions support the development of more holistic models of sustainable innovation, moving beyond fragmented approaches and redefining marketing's role as a catalyst for systemic transformation (Strizhakova & Coulter, 2024). In this perspective, marketing becomes not just a tool for promotion but a driver of ecological sustainability and social welfare, aligned with planetary boundaries and intergenerational equity (Hickel & Kallis, 2019; Raworth, 2018; Schneider et al., 2010).

4.3. Limitations and Future Research

As a conceptual framework, the DDSF therefore requires systematic empirical validation to assess whether the diffusion-discontinuance dynamics predicted across configurations emerge in real organizational and policy contexts. Subsequent research may build on the DDSF by testing the four propositions derived from the framework and assessing whether each quadrant generates the diffusion and discontinuance patterns theorized across market strategies. To support this empirical validation agenda, future studies may examine research questions such as:

RQ1. How do stakeholder pressures influence firms' movement across DDSF configurations?

RQ2. Under what institutional conditions do diffu-

sion strategies coexist with discontinuance processes in sustainability-oriented offering portfolios?

RQ3. How do technological lock-ins and regulatory constraints limit transitions toward coordinated diffusion-discontinuance portfolio strategies?

RQ4. Do firms aligned with different economic orientations exhibit distinct diffusion-discontinuance balances in their sustainability-oriented market strategies?

Empirical studies may also analyze how organizational capabilities, stakeholder expectations, and policy environments jointly enable or constrain diffusion-discontinuance dynamics in firms' offering portfolios (Handelman & Arnold, 1999). In particular, further investigation may explore whether aligning diffusion and discontinuance decisions with firms' underlying economic orientations improves environmental and market performance in practice (Papadas et al., 2017) and supports transitions from diffusion-dominant initiatives toward more coordinated diffusion-discontinuance portfolio strategies under increasing legitimacy expectations (Ferrell et al., 2010).

At the same time, the framework suggests that such transitions are likely to remain contingent on structural boundary conditions. Technological lock-ins, institutional inertia, and regulatory constraints may limit firms' capacity to reconfigure value propositions by combining the diffusion of lower-impact solutions with the discontinuance of environmentally harmful offerings. More broadly, opportunities for empirical inquiry include assessing how these conditions sustain coexistence between incumbent and emerging market systems (Vrain et al., 2022) while rendering discontinuance processes subject to regime maintenance dynamics, legitimacy-based counter-positioning, and strategic delay that stabilize existing offering portfolios over time (Sardo & Pfothenauer, 2025), thereby shaping how organizations navigate DDSF configurations in practice (Voulvoulis et al., 2022). Additional empirical questions include:

RQ5. Under what conditions do incumbent and emerging sustainability-oriented offerings coexist rather than substitute for one another across DDSF configurations?

RQ6. How do regime maintenance dynamics and strategic delay mechanisms shape the timing and effectiveness of discontinuance processes across DDSF configurations?

Empirical extensions of the framework may also clarify

how the DDSF relates to established models of innovation and sustainability in order to assess its conceptual distinctiveness and empirical robustness. As with any typological framework, the DDSF necessarily abstracts from empirical complexity and may not fully capture hybrid or transitional configurations observed in practice (MacInnis, 2011). Future research may also expand the framework by integrating non-Western perspectives, Indigenous ecological knowledge and post-colonial critiques, as well as concepts such as technocolonialism, which reveal how Eurocentric technological and sustainability frameworks can reproduce exclusion and power asymmetries (Couldry & Mejias, 2019; Couldry & Mejias, 2024; Madianou, 2024). A further line of inquiry concerns the following question:

RQ7. How do diffusion–discontinuance dynamics vary across institutional, cultural, and epistemic contexts, particularly when non-Western sustainability perspectives challenge dominant economic orientations underlying the DDSF?

Marketing is not only about diffusing new products; it is equally about discontinuing those that no longer serve society or the planet. Discontinuance functions as a strategic reallocation mechanism, freeing material, financial, organizational, and symbolic resources that can be redirected toward regenerative value creation. In this sense, discontinuance can enable regenerative purpose (Sarkar et al., 2023). The DDSF makes this link explicit by showing how diffusion and discontinuance jointly shape an organization's capacity to support environmentally and socially sustainable outcomes. Finally, future research may examine:

RQ8. How does regenerative purpose influence the balance between diffusion and discontinuance strategies, and do purpose-driven firms develop distinctive capabilities for managing responsible withdrawal within sustainability-oriented offering portfolios across DDSF configurations?

5. Conclusion

The DDSF offers a timely and strategic contribution to sustainable marketing theory by bridging two interrelated but often disconnected innovation dynamics, diffusion and discontinuance, within a coherent economic typology. In doing so, it provides not only analytical clarity, but also a conceptual compass for organizations and researchers seeking to navigate the complexity of sustainability transitions. It enables firms to strategically position themselves in rela-

tion to systemic worldviews and to make more deliberate decisions about what to adopt, what to discontinue, and why. The framework also recognizes that firms may move across configurations or combine strategic logics over time as stakeholder pressures, legitimacy risks, regulatory signals, and resource conditions change. Such strategic flexibility is essential for aligning business strategies with ecological constraints and long-term sustainability considerations (Steffen et al., 2015).

The DDSF does not imply a normative hierarchy among configurations but offers an analytical framework to examine how economic orientations shape diffusion and discontinuance strategies across institutional contexts. Each configuration reflects a distinct strategic logic. Sustainable Growth + Environmental Economics emphasizes eco-efficiency, market incentives, and gradual phase-outs. Sustainable Growth + Ecological Economics combines innovation and circularity with attention to biophysical constraints. Degrowth + Ecological Economics emphasizes sufficiency-oriented and regenerative innovation, while discontinuance becomes a deliberate and participatory strategic process for withdrawing from harmful practices, linking post-growth marketing with planned reductions in harmful consumption under explicit ecological constraints (Roux, 2025).

The DDSF also highlights how paradigmatic misalignment may create coordination risks in certain contexts, particularly in the Degrowth + Environmental Economics quadrant. Here, environmental objectives may be pursued primarily through market-driven tools, such as subsidy removals or price-based discontinuance measures, while transition support and complementary diffusion dynamics remain limited. In these cases, discontinuance may occur without sufficient coordination, potentially generating social backlash, institutional distrust, and unstable transition outcomes (Blanchard et al., 2023; Montenegro-Casa & Ramírez-Álvarez, 2025). Together, these configurations clarify how firms may align adoption, withdrawal, and value creation with different sustainability assumptions.

Ultimately, the DDSF equips sustainable marketing with the tools to move beyond symbolic innovation and toward structurally coherent sustainability transitions (Adams et al., 2015). It advances sustainable marketing theory by reframing diffusion and discontinuance as core strategic marketing choices embedded in economically grounded worldviews, enabling marketing to engage more directly with the transformations associated with sustainability and to guide organizations toward strategies aligned with emerging environmental and economic logics.

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CRedit Authorship Contribution Statement

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Dídac Cervera-Itarte: Conceptualization; Methodology; Formal analysis; Investigation; Visualization; Writing – original draft; Writing – review & editing.

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