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# Transforming Business Models for a Better Future: Investigating Effects of Sustainable Business Model Archetypes on Consumer Adoption Behavior

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## ABSTRACT

Global challenges such as climate change, resource scarcity and ecological degradation demand that companies rethink how they create, deliver and capture value. Sustainable business model innovations (SBMIs) offer a promising pathway, yet empirical insights into how different SBMI archetypes affect consumer adoption behavior are scarce. We conducted a scenario-based experiment with 349 consumers, manipulating three SBMI archetypes (i.e., technological, social and organizational) and a non-sustainable control. The results reveal that technological and organizational archetypes significantly elevated adoption, while the impact of social archetypes is comparatively weak. Crucially, a higher perceived radicality of the SBMI magnified adoption across all archetypes, suggesting that consumers reward bold, transformative change signals. Theoretically, results substantiate the archetype lens for demand-sided research on SBMIs and clarify their differential persuasive power. Practically, they suggest two levers for managers: foreground concrete technological or organizational advances and communicate their radical nature to accelerate consumer adoption of SBMIs.

## 1 | Introduction

Poly-crises such as climate change, environmental pollution, biodiversity loss, and increasing resource scarcity demand a profound transformation of economic activities and structures toward sustainable development (Chofreh et al. 2018). Against this backdrop, the pressure on companies to adopt more sustainable business models (SBMs) is increasing (Bocken et al. 2014; Geissdoerfer et al. 2018; Schaltegger et al. 2016). This pressure partly stems from governmental regulations aimed at achieving climate goals, such as those outlined in the Paris Agreement, which seeks to limit global temperature increases to a manageable level (Bolton and Hannon 2016; Kanie et al. 2019). Additionally, societal expectations for sustainability are rising, driven by the growing prominence of “green consumption” and consumers’ increasing demand for sustainable products and

services (Ademi et al. 2024; Janz et al. 2025; Kumar et al. 2021; Sivapalan et al. 2021). In response, businesses are compelled to integrate sustainability into their core operations. Meeting these demands requires transformative solutions that extend beyond incremental changes and fundamentally redefine how value is created, delivered, and captured (Stubbs 2019). Within this transformative agenda, sustainable business model innovations (SBMIs) have emerged as a particularly powerful pathway offering novel approaches to value creation and propositions that deliver substantial environmental and social benefits while reducing negative externalities (Bocken et al. 2014).

Given the diversity of ways firms can innovate their business models for sustainability, researchers commonly categorize SBMIs into organizational, technological, and social archetypes (Bocken et al. 2014), representing distinct avenues for embedding

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sustainability. For example, TerraCycle's Loop initiative illustrates a technological SBMI ("create value from waste") by supplying everyday consumer goods in reusable packaging, which are retrieved, cleaned, and returned into circulation (Konietzko et al. 2020). Nespresso illustrates a social SBMI by adopting a stewardship role through its "AAA Sustainable Quality Program," which supports farmers with fairer prices, training, and sustainable cultivation practices (Nestlé Nespresso 2013). Ørsted demonstrates an organizational SBMI by shifting from a fossil-fuel-based utility to a global leader in offshore wind energy, thereby scaling renewable solutions and reshaping energy systems worldwide (McKinsey 2020; Rendtorff 2023). These examples showcase the breadth of SBMIs firms can employ to embed sustainability within their business models. As such, they are increasingly recognized as a key driver of ecological and social progress (Basile et al. 2021; Pan et al. 2023). While prior studies already document the organizational benefits of SBMIs, such as revenue growth, profitability, and competitive advantage (Bashir et al. 2022; Boons et al. 2013; Matinaro et al. 2019; Preghenella and Battistella 2021), empirical insights into how different SBMIs shape consumer perceptions and adoption remain scarce (Basile et al. 2021; Peralta et al. 2019). Yet, understanding consumer adoption is pivotal for accelerating sustainable transformation (Chekima et al. 2016; Reppmann et al. 2024) and for identifying which SBMI approaches most effectively foster acceptance. Without widespread consumer uptake, even well-designed SBMIs risk remaining niche solutions, an issue particularly pronounced for SBMs, where consumers may perceive higher risks or unfamiliar value propositions compared to conventional alternatives (Ciulli et al. 2022). In line with recent calls for more demand-side research on business model innovation (BMI) in non-sustainable contexts (Futterer et al. 2020; Heidenreich, Freisinger, and Landau 2022; Priem et al. 2018), we therefore extend this stream of work to the sustainability domain and shed further light on how consumers react to different types of SBMIs. Specifically, we focus on how organizational, technological, and social SBMI archetypes shape consumers' intentions to adopt sustainable offerings.

At the same time, prior demand-side research on BMI emphasizes that it is not only which business model components are innovated that matters for consumers, but also how strongly they depart from established ways of doing business (Futterer et al. 2020). Building on this insight, we argue that an influential yet underexplored factor in the adoption of SBMIs is their degree of radicality, defined as the extent to which a business model departs from established practices (Taran et al. 2015). While previous studies have primarily examined radicality in the context of sustainable products and their design (Kennedy et al. 2017; Paparoidamis et al. 2019), its role within SBMIs remains insufficiently understood. Accordingly, we shed first light on whether and how business model radicality shapes consumer adoption of SBMIs and how it interacts with different SBMI archetypes.

To empirically address these research questions and validate theoretical assumptions in a consumer context, we conduct a scenario-based experiment with 349 participants in the context of a sustainable automobile company. The experiment included nine pre-tested scenarios, eight of which represented specific SBMI archetypes and a control scenario depicting a non-sustainable business model served as a reference point (Barth

et al. 2021; Bocken et al. 2014). Using structural equation modeling (SEM), we examine how SBMI archetypes and perceived radicality influence adoption intentions.

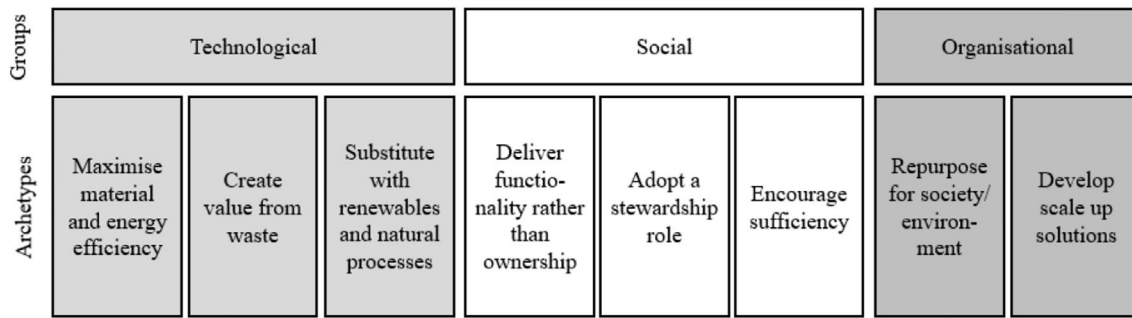
Theoretically, our study makes three contributions. First, we respond to recent calls for more demand-side research on BMI by transferring Bocken et al. (2014) SBMI archetype framework from an organizational-performance lens to a consumer-behavior context and showing that technological, social, and organizational archetypes systematically shape adoption intentions. Second, we provide initial evidence on the relative effectiveness of these archetypes, demonstrating that consumers privilege ecological and performance-oriented (technological and organizational) SBMIs over social SBMIs, thereby extending product-level findings on the dominance of environmental over social sustainability attributes to the business-model level. Third, we identify perceived radicality as a central demand-side boundary condition that amplifies the impact of SBMIs on adoption intention, underscoring that incremental business model changes are unlikely to trigger substantial behavioral shifts and that more radical reconfigurations of value creation, delivery, and capture are needed to engage consumers and drive sustainable transformation. Practically, the results provide actionable guidance for sustainability managers and strategists seeking to strengthen consumer adoption of SBMIs. By aligning business model designs more closely with consumer preferences and clearly communicating their transformative potential, firms can advance their sustainability initiatives and secure competitive advantages in an increasingly sustainability-focused marketplace.

## 2 | Conceptual Background and Hypotheses Development

### 2.1 | Sustainable Business Model Innovations: State of Research

A business model represents the foundational logic of a company's operations to generate economic value (Osterwalder and Pigneur 2010; Teece 2010), built on value creation, value proposition, and value capture (Teece 2010). The value proposition defines products and services that provide added value to customers, while value creation includes the activities and resources required to fulfill this promise (Freisinger et al. 2021). Value capture describes how revenues and profits are generated through the value provision (Baldassarre et al. 2017; Richardson 2005). BMI extends this by aligning value creation and monetization through novel approaches to delivery and remuneration (Amit and Zott 2012; Zott et al. 2011). Unlike product innovation, BMI focuses on optimizing existing offerings by adapting structures and processes (Basile et al. 2021) but often neglects ecological and social aspects (Lüdeke-Freund et al. 2018; Upward and Jones 2016).

Sustainable business models address this by integrating economic, environmental, and social goals (Lüdeke-Freund and Dembek 2017; Lüdeke-Freund et al. 2018), aligning all business model components with sustainability objectives (Boons and Lüdeke-Freund 2013; Geissdoerfer et al. 2018). These models aim to regenerate natural, social, and economic capital beyond



**FIGURE 1** | The eight business model archetypes categorized into technological, social and organizational archetypes (Bocken et al. 2014).

organizational boundaries (Schaltegger et al. 2016). SBMs also emphasize the “triple bottom line” and foster reciprocal value creation with stakeholders, including customers, investors, and society (Kristensen and Remmen 2019; Preghenella and Battistella 2021). This contrasts with traditional business models focused on profit maximization (Bocken et al. 2014; Lüdeke-Freund et al. 2024).

Building on this theoretical framing, the archetype taxonomy of Bocken et al. (2014) provides a widely used, practice-oriented lens for embedding sustainability into business models, introducing archetypes such as “Adopting a stewardship role” and “Creating value from waste”. These archetypes are classified into technological, social, and organizational innovations (Alonso-Martinez et al. 2021; Boons and Lüdeke-Freund 2013; Ritala et al. 2018) and have been applied across diverse industries such as banking and agriculture (Barth et al. 2021; Yip and Bocken 2018). Viewed through Schneckenberg et al. (2022) conceptualization, BMI is a multidimensional organizational change process involving strategic intent, resource orchestration, and stakeholder alignment. From this angle, the SBMI archetypes represent concrete expressions of dynamic capabilities (Teece 2018) that help firms sense sustainability opportunities, seize them through innovation, and reconfigure their value creation logic.

This theoretical integration implies that SBMIs are not merely operational templates but also manifestations of deeper organizational capacities for transformation. It suggests that different archetypes may communicate varying levels of strategic commitment and change potential to external stakeholders, particularly consumers. In other words, when viewed through this lens, the archetypes serve as observable signals of a firm’s ability to enact and sustain transformative change, linking the practical taxonomy of Bocken et al. (2014) with the broader theoretical foundations of BMI research. Given this signaling role, it becomes crucial to understand how different archetypes shape consumers’ willingness to adopt SBMs, a relationship that remains underexplored and which this study directly addresses.

## 2.2 | SBMI Archetypes, Potential Effects on Adoption Intention and the Impact of Radicality

Building on the framework of SBMI archetypes by Bocken et al. (2014), this study explores their effects on consumer reactions. The focus lies on exploring how these archetypes,

categorized into technological, social, and organizational innovations (see Figure 1), influence consumer adoption behavior. To anchor the psychological mechanisms driving consumer reactions to different BMI archetypes in established theoretical frameworks, we draw primarily on diffusion of innovation theory (Rogers 2003). The diffusion of innovation theory provides a comprehensive lens by emphasizing perceived innovation attributes such as relative advantage, compatibility, complexity, and observability, which are central to understanding adoption across BMI types (Min et al. 2021; Rogers 2003). In doing so, we rely on Bocken et al. (2014) archetype framework (please see Figure 1) as an organizing scheme but use these attributes as the core conceptual bridge between SBMI archetypes and consumers’ adoption behavior, specifying for each archetype how it is likely to shape relative advantage, compatibility, complexity, and observability in the eyes of consumers.

### 2.2.1 | Technological SBMI and Adoption Intention

Technological SBMIs are BMIs that place technological innovation at the core, primarily advancing sustainability through technical solutions such as product and process redesign (Bocken et al. 2014). The first environmentally oriented archetype within this category, “Maximization of material and energy efficiency,” stresses resource efficiency, waste reduction, and emission minimization (Barth et al. 2021), exemplified by lean manufacturing practices like the Toyota Production System (Henao et al. 2019; Ritala et al. 2018). The second, “Create value from waste,” transforms waste streams into inputs in line with circular economy principles (Kirchherr et al. 2017; Linder and Williander 2017), as in Patagonia’s NetPlus recycling system (Patagonia 2024). The third, “Substitution with renewables and natural processes,” highlights renewable energy for impact reduction and resource security, reflected in the global expansion of solar and electrification (Lüdeke-Freund et al. 2018; Ritala et al. 2018).

From a theoretical perspective, diffusion of innovation theory (Rogers 2003) suggests that adoption is more likely when consumers perceive an innovation as offering strong relative advantage, fitting well with their existing values and usage patterns (compatibility), being easy to understand and use (low complexity), and making its benefits readily visible (observability; Heidenreich, Millemann, and Jordanow 2022). Technological SBMIs can be characterized precisely along these dimensions: efficiency gains and performance improvements provide clear relative advantage (Pinkse and

Bohnsack 2021), circular economy practices such as reuse and recycling align with consumers' growing pro-environmental and resourcefulness values, thereby enhancing perceived compatibility (Calvo-Porrall and Lévy-Mangin 2020), and renewable energy or low-carbon technologies make environmental benefits more observable, especially when accompanied by transparent environmental labeling and communication (Huang et al. 2024). At the same time, many technological SBMIs leave core usage routines intact (e.g., consumers continue to use familiar product formats while production or energy systems change in the background), which helps to keep perceived complexity at a manageable level.

Empirical research supports this theoretical alignment. Technological SBMIs provide ecological, cognitive, and emotional benefits that foster positive attitudes and adoption intentions (Hazen et al. 2017; Rezvani et al. 2015; Liu et al. 2018). For instance, Du et al. (2016) show that consumers are willing to pay premiums for low-carbon products when benefits are clearly communicated, while studies in electromobility highlight that technical features and environmental performance are decisive for adoption (Li et al. 2017). Circular economy practices such as resource reuse further enhance intentions in durable goods, where longevity and reliability are critical (Calvo-Porrall and Lévy-Mangin 2020; Gnanapragasam et al. 2018; Wang et al. 2018). In summary, technological SBMIs simultaneously increase perceived relative advantage, compatibility, and observability while not substantially raising perceived complexity, thereby fulfilling the key determinants of adoption emphasized in diffusion of innovation theory (Rogers 2003), which leads to the following hypothesis:

**H1.** *Technological SBMI archetypes have a positive effect on consumers' adoption intention.*

### 2.2.2 | Social SBMI and Adoption Intention

The social archetype category focuses on SBMs that drive social innovation by influencing consumer behavior and social structures. These models engage customers in innovation processes and promote conscious consumption patterns (Alonso-Martinez et al. 2021). Archetypes include "Functionality rather than ownership," exemplified by Philips' Pay-per-lux model, where customers pay for lighting services while the company retains ownership (Bocken and Ritala 2022). "Adopt a stewardship role" involves firms assuming responsibility for ecological or societal challenges, such as Weleda's commitment to biodiversity (Ritala et al. 2018; Weleda 2024). Finally, "Encourage sufficiency" promotes mindful consumption, illustrated by Patagonia's *Don't Buy This Jacket* campaign (Bocken and Short 2016; Niessen and Bocken 2021).

Collectively, these models aim to reduce overconsumption, promote shared responsibility, and strengthen consumer–firm relationships through ethical alignment (Vehmas et al. 2024). In adoption-theoretical terms (Rogers 2003), this ethical alignment increases perceived compatibility and relative advantage because consumers can satisfy functional needs while acting in line with their social and environmental values. Empirical research shows that consumers value quality and fairness,

rewarding firms that demonstrate responsibility across supply chains (Lee et al. 2017; Öberseder et al. 2013). Such perceptions of fairness and responsibility not only foster loyalty and trust but also reduce perceived risk and reinforce the relative advantage of social SBMIs over conventional offerings. CSR initiatives, for instance, can enhance loyalty, trust, and perceptions of fairness, thereby increasing willingness to adopt socially oriented models (Chernev and Blair 2015; Servera-Francés and Piqueras-Tomás 2019). However, social SBMIs may also be associated with higher perceived complexity or inconvenience when they require new usage routines or challenge status-driven consumption patterns (Singh and Giacosa 2019). Yet, CSR communication can make the social outcomes of adoption more observable, which Rogers (2003) highlights as an important determinant of diffusion. In addition, evidence shows that consumers increasingly demand transparency in social aspects such as working conditions and employee safety and actively integrate such considerations into purchase decisions (Shao et al. 2017). This growing demand for transparency increases the salience of social information, thereby enhancing both the observability of firms' practices and the perceived compatibility of social SBMIs with consumers' moral and societal expectations.

Empirical evidence lends support to this theoretical alignment. Prior work on social norms and moral attitudes (Ajzen 1991; Legere and Kang 2020) suggests that when such models resonate with consumers' moral identity and the expectations of relevant reference groups, adoption becomes more likely. Consistently, insights from sufficiency models, slow fashion, and product–service systems show that consumers with strong moral identities feel empowered when aligning with such practices, which in turn enhances perceived compatibility and adoption intentions (Armstrong et al. 2015; D'Agostin et al. 2020; Jung and Jin 2016). In summary, social SBMIs may confront challenges of compatibility and complexity when they deviate from ownership-based or status-oriented consumption, but they leverage moral empowerment, enhanced observability of social impact, and perceived ethical superiority, thereby fulfilling key adoption determinants emphasized by diffusion of innovation theory, which increases consumers' willingness to adopt such models and leads to the following hypothesis:

**H2.** *Social SBMI archetypes have a positive effect on consumers' adoption intention.*

### 2.2.3 | Organizational SBMI and Adoption Intention

Organizational SBMIs aim to redefine the purpose and structure of firms, prioritizing social and environmental value creation over short-term profit maximization. These systems reshape governance structures, responsibilities, and stakeholder relationships, aligning the organization's mission with broader societal and ecological objectives (Bocken et al. 2014). The first archetype, "Repurpose for society/environment" reorients business activities toward delivering societal and environmental benefits through closer integration with communities and stakeholders, as exemplified by Novo Nordisk's differentiated pricing strategy that improves medical access for low-income populations (Vehmas et al. 2024). The second, "Develop scale-up solutions," focuses on large-scale sustainable practices

to maximize societal and environmental benefits, illustrated by Unilever's Project Shakti, which empowers rural women in India as micro-entrepreneurs while promoting sustainable distribution (Unilever 2024). Through visible transformations, such as integrating elements of private, nonprofit, and public sectors, organizational SBMIs thus address societal needs while simultaneously balancing social and economic goals (Battilana and Lee 2014; Defourny and Nyssens 2017).

From a diffusion of innovation theory perspective (Rogers 2003), organizational SBMIs can be understood as bundles of innovation attributes that shape how consumers evaluate the underlying business model: by aligning the firm's purpose and structures with social and environmental goals, they increase perceived compatibility with consumers' prosocial and environmental values and strengthen the perceived relative advantage of choosing such a provider over conventional alternatives. At the same time, the visible reconfiguration of governance, stakeholder relationships, and partnerships enhances observability and trialability because social and environmental outcomes, pilot initiatives, and collaborative projects become easier to see and experience. Moreover, by embedding sustainability in core organizational processes and routines, organizational SBMIs can reduce perceived complexity for consumers, who can act more sustainably without substantially changing their everyday behaviors (Rogers 2003).

Available empirical evidence supports this theoretical alignment. Studies show that hybrid business models and social enterprises, which are representative of organizational SBMIs, can significantly influence consumer behavior (Choi and Kim 2013; Tsai et al. 2020). When social and functional benefits are clearly communicated, consumers report higher purchase intentions, even at higher costs (Tsai et al. 2020), and exhibit stronger brand loyalty (Choi and Kim 2013). Moreover, organizational SBMIs often use collaborative innovation tools, such as sustainability-oriented crowdsourcing, which enhances engagement and trust. In these settings, perceived transparency and enjoyment foster positive attitudes and behavioral intentions (Martinez 2017; Kumar et al. 2019), thereby reinforcing observability and the perception of firms as legitimate actors of sustainable transformation. In summary, organizational SBMIs signal credible, institutionalized commitment to sustainability by reconfiguring governance structures and stakeholder relationships in ways that increase perceived compatibility and relative advantage, enhance the observability and trialability of social and environmental outcomes, and lower perceived complexity for consumers, which strengthens their willingness to adopt such models and leads to the following hypothesis:

**H3.** *Organizational SBMI archetypes have a positive effect on consumers' adoption intention.*

#### 2.2.4 | The Radicality of Sustainable Business Model Innovations and Adoption Intention

Radical innovations are essential for addressing today's environmental and social challenges, as they enable systemic changes that incremental approaches alone cannot achieve. By fundamentally transforming existing systems, they lay

the groundwork for sustainable development and advance environmental and social progress beyond the status quo (Boons and Lüdeke-Freund 2013; Cillo et al. 2019; Hall and Vredenburg 2003; Tukker and Butter 2007). In doing so, they act as a bridge between firms and broader production and consumption systems, allowing sustainable innovations to become more deeply embedded within society (Boons et al. 2013). Business models play a central role in this process, as they shape a company's overall sustainability profile and determine how value is created, delivered, and captured (Klewitz and Hansen 2014).

Although empirical evidence on the moderating role of innovativeness in BMI performance is still limited (Futterer et al. 2020), existing studies suggest that the radicality of a business model is a critical determinant of BMI success or failure (Taran et al. 2015). Consumer perceptions of innovativeness, understood as the perceived novelty and relative advantage of an offering compared to existing alternatives, are a key driver of adoption intention (Lowe and Alpert 2015; Ziamou 1999). For example, Paparoidamis et al. (2019) show that consumers are more willing to adopt radically sustainable products when these are perceived as both innovative and environmentally friendly and attribute this higher willingness precisely to their novelty and perceived relative advantages. These findings suggest that radicality not only affects the performance of innovations directly but can also strengthen the positive impact of SBMIs on adoption intention by accentuating perceived novelty and relative advantage.

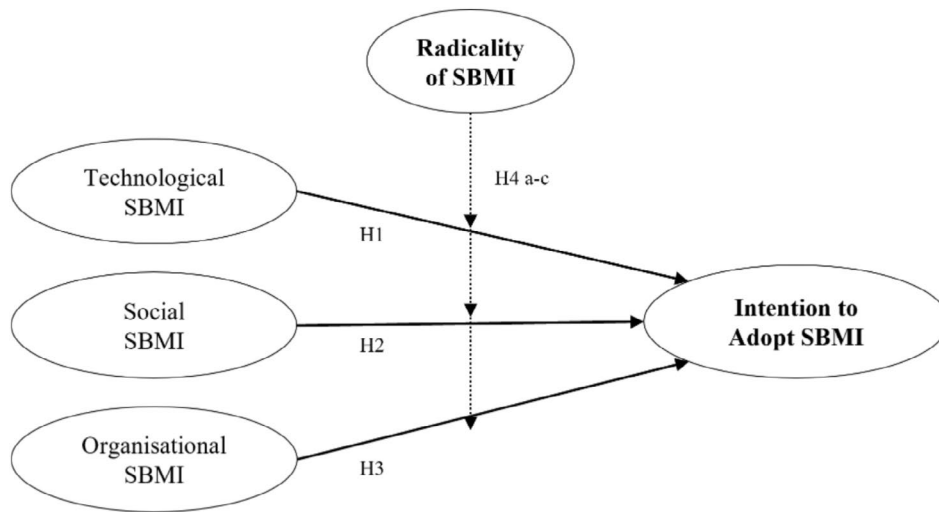
Building on this reasoning, we expect that the radicality of different SBMI types will similarly enhance consumers' willingness to adopt. For technological SBMIs, greater radicality, such as disruptive changes in production technologies, product-service configurations, or resource use, should heighten perceived novelty and relative advantage, thereby amplifying the positive effect of technological SBMIs on adoption intention. For social SBMIs, more radical reconfigurations of value creation and distribution (e.g., deep integration of disadvantaged groups or entirely new sharing and access logics) signal stronger social impact and moral benefits, which should further increase consumers' propensity to adopt these models. For organizational SBMIs, radical redesigns of governance structures, stakeholder relationships, and institutional arrangements make sustainability more transparently embedded in the core of the organization, strengthening trust and perceived credibility and thus reinforcing the positive influence of organizational SBMIs on adoption intention.

**H4.** *The effect of SBMIs on adoption intention is moderated by the radicality of the business model.*

**H4a.** *The positive effect of technological SBMI on intention to adopt will increase with rising levels of radicality of the business model.*

**H4b.** *The positive effect of social SBMI on intention to adopt will increase with rising levels of radicality of the business model.*

**H4c.** *The positive effect of organizational SBMI on intention to adopt will increase with rising levels of radicality of the business model.*



**FIGURE 2** | Hypothesized relationships among SBMI archetypes, radicality, and consumers' adoption intention.

Figure 2 summarizes the hypothesized relationships. Technological, social, and organizational SBMIs are proposed to positively influence consumers' intention to adopt (H1–H3), while perceived radicality of SBMI is expected to moderate these relationships (H4a–H4c).

### 3 | Research Methodology

#### 3.1 | Data Collection and Sample Description

To investigate the mutual influence of the eight SBMI archetypes on consumers' adoption intention, we conducted a cross-sectional survey in Germany, Switzerland, and Austria via the online crowdsourcing platform Clickworker in August 2024. We received 412 qualified responses, which were subsequently reviewed for inconsistencies. This process led to the exclusion of 63 datasets where participants failed the attention check. The final sample consisted of 349 participants aged between 19 and 76 years (mean age = 43), of whom 57% were male and 42% female. In terms of education, 56% held a university degree. For further description of the sample, please see Table A1 in the Appendix.

#### 3.2 | Measures

To test the proposed hypotheses, we employed a scenario-based experiment (Wagner et al. 2009), a recognized approach that immerses participants in hypothetical roles and contexts (Kwon and Weingart 2004; Wagner et al. 2009). This design facilitates precise experimental manipulations and control over complex variables (Bitner 1990). We chose a sustainable electromobility manufacturer to ensure participants' familiarity with the product category (Kwon and Weingart 2004) and align with the sector's current sustainability transformation (Mayyas et al. 2012; Peattie and Collins 2009).

Before the main study, we conducted a pretest ( $n = 150$ ) to confirm that the scenario manipulations functioned as intended. Participants were randomly assigned to one of eight scenarios

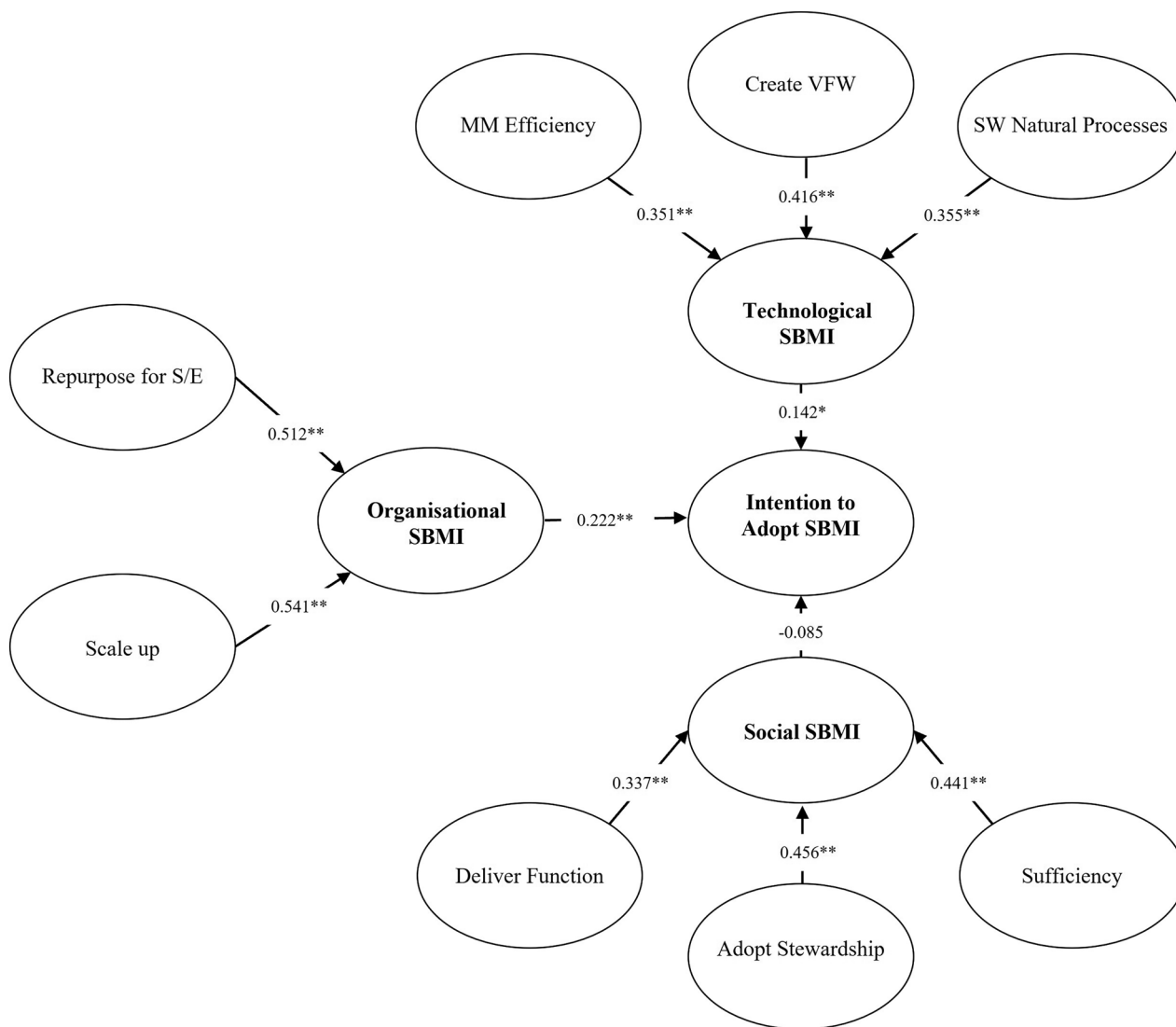
or a control scenario, then rated perceived business model innovativeness (Paparoidamis et al. 2019) and scenario realism (Lim and Darley 1997; Wagner et al. 2009) using 7-point Likert scales (1 = strongly disagree, 7 = strongly agree). Average realism was 5.45, and innovativeness was 4.6, indicating satisfactory results. A paired t-test confirmed that the SBMIs and control scenario were perceived as intended, and minor adjustments were made for clarity. Additional details, including measurement items (Table A2), scenario ratings (Table A3), and t-test characteristics (Table A4), appear in the Appendix.

In the main study, participants were introduced to “Future Drive Mobility,” a fictitious Munich-based firm known for innovative, eco-friendly solutions. They were randomly assigned (Drèze and Nunes 2004) to one of nine scenarios: eight featuring distinct SBMI archetypes (Barth et al. 2021; Bocken et al. 2014) and one illustrating a non-sustainable model focused on driving comfort. Detailed background information preceded each scenario.

Constructs were measured using validated scales (Klein et al. 2021; Podsakoff et al. 2003). Forty-eight items adapted from Barth et al. (2021) and Bocken et al. (2014) assessed the eight SBMI archetypes, while consumers' adoption intention was captured with three items adapted from Kulviwat et al. (2007). Perceived radicality was measured via items from Futterer et al. (2020) on a 7-point Likert scale. Education, age, income, and gender served as individual-level controls to enhance estimate precision. The complete list of measurement items is provided in Table A5 in the Appendix.

### 4 | Analysis and Results

We employed partial least squares structural equation modeling (PLS-SEM) to estimate and validate the relationships among dependent and independent variables, prioritizing variance-based SEM due to its exploratory orientation (Sarstedt et al. 2021). PLS-SEM offers robustness with smaller samples and fewer distributional constraints (Hair et al. 2014). Model estimation was conducted using SmartPLS 4.0 (Ringle et al. 2015), following



**FIGURE 3** | Structural model results. \* Significant at  $p < 0.1$ ; \*\*significance at  $p < 0.05$ . Controls: Age, education, gender, income. (Adopt Stewardship, Adopt a stewardship role; Create VFW, Create value from waste; Deliver Function, Deliver functionality rather than ownership; MM Efficiency, Maximize material and energy efficiency; Repurpose for S/E, Repurpose for society/environment; Scale Up, Develop scale up solutions; Sufficiency, Encourage Sufficiency; SW Natural Processes, Substitute with renewable and natural processes).

established criteria for measurement and structural model assessment (Sarstedt et al. 2021).

The measurement model evaluation began with reflective first-order constructs, assessing convergent and discriminant validity (Sarstedt et al. 2021). All indicator loadings exceeded 0.70, except one at 0.557, and composite reliability consistently surpassed 0.8 (Bagozzi and Yi 1988). Average variance extracted (AVE) values exceeded 0.50, confirming convergent validity. Discriminant validity was verified using the Fornell-Larcker criterion and cross-loadings (Chin 1998; Fornell and Larcker 1981). Formative second-order constructs were then examined; all weights were significant at  $p < 0.01$ , and variance inflation factors (VIFs) remained below 5 (Hair et al. 2014). As depicted in Figure 3, the structural model yielded an  $R^2$  value for “intention to adopt” of 0.078, indicating modest explanatory power, which is not unexpected given our deliberately parsimonious specification with only three exogenous SBMI predictors. Multicollinearity was again checked via VIFs, which stayed below 3.14 (Sarstedt

et al. 2021). Hypothesis testing involved estimating model parameters and computing t-values via bootstrapping with 1000 resamples (Fornell and Bookstein 1982). These steps ensured robustness in evaluating the hypothesized relationships.

Confirming hypothesis 1, our results show a positive and significant effect of technological SBMI on intention to adopt ( $\beta = 0.142$ ,  $p < 0.1$ ), suggesting that technology-driven SBMIs can meaningfully motivate consumers to adopt. In contrast, H2 was not supported: social SBMI showed no significant influence on adoption intention ( $\beta = -0.085$ , n.s.), indicating that these models may resonate less strongly with consumers. Consistent with H3, organizational SBMI demonstrated a significant positive effect on adoption intention ( $\beta = 0.222$ ,  $p < 0.05$ ).

Given the unexpectedly weak performance of social SBMI, we conducted additional post hoc analyses to examine whether specific social sub-archetypes differed in their influence on

consumers' adoption intentions. A one-way ANOVA comparing mean adoption intentions across the three sub-archetypes (Functionality rather than Ownership, Encourage Sufficiency, and Adopt a Stewardship Role) revealed no significant differences,  $F(2, 122)=1.15$ ,  $p=0.322$ ,  $\eta^2=0.018$ , indicating only a very small effect size. Post hoc Tukey tests confirmed that none of the pairwise comparisons were significant (all  $p>0.30$ ). These results suggest that the weak performance of social SBMIs is not attributable to a single sub-archetype but reflects generally modest effects across all three configurations.

**TABLE 1** | Moderating effects of business model innovativeness on the different types of SBMIs.

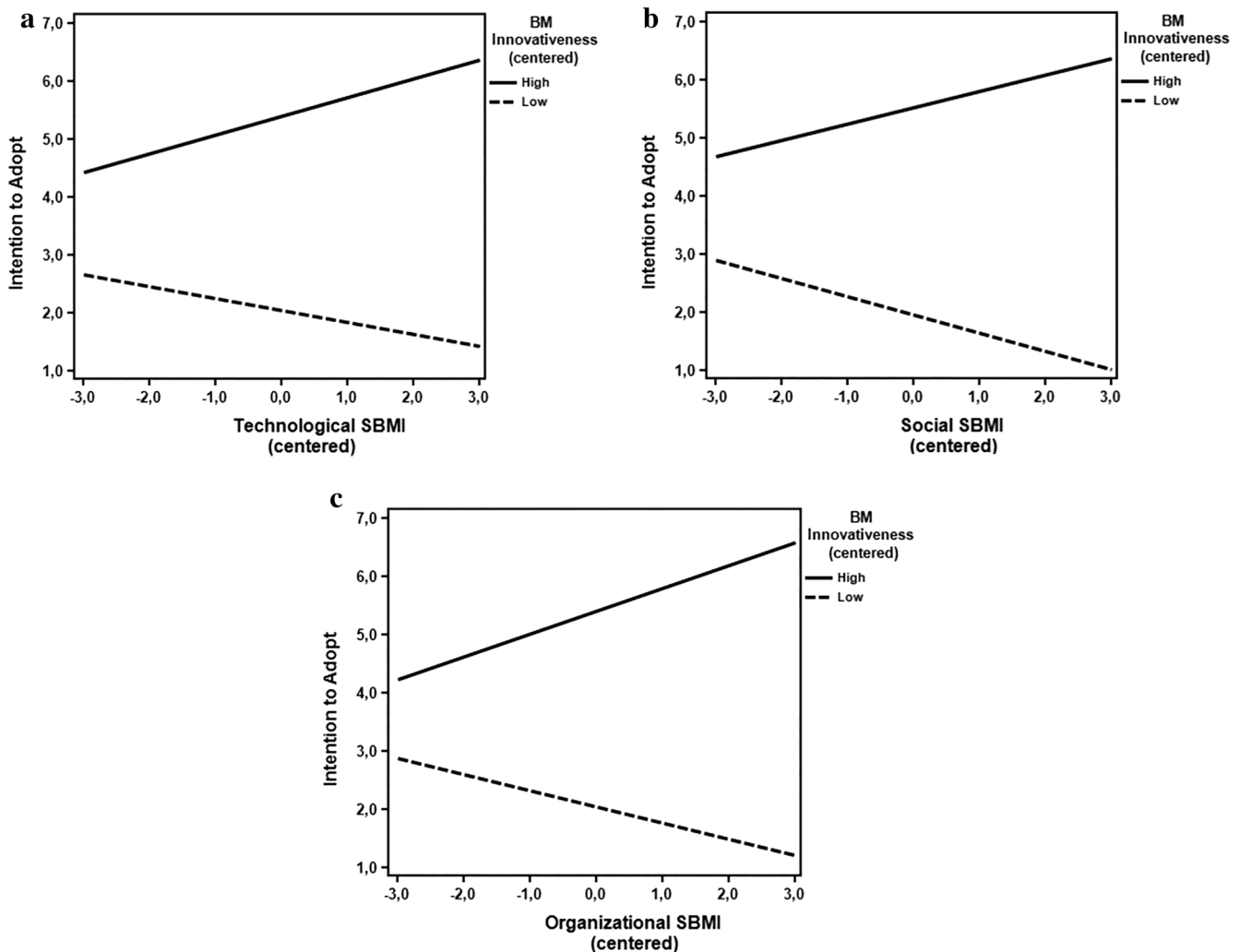
Type of SBMI	Interaction term with BM innovativeness	
	Path coefficient	t-value
Technological SBMI	0.055	2.488
Social SBMI	0.062	2.445
Organizational SBMI	0.070	2.993

Next, to examine the moderating effects of BM radicality (H4), we performed separate interaction analyses using the Interaction software package by Sloper (2011). As shown in Table 1 and Figure 4a–c, all interaction terms were positive and significant, at least at a 5% level, confirming H4. This finding demonstrates that the positive effect of the type of the SBMI on intention to adopt is markedly more pronounced for SBMIs characterized by high levels of innovativeness compared to SBMIs with lower innovativeness.

The effects of the control variables, namely age ( $\beta=0.034$ , n.s.), gender ( $\beta=0.059$ , n.s.), education ( $\beta=0.009$ , n.s.), and income ( $\beta=0.029$ , n.s.) all turned out to be insignificant.

## 5 | Discussion

The relevance of SBMIs as a cornerstone for sustainable transformation and for addressing climate-related challenges such as pollution and resource scarcity is widely acknowledged (Evans et al. 2017; Geissdoerfer et al. 2018; Schaltegger et al. 2016). However, despite growing academic interest, we still know relatively little about how specific SBMI archetypes shape consumers' intentions to adopt such models. This study helps to close



**FIGURE 4** | Interaction effect plots for (a) technological SBMIs, (b) social SBMIs, and (c) organizational SBMIs.

this gap by examining the effects of technological, social, and organizational SBMI archetypes on consumer adoption intention and by testing perceived radicality as a moderator of these relationships.

Our findings show that technological and organizational SBMIs significantly increase consumers' intentions to adopt. Organizational archetypes exert the strongest effect, suggesting that structural commitments, such as repurposing the business for societal or environmental goals or developing scalable sustainable solutions, serve as particularly persuasive signals of credibility and long-term intent (Battilana and Lee 2014; Schaltegger et al. 2016). Technological SBMIs, ranging from maximizing resource efficiency to creating value from waste, also meaningfully enhance adoption intentions, albeit to a lesser extent, consistent with prior work linking sustainability-oriented technologies to perceived usefulness and performance benefits (Geissdoerfer et al. 2018).

By contrast, social SBMIs exerted no significant direct effect on adoption intention. Post hoc analyses revealed that none of the three social sub-archetypes differed meaningfully in their effects, suggesting that the weak performance of the social dimension is not driven by a single configuration but reflects generally modest effects across all three. This finding resonates with previous research at the product level, such as Shao and Ünal (2019), which found that environmental aspects tend to dominate consumer preferences, with social attributes playing a secondary role. One explanation is that social and ethical aspects are often less tangible and less salient during decision-making, making them harder for consumers to process compared to environmental and efficiency-related cues. As De Pelsmacker et al. (2005) also note, social attributes frequently remain at the level of ethical concern without translating into consistent behavioral change. Moreover, consumers tend to equate sustainability primarily with environmental issues, while social aspects are less strongly associated with sustainability in consumer cognition (Sander et al. 2021). This limited mental availability may further explain why social SBMIs fail to trigger the cognitive or emotional responses necessary to shift adoption intentions. Our findings therefore suggest that without targeted framing, contextual cues, or stronger incentives to enhance their visibility and salience, social SBMIs are unlikely to reach their full persuasive potential.

The moderating role of perceived radicality further refines these insights. The perceived radicality of the SBMIs, reflecting consumers' evaluation of how substantially the presented business models departed from established practices, amplified the effects of all SBMI archetypes. Thus, in line with Schneckenberg et al. (2022) view of BMI as a multidimensional change process, radical SBMIs can be interpreted as more profound reconfigurations of strategic intent and resource orchestration. Such profound changes are likely to be perceived as stronger commitment signals by consumers, thereby amplifying the effects of SBMI archetypes on adoption intentions. In the following, we elaborate on the theoretical and practical implications of these findings, offering new insights into the mechanisms that shape consumer responses to SBMIs and the broader impact on sustainable market transformations.

## 5.1 | Theoretical Implications

Our study responds to recent calls for more demand-side research on BMI (Futterer et al. 2020; Heidenreich, Freisinger, and Landau 2022; Priem et al. 2018) by examining how different SBMI archetypes shape consumers' intentions to adopt sustainable offerings.

First, we validate and extend the relevance of Bocken et al. (2014) framework, which categorizes SBMIs into technological, social, and organizational archetypes. While this framework has predominantly been used to analyze firm-level configurations and performance outcomes (Barth et al. 2021; Oliveira-Dias et al. 2022; Ritala et al. 2018), our findings show that it is equally useful for structuring demand-side analyses of consumer reactions to SBMI. Unlike prior work that adapts and tailors archetypes to sector-specific contexts (e.g., Yip and Bocken 2018), we retain Bocken et al. (2014) original archetypes and demonstrate that scenarios grounded in a single industry but tightly aligned with these generic definitions capture meaningful variance in adoption intentions. The technological-social-organizational categorization thus not only offers a parsimonious lens for designing and assessing SBMIs at the organizational level but also provides a transferable conceptual scaffold for theorizing and empirically testing how distinct SBMI configurations are perceived on the demand side.

Second, our findings provide initial evidence on the relative importance of technological, organizational, and social SBMI archetypes from a demand-side perspective and show that consumer reactions follow a distinct pattern. This pattern aligns with product-level research indicating that environmental and efficiency-related benefits tend to outweigh social considerations in consumer decision-making (Shao and Ünal 2019). Similarly, Cotte and Trudel's (2009) review highlights that consumers are generally more willing to change their behavior in response to environmental rather than social issues. Subsequent work explains this asymmetry by showing that social sustainability is often seen as more affective, local, and short-term, whereas environmental sustainability is evaluated in more cognitive, global, and long-term perspectives (Catlin et al. 2017; Sander et al. 2021). By extending these insights to the business-model level, our study demonstrates that consumers evaluate SBMIs through a lens that privileges ecological and performance dimensions, while social dimensions carry less persuasive weight. This advances the understanding of how different sustainability dimensions matter for business model design and underscores the need to align SBMIs with consumer preferences to enhance adoption intentions.

Third, our study identifies perceived radicality of SBMIs as a central demand-side boundary condition for the effectiveness of different archetypes. Across technological, organizational, and even the comparatively weaker social archetypes, consumers' willingness to adopt increased markedly when the business models were perceived as more radical. This finding aligns with Futterer et al. (2020), who show that the adoption impact of BMI depends on the perceived innovativeness of its elements, and it extends product-level work such as

Paparoidamis et al. (2019), which links the innovativeness of sustainable products to higher adoption intentions. By demonstrating that, in sustainability-oriented contexts, radicality functions as a powerful amplifier of adoption intentions at the business-model level, our results suggest that traditional, incremental SBMIs are unlikely to generate substantial behavioral change. Instead, they support theoretical arguments that only more radical reconfigurations of value creation, delivery, and capture can drive systemic transformation (Boons and Lüdeke-Freund 2013; Cillo et al. 2019). In doing so, the study underscores the need for a paradigm shift toward genuinely innovative SBMIs that not only address ecological and social challenges more effectively but also engage consumers through perceptible, credible, and profound changes in how firms do business.

## 5.2 | Practical Implications

The findings of this study provide decision-makers in sustainability management and strategic roles with evidence-based strategies to address challenges in implementing SBMIs. These insights enable the development of targeted, practice-oriented strategies that promote consumers' intention to adopt SBMs while maintaining competitiveness in an increasingly sustainability-driven market. By applying these strategies, companies can achieve sustainability goals, foster consumer trust, and ensure long-term economic and environmental success. Importantly, the results also suggest that managerial action should be tailored to the specific strengths and weaknesses of technological, organizational, and social SBMIs rather than treating them as a homogeneous category. The following key implications can be drawn:

First, the results emphasize the strategic importance of integrating technological and organizational innovations into SBMs and actively managing how these are perceived by consumers. For technological SBMIs, managers should not only implement solutions such as energy-efficient production methods or circular economy models, but also clearly communicate performance gains (e.g., reliability, cost savings) and ease of use, offer low-risk trial opportunities, and reduce perceived complexity through simple, user-oriented explanations. For organizational SBMIs, such as scale-up solutions or hybrid business models, making structural commitments visible is crucial: firms can formalize their purpose, disclose governance arrangements, highlight long-term investments in sustainable infrastructure, and use certifications or independent audits as credibility signals. In contrast, social SBMIs require coping strategies that tackle their weaker demand-side performance: managers should frame social initiatives explicitly in terms of consumer-relevant benefits (e.g., fairness, community well-being), reduce perceived inconvenience by embedding them in convenient service formats, and use storytelling, impact reporting, and trusted intermediaries (e.g., NGOs) to increase the salience and observability of social outcomes.

Second, our findings suggest that combining archetypes can be used strategically to compensate for weaknesses in individual SBMI types, particularly for social SBMIs. Managers may deliberately anchor social initiatives in a strong technological

and organizational “backbone,” for example by linking community benefits or sufficiency strategies to visible efficiency gains or to clearly institutionalized commitments in governance and partnerships. Technological innovations like energy-efficient production methods can be complemented with social elements such as local benefit-sharing schemes, while organizational measures (e.g., repurposing the firm's mission) can be made tangible through concrete social programs. By purposefully designing such bundles, firms can use technological and organizational strengths to legitimize and stabilize social SBMIs, thereby creating a more comprehensive and attractive value proposition that addresses environmental, social, and economic priorities simultaneously and fosters stronger consumer engagement.

Third, the study demonstrates that radical SBMIs across all three categories significantly enhance adoption intentions, which has direct strategic implications. Rather than relying solely on incremental adjustments, managers should consider when more far-reaching changes in value creation, delivery, and capture are necessary to signal credible commitment and to break through consumer inertia (Heidenreich, Freisinger, and Landau 2022). In technological SBMIs, this may involve introducing disruptive product-service configurations (e.g., take-back and refurbishment systems) rather than minor eco-efficiency tweaks; in organizational SBMIs, it may entail reorienting the core business toward renewable or circular logics; and in social SBMIs, it may mean designing bold sufficiency or access models that visibly challenge status-quo consumption. At the same time, firms should manage the risks of radical change by phasing implementations, involving lead users and stakeholders in co-creation, and accompanying radical SBMI moves with clear, consistent communication. Implementing transformative, future-oriented measures within each archetype in this way enables companies to leverage the amplification effect of perceived radicality, more effectively achieve their sustainability objectives, deliver measurable and impactful changes to consumers, and position themselves as frontrunners in an increasingly competitive, sustainability-driven market environment.

## 6 | Limitations and Avenues for Future Research

Despite a careful research design, this study has limitations. First, the sample ( $n = 349$ ) is restricted to Germany, Austria, and Switzerland, which may limit the generalizability of our findings to other cultural or economic contexts. Future research should broaden the sampling frame to additional countries to capture cross-national variation in adoption intentions. Likewise, our industry-specific focus on electromobility may constrain the transferability of results to other sectors, as perceptions of innovativeness are often industry-dependent. Examining SBMIs in other domains (e.g., fashion or consumer goods) could provide a more comprehensive understanding of how BMIs are evaluated across contexts.

Second, a further limitation concerns the relatively modest share of variance in adoption intention explained by our model (about 10%). This is partly due to our deliberately parsimonious design, which uses only three high-level SBMI archetypes as predictors. Diffusion of innovation theory (Rogers 2003) explicitly distinguishes characteristics of the adoption subject, the

adoption object, and the adoption environment as key drivers of adoption. However, in line with much experimental adoption research (Futterer et al. 2020; Heidenreich, Freisinger, and Landau 2022), our study focuses exclusively on the adoption object by manipulating SBMI archetypes while largely holding subject- and context-level influences constant, even though these domains are typically important additional predictors of adoption behavior (Paulus et al. 2022). As a result, psychological mediators (e.g., perceived usefulness, social value, trust) and boundary conditions related to the adoption subject and environment are not modeled. Future research should therefore extend our adoption object-focused approach by incorporating psychological mediators (e.g., perceived usefulness, trust, moral identity) to unpack the mechanisms linking SBMIs to adoption and examine boundary conditions through moderators related to the adoption subject and environment (e.g., environmental concern, prior green behavior, social norms).

Third, our findings indicate that social SBMIs do not significantly increase consumers' adoption intentions. Although post hoc analyses showed that none of the three social sub-archetypes have a direct effect, our design does not reveal why these models underperform. To clarify the underlying mechanisms and identify ways to enhance their effectiveness, future research could employ qualitative approaches, such as interviews or focus groups, to uncover key drivers and barriers. Promising avenues include examining perceptions of restriction or tensions with consumerist ideals in sufficiency strategies (Singh and Giacosa 2019), the low visibility of stewardship benefits (Heinl et al. 2021), and uncertainty regarding convenience or usage in functionality-over-ownership models (Muylaert et al. 2022).

Finally, our experimental design does not allow us to examine potential interaction effects between technological, social, and organizational SBMIs. Each participant was exposed to only one SBMI archetype (or the control condition), which implies that different archetype configurations do not co-occur within the same observation. This is a relevant limitation because, conceptually, synergies or trade-offs between different SBMIs are likely: for example, social initiatives may be perceived differently when embedded in strongly technological or organizational transformations. Future research should therefore employ designs that can explicitly vary and combine archetype features within scenarios, such as factorial vignette experiments or conjoint analyses, to test how configurations of technological, social, and organizational SBMIs jointly shape consumer responses.

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## Appendix A

**TABLE A1** | Descriptive analysis of the main study: Demographic characteristics of respondents.

Gender			Age	Education					Income
Male	Female	Other		Secondary school diploma	Vocational training	High-school diploma	Graduate degree	Other degree	> 35.000€
57.3%	42.1%	0.6%	42.9	6.0%	15.8%	21.2%	55.6%	0.3%	42.7%

**TABLE A2** | Pretest—List of measurement items for the pretest.

Construct	Initial Items	Items adapted based on
Realism	1 I can easily put myself in the described situation.	Darley and Lim (1993); Wagner et al. (2009)
	2 The situation described above is easy for me to understand.	
	3 I can imagine that I would encounter the described business model in real life.	
	4 In real life, it is conceivable that I would come into contact with such products.	
Perceived business model innovation	1 How much does this business model differ from other business models you have known so far?	Paparoidamis et al. (2019)
	2 How innovative do you think this business model is?	
	3 To what extent would this business model change the way you have perceived business models up to now?	

**TABLE A3** | Pretest—Means for realism and perceived business model innovativeness for each scenario, including the control scenario.

SMBI archetype scenarios and control scenarios		Realism		Business model innovativeness	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Group 1	Material and energy efficiency	5.31	1.20	4.51	1.37
	Control	5.49	1.18	4.01	1.51
Group 2	Create value from waste	5.45	1.48	5.14	1.46
	Control	4.49	1.66	5.35	1.34
Group 3	Substitute with renewable and natural processes	5.77	1.07	4.7	1.31
	Control	5.77	1.07	5.70	1.08
Group 4	Functionality rather than ownership	5.66	0.87	4.54	1.40
	Control	5.57	0.96	3.91	1.50
Group 5	Stewardship role	5.29	1.12	4.36	1.32
	Control	5.51	0.98	4.01	1.35
Group 6	Sufficiency	5.62	1.2	4.77	1.00
	Control	5.56	1.38	3.58	1.34
Group 7	Repurpose for society and environment	5.29	1.30	5.37	0.98
	Control	5.65	1.06	4.38	1.68
Group 8	Develop scale up solutions	5.32	1.26	5.04	1.23
	Control	5.40	1.50	4.27	1.73

**TABLE A4** | Pretest—Results of the paired *t*-test confirming the differentiation between SBMIs and the control scenario, ensuring intended scenario perception.

SMBI archetypes	Scenario		Control		<i>t</i>	<i>df</i>	<i>p</i>	Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
Material and energy efficiency	5.60	1.21	3.78	1.73	5.33	46	<0.001	2.337
Create value from waste	5.70	1.46	3.35	1.91	5.71	30	<0.001	2.291
Substitute with renewable and natural processes	5.51	0.69	2.89	1.90	6.17	21	<0.001	1.992
Functionality rather than ownership	6.08	1.18	3.53	1.53	6.25	30	<0.001	2.272
Stewardship role	5.11	1.09	3.96	1.42	-4.03	25	<0.001	1.460
Sufficiency	5.37	1.19	3.25	1.62	5.38	30	<0.001	2.194
Repurpose for society and environment	5.88	0.93	3.46	2.08	5.50	26	<0.001	2.294
Develop scale up solutions	6.00	1.20	3.56	2.01	-5.71	30	<0.001	2.376

**TABLE A5** | Main study—List of measurement items for the main study.

<b>Construct</b>		<b>Initial Items</b>	<b>Items developed based on</b>
Business model archetype			
Maximize material and energy efficiency	1	The company works in a resource-efficient manner to reduce emissions, pollution and waste.	Barth et al. (2021); Bocken et al. (2014)
	2	The company works to rationalize the value chain (e.g., production and transport) by using fewer resources, thereby reducing emissions, pollution and waste.	
	3	The company works to optimize the use of materials and reduce waste in order to lower costs.	
	4	The company works in a respectful and sustainable way to reduce emissions, pollution and waste.	
	5	The company works to streamline the supply chain by using fewer resources, thereby reducing emissions, pollution and waste.	
	6	The company works with efficient use of materials and reduced waste to lower costs.	
Create value from waste	1	The company reuses scrap and waste.	Barth et al. (2021); Bocken et al. (2014)
	2	The company works actively to ensure that both the company and its partners utilize the benefits of waste.	
	3	The company works to reduce costs by reusing materials and recycling waste.	
	4	The company tries to avoid rejects and waste by considering them as useful and valuable material for other types of production.	
	5	The company is constantly working to ensure that both the company and its partners can reap the benefits of waste.	
	6	The company works to reduce costs by recycling materials and reducing waste.	
Substitute with renewable and natural process	1	The company is working to reduce its impact on the environment through renewable energy sources or natural processes.	Barth et al. (2021); Bocken et al. (2014)
	2	The company utilizes renewable energy sources or natural processes to reduce the amount of waste produced.	
	3	The company uses renewable energy sources and reduces the use of non-renewable resources in order to increase profits.	
	4	The company works with renewable energy sources or natural processes that reduce the environmental impact.	
	5	The company reduces its environmental impact and increases its competitiveness by focusing on renewable energy sources.	
	6	The company reduces its environmental impact and increases profits by focusing on natural processes and reducing waste.	
Deliver functionality rather than ownership	1	The company provides services that users need without having to own the physical product.	Barth et al. (2021); Bocken et al. (2014)
	2	The company's business orientation requires that both the company and its partners maintain close contact and dialog with their customers in order to meet their needs.	
	3	The customers pay for using the service and not for owning the product.	
	4	The company offers a service that meets the customer's needs without them owning a physical product.	
	5	The company and their partners focus on close contact and dialog with their customers in order to meet their needs.	
	6	The company's customers do not own the product, but pay for the use of the data.	

(Continues)

TABLE A5 | (Continued)

Construct		Initial Items	Items developed based on
Adopt a stewardship role	1	The company actively works to ensure the long-term health and well-being (both in terms of the environment and society) of all those affected by the company's operations.	Barth et al. (2021); Bocken et al. (2014)
	2	The company ensures that the company and its partners work to achieve the long-term health and well-being (both environmental and social) of all those affected by its operations.	
	3	Actively ensuring long-term health and wellbeing (both in terms of the environment and society) strengthens the company's brand and provides the opportunity to charge a higher price.	
	4	The company works proactively with all stakeholders to ensure the long-term health and well-being of all those affected by the company's operations.	
	5	The company strengthens its brand by actively promoting long-term health and well-being (both in terms of the environment and society).	
	6	The company can charge a higher price by actively ensuring long-term health and well-being (both in terms of the environment and society).	
Encourage sufficiency	1	The company works to influence customers' behavior in order to reduce consumption by offering products/services that contribute to this.	Barth et al. (2021); Bocken et al. (2014)
	2	The company ensures that the company and its partners focus on using and throwing away less and using the products for longer.	
	3	The company helps increase demand by educating and informing the public about its sustainable products, which creates long-term profitability and satisfied customers.	
	4	The company offers solutions that actively aim to reduce consumption and production.	
	5	The company offers products and services that help to influence customer behavior and reduce consumption.	
	6	The company and its partners are focusing on using and throwing away less and using products for longer.	
Repurpose for society/environment	1	The company conducts business activities that contribute to a low environmental impact and at the same time are part of a sustainable society.	Barth et al. (2021); Bocken et al. (2014)
	2	The company focuses on creating social and environmental benefits through non-traditional business relationships, for example by encouraging employees to participate in the company.	
	3	The company focuses on achieving social and environmental benefits instead of maximizing economic profit, for example through close cooperation between the company and rural areas.	
	4	The company prioritizes the achievement of social and environmental benefits over financial profits and financial targets.	
	5	The company contributes to a low environmental impact and at the same time is part of a sustainable community.	
	6	The focus is on creating social and environmental benefits through non-traditional business approaches.	

(Continues)

TABLE A5 | (Continued)

Construct	Initial Items	Items developed based on
Develop scale up solutions	1 The company strives to develop and disseminate sustainable solutions in order to maximize the benefits for society and the environment.	Barth et al. (2021); Bocken et al. (2014)
	2 The company chooses a partner for the development and provision of sustainable solutions.	
	3 The company uses franchising or licensing to grow the business.	
	4 The company develops and distributes sustainable solutions to maximize the benefits for society and the environment.	
	5 The company participates in maximizing the benefits for society and the environment through the development and dissemination of sustainable solutions.	
	6 The company selects its partners in such a way as to ensure the development and provision of sustainable solutions.	
<b>Perceived radicalness</b>		
The described business model differs very strongly from existing business models.	Futterer et al. (2020) adapted from Atuahene-Gima (1995), and Langerak et al. (2004)	
<b>Intention to adopt</b>		
If you had access to such a company in the future, how likely would you be to use its products?		
1. Unlikely/likely	Kulviwat et al. (2007)	
2. Improbable/probable		
3. Impossible/possible		