Business Strategy and the Environment

WILEY | Business Strategy and the Environment

RESEARCH ARTICLE OPEN ACCESS

Sustainability-Oriented Innovation and Circular Economy Transitions: Evidence From the UK Textile and Clothing Industry

Krishnendu Saha[1] | Narain Gupta[1] | Deniz E. Yoruk[1] | Vikas Kumar[2]

[1]Birmingham City Business School, Birmingham, UK | [2]University of Portsmouth, Portsmouth, UK

Correspondence: Krishnendu Saha (krish.saha@bcu.ac.uk)

Received: 9 July 2025 | **Revised:** 24 November 2025 | **Accepted:** 16 December 2025

Keywords: circular economy | contextual moderators | creative destruction | partial least squares (PLS-SEM) | sustainability-oriented innovation | textile and clothing industry

ABSTRACT

The transition to a circular economy (CE) in the textile and clothing (TC) industry is frequently attributed to sustainability-oriented innovation (SOI), yet empirical understanding of the systemic conditions under which SOI enables CE remains underdeveloped. This study addresses the gap by offering a novel, context-specific analysis of how consumer behaviour and institutional quality shape the effectiveness of SOI in a high-consumption, developed economy context. Drawing on survey data from 280 UK-based textile and clothing firms and employing rigorous partial least squares-structural equation modelling (PLS-SEM), this study provides robust evidence that SOI has a significant positive influence on circular economy transitions (CET). However, this effect is contingent: it is strengthened by consumer willingness to buy and weakened by institutional voids. Notably, regulatory compliance, often assumed to drive sustainability, does not significantly moderate the relationship between the SOI and CET. These findings challenge linear models of innovation diffusion and reinforce a more relational, system-aware understanding of circular transitions. The study makes an original theoretical contribution by modelling SOI as a second-order construct and CET as a multidimensional outcome. It offers actionable insights for firms and policymakers by exposing the limitations of compliance-led strategies and calling for more integrated, behaviourally informed approaches to managing innovation for sustainability.

1 | Introduction

As calls for transitioning to a circular economy (CET) have intensified (Ishaq et al. 2025), in response to escalating and irreversible ecological damage, sustainability-oriented innovation (SOI) has emerged as a key driver of this transition (Dey et al. 2020). SOI entails the integration of environmental and social considerations into innovations (Adams et al. 2016; Tanveer et al. 2024), while CET represents systemic shifts away from the linear 'take–make–dispose' model towards regenerative, closed-loop systems prioritising reuse, recycling, and resource efficiency (Dey et al. 2022).

Theoretically, SOI acts as an enabler of CET by providing the innovation capabilities, product/service redesigns, and business model transformations required to operationalise

Abbreviations: AB-PSS, access-based product-service systems; CB, consumer behaviour; CE, circular economy; CET, circular economy transitions; CG, circular growth; CS, circular synergy; EPR, extended producer responsibility; IF, institutional factors; IV, institutional voids; PLS-SEM, partial least squares-structural equation modelling; RC, regulatory compliance; SBM, sustainable innovations in business models; SDGs, sustainable development goals; SOI, sustainability-oriented innovation; SPI, sustainable innovations in products; SPRI, sustainable innovations in processes; TC, textile and clothing; WB, willingness to buy.

circular principles (De et al. 2020). Empirically, however, the SOI–CET link has not been consistently validated, as consumer demand, institutional support, and systemic constraints often influence/disrupt this relationship, particularly in resource-intensive sectors such as textiles and clothing (TC) (Saha et al. 2024).

Notably under-explored are the systemic and contextual factors that may strengthen, weaken, or distort the effectiveness of SOI in driving circularity (Dey et al. 2020). We argue that consumer behaviour (CB) and institutional factors (IF) are two critical moderators. On the demand side, consumers' willingness to buy (WB) sustainable and circular products directly affects the commercial viability of SOI, yet WB is influenced by trust, affordability, and convenience trade-offs that can either reinforce or undermine circular transitions (Cascavilla et al. 2025). On the institutional side, regulatory compliance (RC) and institutional voids (IVs), such as fragmented enforcement or policy misalignment, can act as hidden barriers to scaling sustainable innovations. While existing literature (*see* Saha et al. 2024) acknowledges these influences, they are often treated as background context or external constraints, rather than as dynamic moderators of the SOI–CET relationship.

A recent literature review of the authors (see Saha et al. 2024) allowed us to identify three significant gaps: first, much of the existing literature (e.g., Mehrabi et al. 2025; Rodríguez-Espíndola et al. 2022) focuses either on internal firm capabilities (e.g., dynamic capabilities, lean–SOI synergies) or supply-side challenges in resource-constrained settings, overlooking demand-side dynamics and institutional contingencies that shape innovation outcomes. Second, SOI has often been studied in manufacturing contexts within developed countries (e.g., De et al. 2020; Dey et al. 2020), yet relatively little attention has been paid to how it functions in high-consumption markets with advanced environmental regulations. And third, the mechanisms through which SOI influences CE remain under-theorised, particularly with respect to moderating factors like CB and IFs (Adebanjo et al. 2016). Constructs such as WB, a key behavioural driver of sustainable consumption, have been discussed in CE literature but are rarely embedded within SOI-CET frameworks. Likewise, IV and RC issues are recognised as structural impediments (Calzolari et al. 2025; Huq et al. 2014; Stål and Corvellec 2022), yet their moderating influence on the SOI–CET relationship is seldom modelled empirically.

To address these gaps, we pose the following research questions (RQs):

RQ1. How does SOI drive CET?

RQ2. Do CB and IFs moderate the relationship between SOI and CET? If so, how?

We chose the TC industry as the empirical and the United Kingdom as the developed country context for this matter. The TC industry has long been recognised as a significant contributor to environmental degradation, with unsustainable production practices, resource-intensive processes, and high levels of waste generation (Colucci and Vecchi 2024). The sector accounts for approximately 10% of global greenhouse gas emissions and nearly 20% of industrial water pollution annually (Saha et al. 2021).

Similarly, as a developed, consumption-intensive economy with relatively mature sustainability regulations, the United Kingdom represents a pertinent context where the presence of SOI, consumer awareness, and regulatory frameworks should, in theory, support CET. However, the UK's TC waste remains among the highest in Europe (Moore 2020), and circular models have not scaled at pace, raising questions about the systemic frictions that continue to obstruct transformation. This makes the United Kingdom a critical test case for evaluating the real-world conditions under which SOI enables CET, and where it falls short.

Drawing on survey data from 280 UK textile and clothing firms, the study uses PLS-SEM to explore how SOI drives CET. It conceptualises SOI as a multidimensional construct comprising product, process, and business model innovations, each contributing distinctly to CET. The findings extend institutional theory by showing that institutional voids weaken the SOI–CET relationship even in a developed country, while regulatory compliance has no significant effect. They also contribute to consumer behaviour theory by revealing that willingness to buy acts as a dynamic moderator, with consumer engagement shaped by trust, affordability, and systemic reinforcement.

Our findings position circular economy transitions as a contemporary manifestation of creative destruction, a process recently revisited by the 2025 Nobel Prize in Economic Sciences awarded to Philippe Aghion, Peter Howitt, and Joel Mokyr for their work on innovation-driven growth (Aghion and Howitt 1992). By revisiting Schumpeter's (1943a) insight that progress emerges through cycles of renewal and replacement, we show how SOI might function as a modern form of creative destruction in the long term due to its potential to dismantle linear, resource-intensive systems while generating regenerative pathways. However, this is conditional upon SOI being supported by a move beyond today's compliance-based strategies toward integrated approaches that align innovation with institutional adaptation/reform and behavioural change.

The paper is organised as follows: Section 2 critically reviews the literature and develops the conceptual framework and hypotheses for analysis; Section 3 describes the methodological framework, including survey design, data collection, and PLS-SEM method and model; Section 4 analyses the data and presents the results. Section 5 offers a discussion of the findings before concluding in Section 6.

2 | Literature Review

This study adopts an integrated theoretical framework comprising institutional theory (DiMaggio and Powell 1983; North 1990; Scott 2013), consumer behaviour (CB) theory of planned behaviour (Ajzen 2020, 1991), and complementarity theory (Mahapatra et al. 2010; Milgrom and Roberts 1995) to explore the role of SOI in driving CET in the TC industry in a developed country context.

2.1 | Sustainability-Oriented Innovation (SOI)

The concept of innovation for sustainability is rooted in Schumpeter's notion of creative destruction (Schumpeter 1943b). Laureates of the 2025 Nobel Prize in Economic Sciences, Aghion and Howitt (1992) demonstrated how technological renewal drives long-term economic growth through cycles of disruption and replacement. This logic has since been extended to ecological contexts through the lens of eco-innovation (Rennings 2000).

SOI synthesises these traditions, embedding purpose-driven transformation across firm functions (Adams et al. 2016) and technology transitions across sectors and societies (Freeman and Perez 1988; Geels 2002; Perez 2002). Therefore, distinct from conventional innovation, which emphasises efficiency or cost reduction, SOI entails a more holistic approach that integrates environmental, social, and economic value into product, process, and business model innovations; converting them into sustainable product innovation (SPI), sustainable process innovation (SPRI), and sustainable business models (SBM) (Boons et al. 2013; Boons and Lüdeke-Freund 2013). As per the complementarity theory, SPI, SPRI, and SBM hold the key to creative destruction as mutually reinforcing components of SOI, creating synergistic value when pursued holistically rather than as isolated efforts.

It is also important to note that SOI extends beyond related concepts such as green, eco, or circular innovation (Cruciata et al. 2024). Green innovation typically focuses on pollution control, whereas eco-innovation encompasses lifecycle thinking (Bossle et al. 2016). In contrast, circular innovation focuses on closing resource loops (Bocken et al. 2025). SOI, however, encompasses all these but additionally requires broader organizational transformation and social impact integration (Afeltra et al. 2023). Therefore, SOI has the potential to generate a techno-economic paradigm shift (i.e., CET) in overarching production systems, organization and institutions (Dey et al. 2020).

2.2 | Circular Economy Transitions (CET)

A growing body of research presents CET as a complex, multidimensional process influenced by institutional dynamics, innovation capacities, and systemic conditions/barriers. Below, we address this multidimensionality through the lenses of the theories adopted in this study.

2.2.1 | CET and Institutional Voids

Institutions comprise both formal institutions (rules, policies, enforcement) (North 2016) and informal cultural norms (Scott 2013). Institutional theory provides the foundation for understanding how external regulatory frameworks (formal institutions), societal/cultural norms (informal institutions), and market structures (institutional void) influence the adoption of SOI (Saha, Malesios, et al. 2023). In the context of CET, this theory helps explain how varying institutional contexts either enable or constrain the adoption of SOI. Specifically, in institutional environments characterised by robust RC mechanisms, enforceable environmental legislation, and supportive policy infrastructures, as demonstrated by developed countries, firms are more likely to engage in SOI not merely as an operational adaptation, but as a strategic act of legitimacy-seeking and field-level alignment (Bromley and Powell 2012; North 1990).

Conversely, in institutional environments characterised by weak governance, fragmented infrastructure, or regulatory ambiguity (North 2016; Scott 2013), the institutional logics necessary to sustain transformative innovation remain underdeveloped, resulting in symbolic rather than substantive adoption of circular practices. IVs, defined as the absence or weakness of formal regulations and enforcement mechanisms, are typically associated with developing economy contexts (Peng et al. 2009). This framing is particularly salient in the TC industry, where global value chains span jurisdictions with varying degrees of IVs (Gereffi et al. 2005). In addition, fragmented infrastructure, weak enforcement, and policy ambiguity also constrain CET in developed economies (Calzolari et al. 2025). This stems from institutions being unprepared for the new paradigm, and CET operating within institutions built for the existing system (Dey et al. 2020). Even when formal regulations exist, the practical efficacy of RC is frequently undermined by means–end decoupling, where firms symbolically comply with (Stål and Corvellec 2022).

2.2.2 | CET and Consumer Behaviour

In parallel, informal institutions, such as social norms, cultural values, and societal expectations, manifest most directly through consumers' planned behaviour (Ajzen 2020, 1991), in the form of the willingness to buy (WB) sustainable products. WB reflects consumers' readiness to act on sustainability preferences under real-world trade-offs (Manika et al. 2021). It is particularly relevant for assessing the adoption potential of CET through SOI-driven business models, which require consumers to evaluate not only price and utility but also trust in sustainability claims and perceived value (Cascavilla et al. 2025).

These informal pressures are critical in legitimising or inhibiting CET through SOI. In markets with strong normative expectations around sustainability (e.g., the United Kingdom), consumers are more likely to favour circular offerings such as rental, resale, or biodegradable garments (Tunn et al. 2021). Also, consumers willing to pay more for sustainable options is evidenced in Italy, where subsidies for circular offerings show better consumption outcomes compared to punitive measures, such as carbon tax, particularly in the low-income consumer groups (Cascavilla et al. 2025). Encouraging evidence from other sectors suggests that consumers can respond positively to sustainability initiatives when trust and value alignment are clearly established. For instance, in the animal health industry, Saha, Malesios, et al. (2023) report that customers were not only receptive to sustainability claims but also willing to pay up to a 20% premium for environmentally responsible products.

On the contrary, in socio-cultural contexts where affordability, trend responsiveness, or convenience outweigh sustainability concerns, choice dilemmas may arise, leading to behavioural inconsistencies that hinder the market diffusion of SOI and overall, CET (Saha et al. 2024). For instance, in the TC industry (fast fashion segment, particularly), this potential is often constrained by persistent choice dilemmas, convenience, ethical trade-offs, and a lack of willingness to pay a sustainability premium (Tunn et al. 2021). Research (e.g., Colasante and D'Adamo 2021; Hussain et al. 2025) also indicates that, despite expressing pro-sustainability attitudes, many consumers hesitate to follow through when sustainable alternatives come with higher prices or unfamiliar usage models.

For these reasons, informal institutional forces are conceptually situated within the broader framing of consumer WB to account for consumer heterogeneity across geographies, income levels, and cultural contexts. These demand-side dynamics, particularly CB, have not received substantial scholarly attention in comparison to the role of firms in driving CET. This gap is especially critical in the TC industry, where fast fashion, disposability norms, and identity-driven consumption influence the viability and direction of SOI (Colasante and D'Adamo 2021).

2.2.3 | CET and Complementarities

Complementarity theory posits that the joint adoption of mutually reinforcing practices can lead to superior performance outcomes (Mahapatra et al. 2010). In the context of CET, the complementarity theory offers a valuable explanatory framework for understanding how internal innovation capabilities and external environmental conditions interact to influence transition outcomes. Specifically, SOIs across product, process, and business model domains often generate non-linear and synergistic effects on CET when enacted in mutually reinforcing configurations (Dey et al. 2020).

SOI contributes to resource efficiency, waste minimisation, and the reduced reliance on finite resources (Reike et al. 2023). SPI is often the entry point for circularity in TC firms, incorporating eco-design principles and sustainable materials to meet rising consumer demand (Saha et al. 2024). SPRIs build on this by adopting cleaner production methods and closed-loop systems, increasingly supported by digital tools for traceability, performance monitoring, and supply chain optimisation (Ecer and Torkayesh 2024). The third domain, SBM, includes models like resale, rental, and product take-back schemes, often based on Access-Based Product-Service Systems (AB-PSS), that enable extended use, reduce resource inputs, and close material loops (Fischer and Pascucci 2017; Kühl et al. 2022). These complementarities are not inherent but contingent, as they depend on the alignment with enabling institutional structures and demand-side factors such as regulatory incentives and consumer WB.

2.2.4 | CET in the TC Industry

In the literature, circular growth (CG) and circular synergy (CS) emerge as key constructs of CET (Manolchev et al. 2024; Ratsimandresy and Miemczyk 2025). CG reflects firms' ability to decouple resource use from economic expansion, while CS captures how inter-firm and inter-sectoral collaborations (e.g., closed-loop supply chains, shared recovery systems) generate system-wide sustainability gains (Ishaq et al. 2025). This is particularly relevant for small and medium-sized enterprises (SMEs), which dominate the TC value chain. Although SMEs possess the agility to trial circular practices, they often lack access to enabling infrastructure such as textile recycling facilities and digital traceability platforms (Dey et al. 2022). These constraints hinder their ability to scale CE strategies, despite strong innovation potential.

For that matter, CET in the TC industry is a non-linear, context-sensitive transformation that depends on the alignment of technological innovation, organisational change, institutional support, and consumer participation (Dey et al. 2022; Goworek et al. 2018). Recognising the complexities, contradictions, and potential unintended consequences (e.g., rebound effects and systemic inertia) is key to designing realistic and effective interventions. In such a multi-actor ecosystem, SOI, when strategically embedded, can serve both as an enabler and an outcome of this transition.

2.3 | SOI for CET

SOI is both a strategic capability and a path-dependent process, shaped by internal leadership and external stakeholder demands. Combinedly, these three domains of innovation (i.e., SPI, SPRI, and SBM) position SOI as a critical enabler of CETs (Manolchev et al. 2024). Critical perspectives, however, caution against viewing SOI as a panacea, as it often involves high upfront investments, technological constraints, and operational complexity. For example, closed-loop textile recycling technologies are promising, but they remain costly and inaccessible to many firms (Perotti et al. 2025).

Moreover, SBMs such as AB-PSS may inadvertently promote fast consumption cycles or short-term use, especially when CB is driven by convenience rather than sustainability (Siderius and Poldner 2021; Tunn et al. 2021). Overreliance on firm-led innovation might also be a downside of SOI. For example, Rossi and Srai (2024) argue that without institutional alignment, even robust SOI practices can lead to rebound effects, where efficiency gains inadvertently stimulate higher consumption, offsetting environmental benefits (Saha et al. 2024). Further, the rebound effect poses a paradox: consumers may engage in circular behaviours (e.g., renting or buying recycled garments) but offset these by consuming more frequently under the guise of sustainability (Yerushalmi and Saha 2025). Thermodynamic limitations also persist, as in reality, material degradation over time makes infinite reuse or recycling physically impossible (Lehmann et al. 2023). This divergence highlights the need to explore SOI not as a deterministic driver of CET, but as a contingent enabler shaped by internal complementarities and external institutional factors.

Adams et al. (2016), a foundational contribution, conceptualise SOI as a multi-level process involving optimisation (e.g., waste reduction), organisational transformation (e.g., strategic reconfiguration), and systems building (e.g., institutional engagement). Klewitz and Hansen (2014) emphasise the development of dynamic capabilities in SMEs, in addition to these processes. Empirical research supports this continuum, highlighting how firms reconfigure not only their operational processes but also their innovation logics to enable CET (Mehrabi et al. 2025; Rogers 2003). For example, Dey et al. (2020) empirically examine how lean practices and SOI interact to enhance the sustainability performance of UK-based SMEs, and later they (Dey et al. 2022) extend this analysis across European SMEs adopting circular economy practices. These studies offer robust evidence of how SOI unfolds in resource-constrained contexts and how internal capabilities influence sustainability outcomes.

More recently, efforts have been made to systematise the measurement of SOI to reflect its multidimensional nature and its alignment with the SDGs. Baxter and Chipulu (2023), for example, created a measurement scale based on the triple bottom line, covering environmental factors such as carbon footprint and lifecycle impact, as well as market focus and performance capabilities. This reflects a growing consensus that SOI cannot be meaningfully assessed through single indicators but requires multi-criteria frameworks that account for systemic trade-offs and organisational capabilities (Reike et al. 2023).

In the TC industry, SOI takes shape through multiple, interrelated pathways that reflect its multidimensional nature and the three-level continuum of innovation, namely operational optimisation, organisational transformation, and systems building (Saha et al. 2021). For instance, SPRIs such as lean manufacturing, low-impact dyeing, closed-loop production, and digital traceability represent efforts at operational optimisation by enhancing resource efficiency and reducing environmental burdens.

Simultaneously, SPIs rooted in biomimicry, design thinking, and the use of biodegradable or recyclable fibres contribute to organisational transformation by embedding sustainability into product design and manufacturing processes (Saha et al. 2024). SBMs, including leasing, resale, and rental, further extend product lifespans by aligning business models with CE principles and the SDGs (Khitous et al. 2022). However, for these innovations to generate systemic impact on the TC industry, they must be strategically embedded and supported by enabling institutional frameworks (Rodríguez-Espíndola et al. 2022). Such SOIs in the TC industry often emerge as a strategic response to institutional and regulatory demands for sustainability (Scott 2013; Berrone et al. 2013) in line with the institutional theory, which posits that organisations respond to regulatory pressures and legitimacy cues from their external environment.

A point to note is that the SOI-CET link is neither automatic nor uniformly implemented across sectors. Especially in resource-intensive industries like textiles, SOI often confronts operational, behavioural, and systemic frictions that dilute its circular potential. Rather than treating this relationship as self-evident, we position it as a critical baseline to interrogate the specific conditions under which SOI facilitates CET and when it does not. This approach enables us to disentangle some of the subtler effects in later moderated hypotheses.

Therefore, we propose the following hypothesis:

Hypothesis 1 (H1):. *SOI positively influences CET in the TC industry.*

2.4 | Moderating Role of Consumer Behaviour (CB) in the SOI-CET Relationship

CB significantly moderates the relationship between SOI and CETs in the TC industry. When consumers display high WB, particularly for clothing rental, repair services, or upcycled garments, TC firms are incentivised to invest in SOI (Cascavilla et al. 2025; Manika et al. 2021; Reike et al. 2023). Eco-conscious consumers also reinforce CE practices through reuse, recycling, and repair behaviors (Tunn et al. 2021).

From a theoretical standpoint, however, WB must be conceptualised as a heterogeneous construct. It varies across demographic (e.g., age, gender, income), psychographic (e.g., values, lifestyles), and cultural dimensions (e.g., collectivism vs. individualism), which influence how consumers engage with circular offerings. Prior studies (e.g., Testa et al. 2020) suggest that national cultural norms shape levels of trust in sustainability claims and acceptance of reuse-based models. As Colasante and D'Adamo (2021) found, despite expressing pro-environmental values, many consumers face behavioural inconsistencies due to price sensitivity, convenience-driven habits, or scepticism toward green claims. This often results in a gap between intention and action. Younger consumers, for instance, may favour fast fashion trends for affordability and novelty, resisting the shift toward slower, circular models (Saha et al. 2024). While our study does not disaggregate these variations, the United Kingdom context provides a relatively coherent institutional and policy environment, allowing for an analytical focus on investigating the moderating role of WB without conflating cross-national heterogeneity.

From a complementarity theory perspective, SOI alone is unlikely to produce systemic outcomes unless supported by demand-side complements such as WB. The effectiveness of CBMs, for example, depends not only on design and production changes but also on consumers' willingness to engage with alternative ownership structures, pricing logics, and usage norms. Moreover, institutional theory broadens this understanding by framing WB as a manifestation of informal institutional norms that reflect societal values, trust in sustainability claims, and cultural receptivity to circular consumption. The convergence of these factors is hypothesised as:

Hypothesis 2 (H2):. *Consumers' willingness to buy (WB) sustainable products positively moderates the relationship between SOI and CET within the UK TC industry.*

2.5 | The Moderating Role of Institutional Voids (IV) in the SOI–CE Relationship

According to institutional theorists, the behaviour of firms is shaped not only by formal rules but also by the broader institutional infrastructure that enables or constrains innovation (North 1990; Scott 2013). In this sense, institutional reconfiguration mediates whether innovation (e.g., SOI) becomes a mechanism of creative destruction or remains a contained incremental adjustment. In the context of CET, IVs represent gaps, misalignments, or weaknesses in this infrastructure, ranging from fragmented regulatory oversight to inconsistent policy enforcement or the absence of market intermediaries (Saha, Malesios, et al. 2023).

In response to the view that IVs are primarily relevant to emerging markets, we argue that when new systems or paradigms emerge, IVs can also take subtle yet impactful forms in developed economies, such as the United Kingdom. SOI alters the environment for firms and institutions, requiring institutional adaptation (Freeman 1991; Freeman and Perez 1988; Perez 2002). In the United Kingdom, the IFs for advancing CET are comparatively mature, with established environmental regulations, policy commitments to net-zero targets, and emerging initiatives like the right-to-repair legislation. Rather than the absence of institutions, IVs in this context manifest as latent institutional frictions, such as fragmentation across regulatory domains, weak coordination between industrial and environmental policies, and inconsistent enforcement, and therefore create a structural lag between the early/installation and deployment phases of the CET paradigm shift (Dey et al. 2020). For example, while fiscal incentives and repair subsidies exist, they are often narrowly targeted, lack continuity, or fail to reach SMEs, the dominant actors in the TC sector (Cascavilla et al. 2025). This creates ambiguity around compliance expectations and weakens firms' confidence in investing in circular models, such as product take-back schemes or closed-loop production.

Moreover, strong policy rhetoric around sustainability is not always matched by robust implementation mechanisms. This can result in means–end decoupling, leading to greenwashing and undermining trust in CET (Huq et al. 2016; Stål and Corvellec 2022). In such cases, SOI may be adopted symbolically, with limited impact on core business models or supply chain operations. Such latent voids can weaken the systemic conditions required for effective CET by increasing compliance ambiguity, discouraging investment in long-term innovation, and eroding consumer and stakeholder confidence. Even in highly regulated economies, therefore, institutional misalignments and policy execution gaps can function as negative moderators, diluting the transformative potential of SOI. Consequently, we hypothesise that:

Hypothesis 3 (H3):. *IVs negatively moderate the relationship between SOI and CET within the TC industry, even in developed countries, such as the UK.*

2.6 | Moderating Role of Regulatory Compliance (RC) in the SOI–CET Relationship

Complementarity theory suggests that innovation outcomes are strongest when internal capabilities (like SOI) align with supportive external conditions (Mahapatra et al. 2010). In developed economies like the UK, RC is one such external factor that can amplify the effectiveness of firm-level sustainability initiatives. On one hand, formal regulatory institutions, through frameworks such as Extended Producer Responsibility (EPR), waste minimisation targets, and right-to-repair legislation, can reduce uncertainty, lower entry barriers for SOI, and nudge firms toward long-term environmental goals (Alhola et al. 2019).

High regulatory quality also improves transparency and trust, both of which are essential in markets where consumer scepticism towards green claims can deter engagement with circular offerings. For example, RC also plays a role in addressing consumer concerns about health and safety, particularly about used clothing. In models such as resale, rental, or take-back schemes, consumer hesitancy can stem from concerns about cleanliness, hygiene, and the overall condition of the garment (Saha et al. 2024). Clear health and safety regulations, covering laundering standards, storage protocols, and quality control, can help reassure consumers and build legitimacy for circular alternatives. Here, formal institutions act not only as rule-setters but as enablers of market transformation.

However, regulation is not without limitations as institutional theory alerts us to the risks of regulatory fatigue, symbolic compliance, and means–end decoupling (Bromley and Powell 2012). Inflexible or poorly coordinated regulations can impose compliance burdens and hinder innovation by introducing ambiguity or disincentivising experimentation (Saha, Malesios, et al. 2023). For RC to function as a positive moderator in the SOI–CET relationship, it must be robust in enforcement, adaptable to sectoral contexts, and complemented by supportive mechanisms such as awareness campaigns, public procurement, and collaborative governance platforms.

Thus, while high-quality regulation has the potential to support CET by aligning incentives and increasing trust, its effectiveness may vary depending on enforcement, sectoral relevance, and firm perceptions. Our final hypothesis reflects this contingent logic, positing a positive moderation effect, but acknowledging that the outcome depends on the regulatory architecture and organisational response patterns.

Hypothesis 4 (H4):. *RC positively moderates the relationship between SOI and CET within the TC industry in a developed country such as the UK.*

These four hypotheses form the foundation of an integrated conceptual model (Figure 1) that positions SOI as the core driver of CET, moderated by both behavioural (WB) and institutional factors (IV and RC).

3 | Research Design

The research design of our study is elaborated in Figure 2. The systematic literature review of circular economy research (Saha et al. 2024) and its contextual practice in the TC industry (Saha et al. 2021) provided the backdrop for our study, informing the identification of the research gap and the development of RQs. First, in addition to the TC industry, we explain the research context, specifically the choice of the United Kingdom as a developed country. We then describe the operationalisation of our

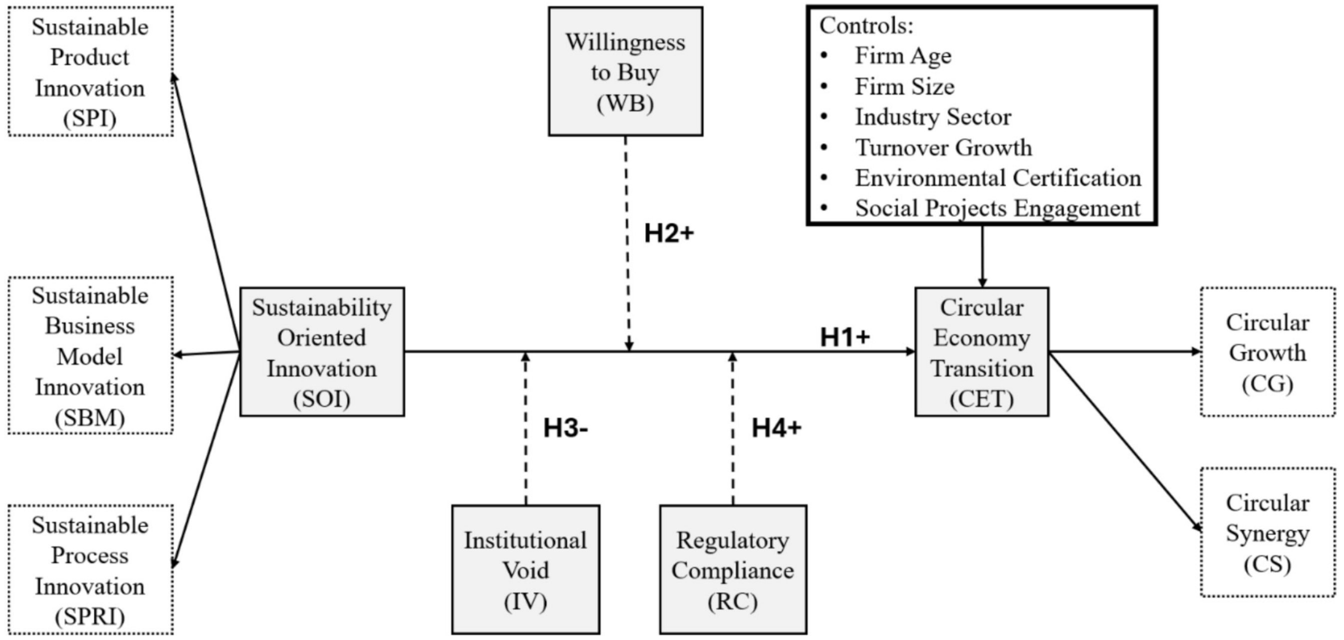

FIGURE 1 | Conceptual model.

FIGURE 2 | Research design of the study.

constructs and the design of our instrument. Finally, before hypothesis testing and presenting our results, we discuss the reliability and validity of the scale measures.

3.1 | Research Context

The United Kingdom represents a salient setting for examining circular economy transitions in the TC industry. It is also a good representative of the developed economies that are high on technology, consumption per capita, textile imports, and sustainability consciousness. The United Kingdom not only shares common institutional characteristics with other European and developed economies worldwide but also presents similarities in international trade and sustainability measures in the TC industry (Table 1).

As a developed economy, the United Kingdom shares several structural and policy similarities with other developed countries, such as high per capita consumption, advanced regulatory frameworks, technological readiness, and heightened sustainability awareness. Despite limited domestic textile manufacturing, the United Kingdom is among the highest consumers and importers of TC products, making the country an analytically relevant context for studying SOI and CET. The UK's textile imports as a percentage of total imports have seen steep growth over the last decade (Figure 3). The UK fashion and textile industry contributed £62 billion to the country's GDP and added 1.3 million jobs (UKFT 2023). Although the UK's emissions from the domestic production and processing of textiles are minimal due to heavy imports of such goods, it generated 480,000 t of textile waste in 2023 with a carbon footprint 7.60 Mt. CO2 (Table 2). The United Kingdom is ranked 4th in Europe after Italy, Germany and France in terms of textile waste generation (Moore 2020).

3.2 | Operationalisation of Constructs

In line with the literature (De et al. 2020; Saha et al. 2024), we operationalised SOI as three latent variables: sustainable innovations in product (SPI), process (SPRI), and business model (SBM). CET is also operationalised as a second-order construct

TABLE 1 | Textile world export import snapshot (2023).

Rank	Country	Textile imports (USD billion)	Total merchandise imports (USD billion)	Textile imports as % of total imports	Textile exports (USD billion)	Total merchandise exports (USD billion)	Textile exports as % of total exports
1	United States	$122.0	$3849.8	3.17%	$29.8	$3027.2	0.98%
2	Germany	$54.0	$1914.9	2.82%	$40.0	$1664.4	2.41%
3	France	$33.4	$1057.7	3.16%	$36.7	$616.0	5.94%
4	Japan	$32.4	$941.7	3.44%	$44.7	$717.3	6.22%
5	Italy	$30.0	$637.9	4.70%	$36.7	$638.0	5.74%
6	Netherlands	$24.9	$825.8	3.02%	$28.6	$616.0	3.47%
7	United Kingdom	$24.0	$1116.1	2.15%	$39.6	$842.6	4.71%
8	Belgium	$22.0	$509.0	4.32%	$13.8	$616.0	2.28%
9	Spain	$20.0	$450.0	4.44%	$27.3	$616.0	4.43%
10	Canada	$18.0	$609.3	2.95%	$14.4	$768.2	1.87%

Source: Textile Imports and Exports: Data sourced from the Observatory of Economic Complexity (OEC) and World Population Review; Total Merchandise Imports and Exports: World Bank.

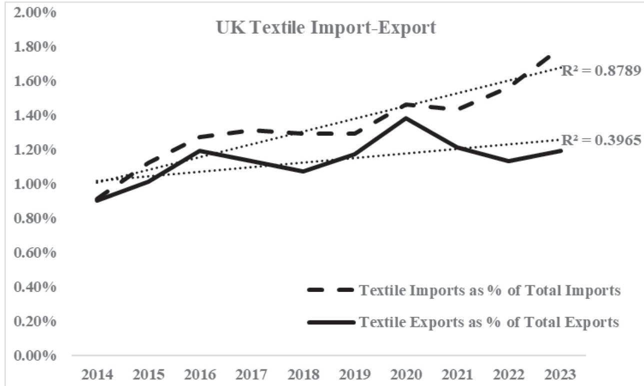

FIGURE 3 | Textile export import trend of the United Kingdom in last decade. Data sources: Textile Imports & Exports: Sourced from the UK Trade.

comprising two latent variables of Circular Growth (CG) and Circular Synergy (CS). As explained above, in line with the planned behaviour theory, CB is operationalised through consumers' Willingness to Buy (WB) sustainable circular products. In line with institutional theory, IFs are operationalised with two latent variables: Institutional Void (IV) and Regulatory Compliance (RC) (Table 3). We could not consider the commonly used global datasets for institutional research, such as the Worldwide Governance Indicators (WGI) (Kaufmann et al. 2011), due to their limited applicability in single-country, cross-sectional studies like ours.

The control variables were composed of firm age, measured by the number of years since foundation; firm size, measured by the number of employees; % change in turnover; availability of Environmental Certification; and the social project engagement (Dey et al. 2020, 2022; Saha et al. 2021).

3.3 | Survey Design

A structured questionnaire survey using a 7-point Likert scale was developed to test the hypotheses in our model. The survey items consist of 41 indicators grounded in an earlier systematic literature review (SLR) of authors elsewhere who reviewed CE and SOI literature. They are designed to measure the latent variables, ensuring ***content validity***, which ensures that the constructs are well defined and validated in the reputed published literature (Hair et al. 2019).

Moreover, before full-scale deployment, the survey was critically reviewed by 10 TC industry experts, including business owners, managers, sustainability officers, and policymakers. The initial review of the questionnaires ensured the ***face validity*** of the measures and assessed the clarity and relevance of the survey items (Hair et al. 2019). Feedback from the experts was used to refine ambiguous questions and improve the overall structure of the survey. Such refinement ensured that the questions effectively captured the intended constructs, minimizing respondent confusion.

The measures were pilot tested using an initial dataset of 68 valid responses. It is recommended that exploratory factor

TABLE 2 | The sustainability snapshot of the United Kingdom's textile industry.

Year	Carbon footprint (Mt CO_2)	Water footprint (million m^3)	Total textile waste (million tonnes)	Post-consumer textile waste (tonnes)	Hazardous chemical use (tonnes)	Textile imports (billion USD)	Sustainable textile index (score)
2014	5.60	17,500	0.80	300,000	2200	7.50	52%
2015	5.80	18,000	0.90	320,000	2300	7.80	54%
2016	6.00	18,500	1.00	340,000	2400	8.10	55%
2017	6.30	19,000	1.10	360,000	2500	8.40	57%
2018	6.50	19,500	1.20	380,000	2600	8.70	59%
2019	6.80	20,000	1.30	400,000	2700	9.00	61%
2020	7.00	20,500	1.40	420,000	2800	9.30	63%
2021	7.20	21,000	1.50	440,000	2900	9.60	64%
2022	7.40	21,500	1.60	460,000	3000	10.00	65%
2023	7.60	22,000	1.70	480,000	3100	10.40	66%
Sources	WRAP, DEFRA	WRAP, Textile Exchange	DEFRA, WRAP, Eurostat	WRAP, DEFRA	Environment Agency UK	ONS, UN Comtrade	Textile Exchange, WRAP

Source: Waste and Resources Action Programme (WRAP), Department for Environment, Food and Rural Affairs (DEFRA), Office for National Statistics (ONS) UK.

analysis (EFA) be used to test the reliability and validity of the measures before collecting the full dataset. The loadings of all the indicators were appropriate (threshold > 0.7), resulting in desired reliability (alpha threshold > 0.7) and validity (***convergent and divergent validity***) (Hair et al. 2019).

3.4 | Data Collection and the Sample

Primary data were collected exclusively using QuestionPro (https://www.questionpro.com/), an online survey platform that enabled efficient and secure data collection. The survey targeted business owners and managing directors to gather insights into decision-making processes related to SOI and CET. The survey has been designed to be self-reported.

The sample consisted of 280 valid responses from all regions of the United Kingdom, ensuring its representativeness. The sample demographics are summarised in Table 4. The distribution of respondents reflects a strong representation from major production and consumption regions such as London, the North-West, and the West Midlands. The sample is dominated by established firms yet inclusive of younger entrants and mirrors the SME-intensive nature of the industry (53% in the sample). Given the size and structure of such firms, the use of self-reported, cross-sectional data based on a single knowledgeable informant is appropriate and widely accepted in SME research (Kull et al. 2018). Within the sample, the prevalence of environmental certification and social engagement initiatives suggests that the sector is increasingly attuned to sustainability imperatives.

3.5 | Variables

We present the model variables as first- and second-order constructs, along with the number of indicators used to measure them in Table 5. Each of the latent variables had a high reliability coefficient (i.e., above 0.8) to ensure the internal consistency of the constructs (Hair et al. 2019)

Dependent variable: CET was defined as a second-order construct. It was made of CG and CS as the two first-order reflective constructs. Each of the two constructs consisted of 4 indicators, with reliability coefficients of 0.817 and 0.840, respectively.

Independent variables: SOI was measured as a second-order construct. The first-order constructs of SOI were SPI, SBM, and SPRI. Each of these reflective constructs consisted of 5, 4, and 4 indicators, with reliability coefficients of 0.831, 0.850, and 0.821, respectively.

Moderators: There were three moderators in the model. The WB, IV, and RC were composed of 4, 5, and 7 indicators, with reliability coefficients of 0.822, 0.823, and 0.858, respectively.

Controls: Firm age, firm size, sector, % change in turnover, environmental certification, social projects engagement (Dey et al. 2022; Saha et al. 2021; De et al. 2020)

3.6 | Data Analysis and Model Specification

The study employs PLS-SEM to test the hypothesised structural relationships among SOI and its interactions with WB, IV, RC, and CE transitions. PLS-SEM was employed due to its ability to model complex relationships between observed and latent variables, allowing us to test both direct effects (e.g., the impact of SOI on CE transitions) and interaction effects (e.g., the moderating roles of WP, IV, and RC). Scholars commonly use PLS SEM (a variance-based approach) for testing the causal relationships, while CB-SEM (a Co-variance based SEM) for theory testing (Henseler et al. 2014). In this research, the primary aim

TABLE 3 | Latent variables of constructs for the analytical model.

Constructs	Latent variables	Proxies	References
Circular economy (CE) transition	Circular Growth	Scaling of circular practices; expansion of circular product and service markets	(Reike et al. 2023; Saha, Paladini, and Yarnall 2023; Tunn et al. 2021)
	Circular Synergy	Collaboration among stakeholders; partnerships for resource sharing	(Ishaq et al. 2025; Manolchev et al. 2024; Ratsimandresy and Miemczyk 2025)
Sustainability-oriented innovation (SOI)	Sustainable Product Innovation	Use of eco-friendly materials; modular designs; products for reuse, recycling, and recovery	(Adams et al. 2016; Saha et al. 2024)
	Sustainable Process Innovation	Low-impact manufacturing techniques; waste minimisation processes	(De et al. 2020; Dey et al. 2020)
	Sustainable Business Model Innovation	Adoption of rental/resale platforms; subscription-based models	(Kühl et al. 2022; Reike et al. 2023; Saha et al. 2024)
Consumer behaviour (CB)	Willingness to Buy (WB)	Likelihood of purchasing sustainable or circular products	(Cascavilla et al. 2025; Colasante and D'Adamo 2021; Manika et al. 2021; Saha et al. 2024)
Institutional factors (IFs)	Institutional Void	Inadequate recycling infrastructure; gaps in policy enforcement	(Calzolari et al. 2025; Huq et al. 2016; Saha, Malesios, et al. 2023; Stål and Corvellec 2022)
	Regulatory Compliance	Alignment with sustainability-focused public procurement and EPR policies	(Calzolari et al. 2025; Cascavilla et al. 2025; Goworek et al. 2018; Huq and Stevenson 2020; Rainville 2021; Ramírez-Escamilla et al. 2024)

was to use the lenses of established theories to test and explain the causal relationships among sustainability-related variables. It is worth noting that both modelling approaches are equally capable of building and testing the measurement and structural models that have direct, mediation and moderation relationships (Sarstedt and Liu 2024). The PLS-SEM approach was found appropriate because it attempts to maximise the variance explained by the causal relations rather than merely the model fit specification, as is the case with CB-SEM. Unlike CB-SEM, which requires a very large sample size for model convergence, PLS-SEM allows modelling complex interrelationships among several variables, even with smaller sample sizes (Hair et al. 2011). The PLS-SEM approach is nonparametric and does not require a multivariate normality assumption, unlike CB-SEM, which uses maximum likelihood algorithms for model solutions (Rigdon et al. 2017). Moreover, the PLS-SEM provides greater statistical power due to higher degrees of freedom and focuses more on reliability, validity, and model predictive power. Based on the scholarly arguments and comparative reflection, we found PLS-SEM appropriate for building our SEM model and testing the hypotheses. The proposed hypotheses (H1–H4) examine both the direct effect of SOI on CET and how this relationship is moderated by consumer behaviour and institutional forces.

The regression equation of the statistical model (Figure 4) and SmartPLS model (Figure 5) is as follows:

$$\begin{aligned}\text{CET} = {} & \beta_0 + \beta_1\,[\boldsymbol{SOI}] + \beta_2\,[\boldsymbol{WB}] + \beta_3\,[\boldsymbol{SOI} \times \boldsymbol{WB}]) + \beta_4[\boldsymbol{IV}] \\ & + \beta_5\,[\boldsymbol{SOI} \times \boldsymbol{IV}] + \beta_6\,[\boldsymbol{RC}] + \beta_7\,[\boldsymbol{SOI} \times \boldsymbol{RC}] + \Upsilon_1\,[\boldsymbol{Firm\ Age}] \\ & + \Upsilon_2\,[\textbf{Firm Size}] + \Upsilon_3\,[\boldsymbol{Sector}] + \Upsilon_4\,[\%\text{Change in } \boldsymbol{Turnover}] \\ & + \Upsilon_5\,[\boldsymbol{Environmental\ Certificate}] + \Upsilon_6\,[\boldsymbol{Social\ Projects}]\end{aligned}$$

TABLE 4 | Respondents' demographic profile.

Details	Freq	%
Region in the United Kingdom		
London	73	26.07%
North West	40	14.29%
West Midlands	29	10.36%
East Midlands	25	8.93%
Scotland	23	8.21%
Yorkshire and The Humber	21	7.50%
South East	20	7.14%
East of England	14	5.00%
North East	14	5.00%
South West	11	3.93%
Wales	7	2.50%
Northern Ireland	3	1.07%
Year of foundation		
1800–1949	12	4.29%
1950–1979	22	7.86%
1980–2009	136	48.57%
2010–2025	110	39.29%
Firm size		
Micro (1 to 9)	56	20.00%
Small (10–49)	40	14.29%
Medium (50–899)	53	18.93%
Large (< 900)	131	46.79%
Sector		
Public sector	119	42.50%
Non-profit sector	23	8.21%
Private sector	138	49.29%
% change in turnover		
< 0%	10	3.57%
< 5%	51	18.21%
5%–10%	152	54.29%
11%–20%	49	17.50%
> 20%	18	6.43%
Environmental certificate		
Available	209	74.64%
Not available	71	25.36%
Social projects		
Undertaken	131	46.79%
Not undertaken	149	53.21%
Sample size	280	100.00%

The betas show the regression coefficients for the main effects and moderating effects; however, the gammas show the effects with control variables in the regression equation.

4 | Results

4.1 | Measurement Model Results

The confirmatory factor analysis and measurement assessment (Table 6) was performed using SmartPLS4 with the full sample. The composite reliability (CR) of all constructs varied between 0.879 and 0.899 (Threshold > 0.7). The strong alpha and CR confirmed that the construct measures were sufficiently reliable for what they were set out to measure. The *discriminant validity* was confirmed by comparing the average variance extracted (AVE) with the squared correlations among the constructs using the Fornell–Larcker criteria (Table 7). The AVE of all constructs varied between 0.541 and 0.690 (threshold > 0.49), confirming the *convergent validity* of constructs. The *structural validity* of the questionnaire measures was assessed using an adjusted R-squared value of 0.749. The model showed strong predictive power.

However, the common method bias (CMB) is expected when the same raters respond to the predictor and the predicted. Yet literature shows that studies involving interaction effects are less likely to exhibit CMB. The argument is that the respondent's cognitive knowledge cannot predict interaction effects that would inflate or bias responses. To further ensure that the study is free of CMB, we take literature recommended procedural and statistical remedies (Podsakoff et al. 2024)

1. The measures' content validity and face validity were confirmed using the impact literature and corporate experts, respectively.
2. The constructs were staggered to break the monotony of the respondents.
3. The divergent validity and structural validity were confirmed using the inter-construct correlations and the adjusted R^2 respectively in both stages of data collection (using pilot data, using full data).
4. The variance inflation factor (VIF) was assessed to confirm the absence of multi-collinearity among the constructs and ensure the factor independence. The inner VIF ranged between 1.059 and 3.765 (Threshold < 5)
5. The most widely used single-factor Harman test returned 44.362% (Threshold < 50%) further confirmed the absence of CMB.

With all remedies described, it is safe to conclude that the study is free of common method bias.

TABLE 5 | Model variables.

Variables	Second-order construct	First-order construct	Indicators (*n*)	Reliability coefficient
Dependent	CET	CG	4	0.817
		CS	4	0.84
Independent	SOI	SPI	5	0.831
		SBM	4	0.85
		SPRI	4	0.821
Moderators		WB	4	0.822
		IV	5	0.823
		RC	7	0.858
Control	Firm age, firm size, sector, % change in turnover, environmental certification, social project engagement (Dey et al. 2020, 2022; Saha et al. 2021)			

4.2 | Structural Model Results

Table 8 presents the PLS-SEM results of the structural model. The direct effect of SOI on CET (β = 0.67; $p < 0.001$) is positive; the empirical evidence supports the hypothesis H1 that there is a strong, positive association between SOI and CET in the UK TC industry.

WB has a positive and marginally significant relationship with CET (**β = 0.11; $p < 0.10$**). The interaction effect of WB on the SOI-CET relationship (**β = 0.132; $p < 0.05$**) is also positive and supports the hypothesis *H2* that WB moderates the relationship between SOI and CET. The positive interaction effect of WB strengthens the positive direct effect of SOI on CET. Figure 6, the interaction plot, depicts the effect of SOI on CET at three different levels (-1σ, μ, $+1\sigma$) of WB. The positive effect of SOI on CET is steeper at $+1\sigma$ levels of WB, vis-à-vis, -1σ. The empirical evidence confirms that with higher WB, the SOI would bring an expedited transition to the circular economy.

Drawing on institutional theory, we proposed that even in mature economies such as the United Kingdom, IVs may persist in the form of structural gaps during the early/installation phase of CET (*H3*). Results show that IV has a positive and marginally significant relationship with CET (**β = 0.097; $p < 0.10$**). The interaction effect of IV on the SOI-CET relationship (**β = −0.092; $p < 0.05$**) is, however, negative and statistically significant, supporting the hypothesis H3. The negative moderating effect of IV weakens the positive direct effect of SOI on CET.

Figure 7, the interaction plot, depicts the effect of SOI on CET across the three levels of IV. The effect of SOI on CET is steeper at -1σ in comparison to the $+1\sigma$ level of IV. The empirical evidence confirms that, with fewer IVs in the textile industry, the SOI would expedite the transition to a circular economy. Our empirical results (H3) suggest that sustained sectoral CET through SOI requires the deployment of robust institutional practices that eliminate systemic misalignments and infrastructural weaknesses, even in developed economies, such as the United Kingdom, if the TC industry is to transform through SOI-driven CET in the long term.

RC has no statistically significant main effect on CET, nor does it moderate the relationship between SOI-CET (**β = −0.026, $p > 0.690$**). In other words, the empirical evidence does not support *H4*. A statistically non-significant interaction effect confirms that there is no significant variation in the effect of SOI on CET across the three different levels of RC, as shown in the interaction plot (Figure 8). This implies that regulatory compliance is not resulting in any further expedited CET with SOI.

4.2.1 | Nuanced Effects of Subgroup Models SPI, SPRI, SBM

The empirical analysis was further continued to assess the nuances of the first-order constructs of SOI. This was one of the ways to ensure the robustness of the findings from all the dimensions of the independent variable. This aims to understand the differences in CET transition in the presence of external

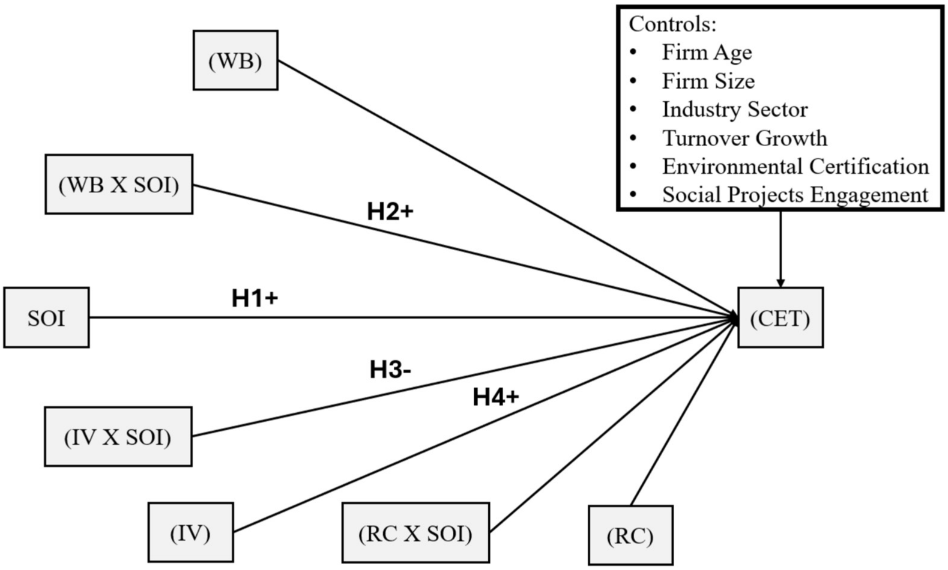

FIGURE 4 | Statistical model.

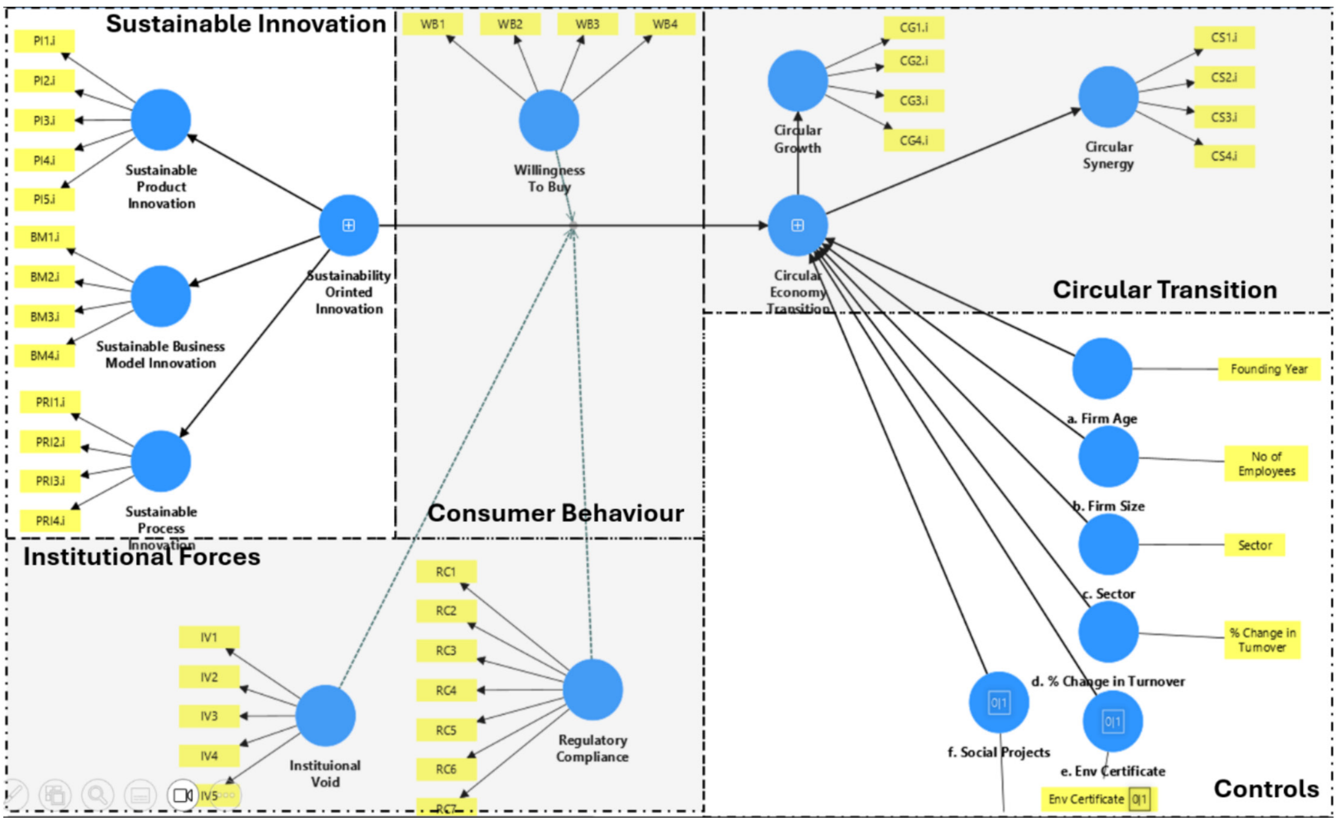

FIGURE 5 | PLS model.

forces, including SBM innovation, SPRI, and SPI (Table 9). The results for hypotheses H1, H3, and H4, along with the three variant models, remained like those of the original model in Table 8. The results confirmed that the research findings are not an outcome of one of the biased first-order constructs of the SOI, and all the first-order constructs of the SOI led to consistent results and thereby the findings. The three alternative models had good model specifications. The standard root mean residual (SRMR) of the three models SPRI, SBM, and SPI were 0.072, 0.070, and 0.069 respectively (Threshold < 0.1). This confirms a good model fit and confirms the model specification.

However, in the case of SPRI ($\beta = 0.116$; $p > 0.175$) and SPI ($\beta = 0.129$; $p > 0.093$) models, the moderating effect of WB disappears, and hypothesis (*H2*) is no longer supported. The moderating effect of WB remains significant only in the SBM model

TABLE 6 | PLS-SEM measurement model results.

Item	Mean	Min	Max	SD	Skew	Loadings	VIF
Product innovation							
My organisation increase the use of sustainable materials, such as organic cotton and recycled polyester, in our products.	5.327	1	7	1.436	−0.975	0.751	1.635
My organisation incorporate principles of modular design in product development in our operations.	5.126	1	7	1.430	−1.004	0.770	1.651
My organisation efficiently recycle and reuse materials.	5.366	1	7	1.433	−0.977	0.755	1.643
My organisation use the latest technological advancements to reduce our environmental footprints (e.g., reduce waste, emission, resources extraction, and use of virgin materials; and increase recycling, upcycling and reusing materials).	4.986	1	7	1.427	−0.724	0.818	1.968
My organisation use the latest technological advancements to reduce our social footprints (e.g., occupational hazards, labour rights abuse, low pay and poor mental and emotional health).	5.112	1	7	1.354	−0.83	0.767	1.743
Business model innovation							
Rental and resale models, such as clothing rental services and online second-hand platforms, can contribute to a more sustainable and circular textile and clothing industry.	5.105	1	7	1.478	−0.868	0.837	1.993
Enhancing traceability and transparency in the textile and clothing supply chain through digital technologies (blockchain, IoT, and data analytics) can increase the commercial viability of circular clothing businesses.	5.173	1	7	1.436	−0.931	0.831	1.963
Fostering collaborations and partnerships among stakeholders, including manufacturers, suppliers, retailers, and consumers, can ensure the commercial viability of circular clothing businesses.	5.247	1	7	1.389	−0.965	0.842	2.020
Clothing and textile businesses must develop a model that discourages cheaper fast fashion and promote durable, long-lasting, and environmentally friendly products that may be more expensive but provide sustainable value for money.	5.347	1	7	1.340	−0.878	0.813	1.838
Process innovation							
My organisation prioritises optimising resource efficiency, such as reducing energy consumption, water usage, and waste generation.	5.308	1	7	1.426	−1.046	0.726	1.428
My organisation collaborate with suppliers, partners, and stakeholders to develop and implement sustainable process innovations throughout the textile and clothing production chain.	5.108	1	7	1.440	−0.884	0.823	1.851
My organisation invests in and adopts cleaner technologies and equipment to minimise environmental impact in our activities, processes and operations (as relevant).	5.204	1	7	1.421	−1.034	0.823	1.845
My organisation has established mechanisms and practices to continuously identify opportunities for improving the sustainability of our activities, processes and operations (as relevant) and actively implement changes.	5.119	1	7	1.506	−0.91	0.855	2.128

(Continues)

TABLE 6 | (Continued)

Item	Mean	Min	Max	SD	Skew	Loadings	VIF
Willing to buy							
The buyers/customers in the industry would purchase sustainable, circular textile and clothing products if textiles and clothing companies produced them.	5.09	1	7	1.418	−0.991	0.777	1.652
The buyers/customers in the industry seek information about the sustainability and circularity of textile and clothing products before purchasing.	5.097	1	7	1.435	−0.769	0.802	1.710
The buyers/customers in the industry are inclined to purchase textile and clothing products that are produced using sustainable and circular practices.	5.172	1	7	1.406	−1.029	0.804	1.756
The buyers/customers in the industry are likely to buy textile and clothing products from brands committed to sustainable and circular practices.	5.265	1	7	1.442	−0.875	0.846	1.990
Institutional void							
My organisation finds it challenging to implement sustainability-oriented innovation (SOI) effectively due to the lack of clear guidelines and regulations regarding sustainable and circular practices.	4.924	1	7	1.546	−0.706	0.760	1.604
Supportive institutional mechanisms for skill development for achieving sustainability are absent.	4.903	1	7	1.491	−0.625	0.706	1.452
Local and national authorities' lack of support for the recycling and waste management industry affects my organisation's ability to adopt circularity.	4.964	1	7	1.511	−0.75	0.819	1.922
The absence of a supportive institutional incentive for sustainability-oriented innovation (SOI) hinders textile and clothing companies' adoption of sustainable and circular initiatives.	5.061	1	7	1.371	−0.697	0.783	1.730
There is a significant gap in the institutional environment, which creates barriers for textile and clothing companies to transition to a circular economy.	4.928	1	7	1.501	−0.852	0.759	1.618
Regulatory compliance							
Textile and clothing companies that comply with environmental regulations and standards are more likely to integrate SOI into their operations.	5.173	1	7	1.429	−0.942	0.733	1.735
Strictly enforcing sustainability regulations can encourage textile and clothing manufacturers to adopt more sustainable and circular practices.	5.244	1	7	1.516	−0.945	0.796	2.115
Regulatory compliance is crucial in promoting the circular economy transition in the textile and clothing industry.	5.349	1	7	1.400	−0.883	0.765	1.849
Companies may prioritise marketing sustainability without implementing meaningful actions to reduce environmental impact.	5.122	1	7	1.412	−0.7	0.736	1.712
The disconnect between sustainability claims and actual practices in the industry may harm the credibility and trust of consumers.	5.133	1	7	1.386	−0.847	0.723	1.674

(Continues)

TABLE 6 | (Continued)

Item	Mean	Min	Max	SD	Skew	Loadings	VIF
The pressure to conform to industry-wide sustainability practices and norms is strong in the textile and clothing industry.	5.036	1	7	1.436	−0.696	0.667	1.468
Companies in the industry tend to adopt similar sustainability practices and structures as their competitors.	5.197	1	7	1.342	−0.926	0.725	1.612
Circular growth							
Adopting circular economy principles for my organisation can lead to new opportunities and economic/market growth.	5.194	1	7	1.504	−0.884	0.771	1.648
For my organisation, embracing circular practices, such as product recycling and remanufacturing, can contribute to the industry's long-term profitability and competitiveness.	5.302	1	7	1.277	−0.882	0.841	1.929
My organisation perceive circular growth as a strategic pathway for us to achieve sustainability goals and reduce environmental impacts.	5.219	1	7	1.411	−0.922	0.841	1.917
For my organisation, circular growth is a key driver for long-term success and competitiveness.	5.262	1	7	1.399	−0.947	0.759	1.598
Circular synergy							
My organisation collaborate with other stakeholders (e.g., manufacturers, suppliers, retailers, consumers, and waste managers) relevant for the textile and clothing industry.	5.183	1	7	1.478	−0.965	0.793	1.704
My organisation develop strong relationships with partners, such as textile manufacturers, retailers, consumers, and waste management companies, to access and share knowledge.	5.183	1	7	1.488	−0.801	0.849	2.041
My organisation develop strong relationships with partners, such as textile manufacturers, retailers, consumers, and waste management companies, to share resources.	5.186	1	7	1.442	−0.825	0.826	1.898
My organisation participate in any collective effort and collaboration happening in the T&C industry to help achieve optimisation of the value chain.	5.007	1	7	1.424	−0.818	0.819	1.825

TABLE 7 | Fornell–Larcker criteria (discriminant validity).

Details	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]
[1]. Firm age	1.00													
[2]. Firm size	−0.33	1.00												
[3]. Sector	−0.02	0.13	1.00											
[4]. % change in turnover	−0.01	0.14	−0.01	1.00										
[5]. Env certificate	0.08	−0.45	0.05	−0.18	1.00									
[6]. Social projects	0.04	−0.16	0.10	−0.11	0.35	1.00								
[7]. Product innovation	0.00	0.17	0.14	0.08	−0.17	0.00	**0.77**							
[8]. Business model	0.08	0.22	0.16	−0.01	−0.16	−0.04	0.71	**0.83**						
[9]. Process innovation	0.00	0.18	0.12	0.08	−0.17	−0.02	0.80	0.75	**0.81**					
[10]. Willingness to buy	0.04	0.17	0.16	0.07	−0.17	0.04	0.75	0.73	0.74	**0.81**				
[11]. Institutional void	0.09	0.15	0.05	0.06	−0.08	−0.05	0.50	0.52	0.50	0.50	**0.77**			
[12]. Regulatory compliance	−0.01	0.23	0.11	0.02	−0.09	0.03	0.70	0.69	0.69	0.74	0.69	**0.74**		
[13]. Circular growth	0.02	0.14	0.19	0.07	−0.08	0.01	0.76	0.72	0.70	0.70	0.49	0.67	**0.80**	
[14]. Circular synergy	−0.03	0.22	0.18	0.12	−0.21	−0.03	0.74	0.69	0.76	0.67	0.49	0.64	0.73	**0.82**
Mean	1997.6	2.93	2.07	3.05	0.25	0.53	5.18	5.22	5.19	5.16	4.96	5.18	5.24	5.14
SD	28.39	1.19	0.96	0.87	0.44	0.50	1.10	1.18	1.17	1.15	1.14	1.05	1.13	1.20
Alpha	NA	NA	NA	NA	NA	NA	0.83	0.85	0.82	0.82	0.82	0.86	0.82	0.84
CR	NA	NA	NA	NA	NA	NA	0.88	0.90	0.88	0.88	0.88	0.89	0.88	0.89
AVE	NA	NA	NA	NA	NA	NA	0.60	0.69	0.65	0.65	0.59	0.54	0.65	0.68

($\beta = 0.204$; $p < 0.01$). These findings help explain how the effect of SBM innovation on CET transition is stronger in the presence of consumer behaviour. The presence of consumer behaviour is not catalytic to the SPRI and SPI effects on CET transition.

5 | Discussion

This study advances our understanding of how SOI facilitates CET by theorising and empirically testing the moderating roles of consumer behaviour and institutional context. Drawing on data from a developed, consumption-intensive setting, the findings challenge deterministic assumptions of innovation-led sustainability.

For circular economy and innovation scholarship, these findings raise critical questions about the limits of innovation as a sustainability strategy and the enabling role of institutional design and consumer agency. We will explain these in detail below.

First and most importantly, our findings suggest that even if SOI proves to be a statistically significant driver of CET (*H1*), its effectiveness is not inherently transformative. The positive effect

TABLE 8 | PLS-SEM regression results.

Details	H#	Beta	se	t stat	p val
Controls					
Firm age -> CET		−0.036	0.029	1.247	0.212
Firm size -> CET		−0.023	0.036	0.630	0.529
Sector -> CET		**0.060**	0.032	1.883	**0.060**
% change in turnover -> CET		0.054	0.034	1.587	0.113
Env certificate -> CET		−0.019	0.087	0.232	0.817
Social projects -> CET		0.003	0.065	0.110	0.913
Main effects					
WB -> CET		**0.110**	0.062	1.735	**0.083**
IV -> CET		**0.097**	0.052	1.849	**0.064**
RC -> CET		0.057	0.054	1.012	0.312
SOI -> CET	H1	**0.666**	0.076	8.806	**0.000**
Interaction effects					
WB×SOI -> CET	H2	**0.135**	0.062	2.127	**0.033**
IV×SOI -> CET	H3	**−0.090**	0.047	1.977	**0.048**
RC×SOI -> CET	H4	−0.031	0.065	0.399	0.690

must be understood as conditional, dependent on factors such as enabling behavioural and institutional contexts. Innovation alone does not guarantee circularity; it functions within a system of constraints and contradictions that can dilute or redirect its intended outcomes. This aligns with previous studies (De et al. 2020; Dey et al. 2020; Reike et al. 2023; Rodríguez-Espíndola et al. 2022) emphasising SOI's potential to enable CET but complicates the assumption of a SOI–CET relationship until institutions adapt to new techno-economic paradigm shifts as Freeman (1991) and Perez (2002) predicted.

Second, the reinforcing role of CB (*H2*) brings to light a persistent tension in the sustainability discourse. The positive moderation effect of WB corresponds with existing literature in TC (Cascavilla et al. 2025; Colasante and D'Adamo 2021; Saha et al. 2024) and beyond (Manika et al. 2021; Saha, Paladini and Yarnall 2023), suggesting that consumer engagement enhances innovation uptake and circular product adoption.

From an institutional perspective, such an outcome reflects the influence of informal institutions (e.g., social norms, cultural values, and collective expectations) that shape consumer decisions in ways that either enable or constrain CET. While the circular economy paradigm remains in the installation phase, consumers are still socially conditioned by the linear logic of disposability, convenience, and low-cost throughput. Under such conditions, willingness to pay premiums for sustainable alternatives remains weak, fragmented, or symbolic, preventing CE innovation from scaling and limiting its signalling value for firms. However, gradual shifts in this domain have recently been observed, as designers like Phoebe English have begun incorporating circular design principles in response to this market signal about consumers' willingness to pay a premium (Finnigan 2025). This is supported by the market projections that estimate the sustainable fashion industry will reach $12.46 billion by 2025 (Coherent Market Insights 2025). However, for such behavioural reinforcement to align with pro-circular intentions, firms require consistent and credible demand signals to avoid reverting to linear practices. This is only possible when other factors, such as consumer affordability, convenience, or fashion cycles, reinforce consumers' sustainability motivations, turning their willingness or intentions into actual, sustained behaviour (Cascavilla et al. 2025).

Such transformations in consumer behaviour require a shift in regulatory architectures and institutional adaptation that embed the new SOI-driven CET paradigm, through which consumer preferences co-evolve. Willingness to buy sustainable products then becomes part of the institutional alignment mechanism that transforms innovation from a niche, incremental practice into a mass-market regime, strengthening the creative destruction potential of circular models by eroding demand for linear incumbents. Consumer behaviour is therefore not a peripheral modifier, but a constitutive element of paradigm deployment. That is why its influence is essential to our understanding of whether SOI translates into market demand or remains confined to contained experimental pockets. Neither is WB simply an individual preference, but a manifestation of institutionalised practices that directly condition the effectiveness of SOI. These practices also raise ethical and strategic questions about how much responsibility can or should be placed on consumers to drive systemic change, especially amid affordability pressures, market saturation, and behavioural inertia.

Our disaggregated analysis adds an important nuance: WB significantly moderates the effect of SBM innovation on CET, but not SPI or SPRI. This suggests that consumer engagement is most influential when circularity is embedded directly in the business model, such as through resale, rental, or take-back schemes, where willingness to buy or participate directly determines commercial viability. By contrast, product and process innovations often remain less visible to end consumers, relying more on technological feasibility, firm capabilities, and regulatory drivers than on demand-side reinforcement. Conceptually, this distinction reflects the institutional divide between informal pressures that shape consumer-facing innovations such as SBMs and formal rules and standards that underpin SPI and SPRI. These differentiated pathways emphasise that SBMs are

FIGURE 6 | Interaction plot for WB and SOI.

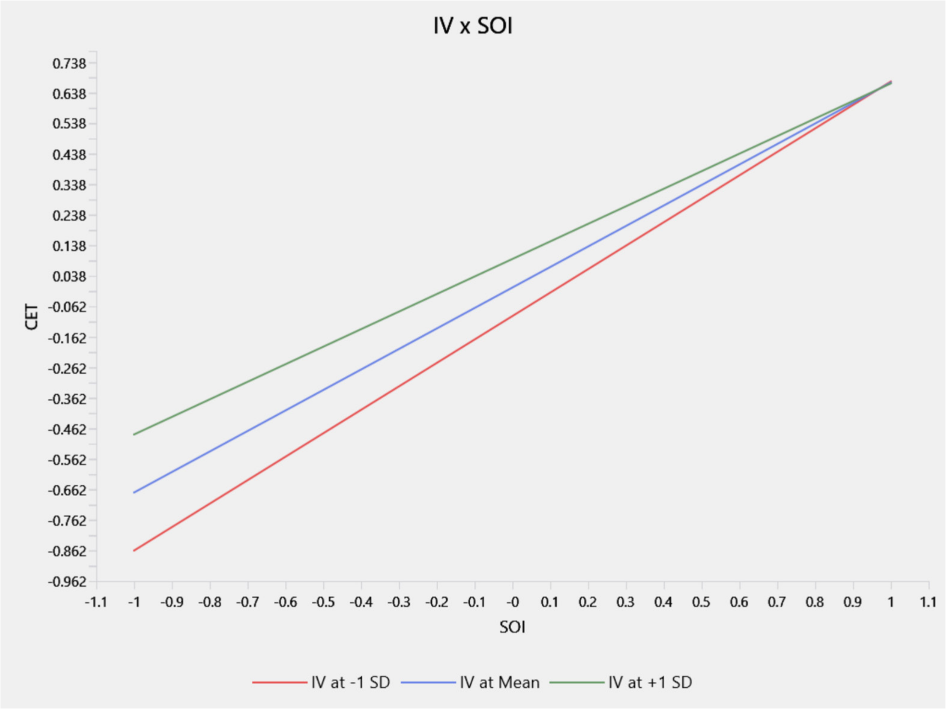

FIGURE 7 | Interaction plot for IV and SOIs.

uniquely dependent on active consumer uptake, while SPI and SPRI deliver environmental benefits largely independent of behavioural reinforcement.

In addition, consumers' willingness to buy sustainable or circular products is shaped not only by environmental values but also by generational identities, digital familiarity, and socio-economic constraints (Saha et al. 2024). For instance, younger consumers may be more open to second-hand platforms due to digital nativity. At the same time, lower-income groups may engage in resale out of necessity rather than circular conviction. These distinctions are critical for understanding the segmented pathways through which CB influences the SOI-CET relationship. Replicating the model with these demographic subgroup analyses could have strengthened the marginal moderation of our findings and might have allowed us to establish stronger

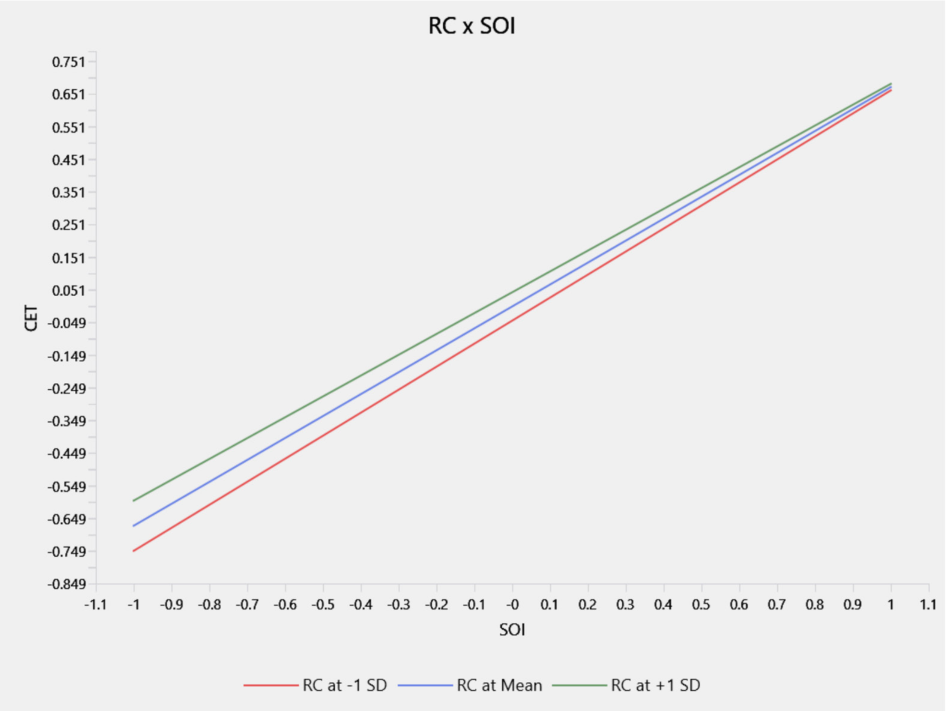

FIGURE 8 | Interaction plot for RC and SOI.

TABLE 9 | Nuanced effects at baseline hypothesis with first order constructs.

	Model SOI	**Model SPRI**	**Model SBM**	**Model SPI**
Alternative models	**SOI**	**SPRI**	**SBM**	**SPI**
Baseline independent variable				
H1 (SOI -> CET)	**0.666*** **	**0.456*** **	**0.397*** **	**0.501*** **
H2 (WB × SOI -> CET)	**0.135***	0.116	**0.204****	0.129
H3 (IV × SOI -> CET)	**−0.090***	**−0.103***	**−0.177****	**−0.142****
H4 (RC × SOI -> CET)	−0.031	0.027	−0.025	0.022
Model specifications				
SRMR	0.072	0.072	0.070	0.069
R square (CET)	0.749	0.696	0.697	0.718
Highest VIF	3.753	3.773	3.504	3.741
Bootstrap	5000	5000	5000	5000

claims about the moderating role of consumer behaviour in the SOI-CET relationship.

Third, the empirical confirmation of IV as a negative moderator (*H3*) in the SOI-CET relationship signals a more troubling reality: even in developed economies, such as the United Kingdom, often assumed to possess high institutional qualities, gaps in enforcement, infrastructure, and policy coherence persist. This finding critiques the complacency in policy discourse that treats regulatory maturity as synonymous with institutional effectiveness. It also echoes apprehensions from Stål and Corvellec (2022) and Huq et al. (2014) about symbolically adopted but structurally unsupported sustainability goals with institutional adaptation.

IVs are conventionally associated with developing economies (Peng et al. 2009), where the absence or weakness of institutions hinders innovation. Yet our results suggest that in the developed country context, IVs manifest not as outright institutional absences but as structural lag between an emergent techno-economic paradigm and the institutional architecture of the existing system (Dey et al. 2020). The institutions are not yet configured sufficiently for the logic, coordination needs, or value creation structures of the emergent paradigm (Freeman 1991); making IVs apparent in the early installation stage of the shifting paradigm through latent frictions, i.e., fragmented regulatory domains, misaligned policy goals, and inconsistent enforcement. More precisely, in the early stages of the CET, sluggish institutional adaptation weakens the impact of SOI on CET, even in developed countries (Dey et al. 2020). These subtler voids are therefore not merely a dysfunction; they are part of a structural lag between the early installation phase and the subsequent deployment phase of CET. It occurs because the existing institutional architecture cannot support the latest innovation regime (i.e., SOI), creating ambiguity, weakening coordination, and eroding firms' confidence in long-term circular investments. In this sense, institutional maturity cannot eliminate voids in the early/installation phase, which is characterised by institutional resistance and temporal mismatch. IVs become part of a systemic transitional condition, which dilutes the effectiveness of SOI in driving CET.

Fourth, juxtaposed with IVs, which continue to exert a negative moderating influence in the United Kingdom, the case of RC reveals a different dynamic: rather than constraining CET, regulatory compliance appears to have nonexplanatory power. Despite previous studies positing a positive moderating role of RC (e.g., Petri and Seuring 2025), our findings suggest that RC neither enables CET nor moderates the SOI-CET relationship. One possible explanation is that regulation is relatively straightforward to enforce during the early stages of a transition, since compliance serves as the specific mechanism through which firms materially experience institutional alignment (or misalignment). In the United Kingdom, where firms abide by regulatory systems, this phase is likely to be well established in the industry, with firms now adequately versed in legal requirements and increasingly driven by intrinsic motivations to adopt sustainable practices and disclose sustainability outcomes. In contexts of regulatory adaptation, compliance may become routinised, producing diminishing returns as firms adopt a procedural rather than strategic orientation toward sustainability mandates. This points to phenomena such as regulatory fatigue and symbolic compliance, where formal adherence masks a lack of substantive engagement, echoing concerns about decoupling in institutional theory (Peng et al. 2009; Saha, Malesios, et al. 2023). Under these conditions, the credibility and transformative potential of regulations erode, shifting the locus of change toward soft governance mechanisms, including voluntary standards, industry peer pressure, and consumer activism (Manolchev et al. 2024).

Another explanation can be from the perspective of creative destruction. In periods of techno-economic paradigm transition, regulatory frameworks are typically still calibrated to the prior industrial production systems. In the early installation phase of CET, where we currently are, regulatory compliance often develops in ways that do not align with emerging innovation trajectories. This misalignment reinforces the constraining effect on SOI, but it also creates a credible signal that firms need to pursue a more significant paradigm shift. TC firms may not fully realize the role of RC as a positive coordination mechanism for reducing uncertainty, codifying expectations, lowering information asymmetry and enabling them to interpret and evaluate new value propositions.

In this sense, regulatory compliance might be merely seen as an administrative burden rather than a critical institutional channel that facilitates creative destruction in the TC industry. Our results on RC, although insignificant in developed economies, speak to wider institutional debates that are particularly salient in developing-country TC sectors. In such contexts, RC can act as a more active enabler of CET, provided that regulatory frameworks exhibit clarity, enforcement consistency, and normative alignment with market expectations. When these conditions hold, regulation reduces perceived innovation risk and enhances legitimacy, an especially critical function in sectors such as TC, where greenwashing and consumer skepticism are pervasive. Yet this enabling role is not guaranteed, as weak enforcement or fragmented oversight can undermine credibility and effectiveness.

5.1 | Contributions to Theory

We contribute to institutional theory by empirically demonstrating how IVs, even in developed contexts like the United Kingdom, negatively moderate the SOI–CET relationship. Such insight questions simplistic binaries of 'strong' versus 'weak' institutions and draws attention to structural gaps during techno-economic paradigm shifts, such as fragmented enforcement and policy misalignment between the institutional requirements of the new paradigm and the existing institutions of the current paradigm that can dilute innovation outcomes (Freeman 1991).

While RC, another latent construct, was expected to strengthen CET, our findings show its effect is non-significant. This raises critical implications for institutional theorists: regulatory presence does not always equate to effectiveness or progress toward sustainability. Instead, our results echo concerns about means-end decoupling (e.g., greenwashing), regulatory fatigue, and the need for more adaptive and coherent policy frameworks to achieve circular transitions.

Aside, this study makes a distinct theoretical contribution to CB theory by repositioning WB not as a static trait or outcome, but as a dynamic, context-contingent moderator in the innovation–sustainability nexus (Manika et al. 2021; Saha, Paladini and Yarnall 2023). While CB theory traditionally emphasises individual attitudes, perceived behavioural control, and intention–action gaps (Ajzen 2020), sustainability-focused applications often overlook how market signals, institutional framing, and innovation types interact to condition actual purchasing behaviour. By modelling WB as a latent moderating construct, this study demonstrates that consumers play an active rather than a passive role in shaping SOI outcomes. Their engagement has a significant influence on the success or failure of CET. However, we also reveal the fragility of WB, even in developed, high-awareness markets like the United Kingdom, warranting that pro-sustainability attitudes are insufficient without consistent value alignment, trust in sustainability claims, and system-level reinforcement. These insights influence (hopefully) CB scholars to move beyond rational choice and micro-level models, and instead incorporate structural enablers and barriers, such as affordability trade-offs, regulatory cues, and normative expectations, into more ecological, systems-aware behavioural frameworks that better reflect the realities of consumer agency in circular transitions.

This study extends the application of complementarity theory (Mahapatra et al. 2010) to the domain of CET by empirically modelling how the effectiveness of SOI depends on its dynamic interplay with external institutional and behavioural moderators.

While previous research, such as Dey et al. (2020), has used complementarity theory to assess how internal capabilities (e.g., lean practices) and innovation co-drive sustainability performance in SMEs, our study broadens this scope by demonstrating how system-level outcomes, namely, CG and CS, emerge through moderated complementarities between SOI and contextual enablers or constraints. Such scoping advances the complementarity theory from one rooted in resource bundling to one centred on conditional synergy, where the value of innovation capabilities is co-determined by their alignment with external systemic forces.

To capture these systemic forces, we introduce and validate a second-order measurement model of CET, comprising CG and CS, thus improving on earlier empirical approaches that rely on single-dimensional outcome variables. Moreover, by modelling consumer WB and IV as conditional moderators, the study addresses the empirical gaps in extant research, where these variables are often treated either as antecedents or as exogenous context. This empirical repositioning not only strengthens construct validity but also provides new insights into the non-linear, occasionally contradictory pathways through which circularity is enacted in real-world contexts.

5.2 | Contributions to Policy and Practice

For policymakers, this study reveals that relying solely on formal regulatory levers, such as EPR, is insufficient to drive CET. While such mechanisms set the baseline, they often fall short in nurturing innovation uptake or changing entrenched business models, especially when regulatory coherence is lacking or enforcement is weak.

The insignificance of regulatory compliance in our findings points to two deeper issues. First, it signals the emergence of regulatory fatigue or strategic minimalism in mature economies such as the United Kingdom, where firms increasingly treat compliance as a box-ticking exercise. This limits the transformative potential of regulation, particularly when compliance mechanisms fail to challenge incumbent business models or reward innovation beyond the minimum legal threshold.

Second (emerging from the first), there is a need for a multi-pronged policy approach that extends beyond compliance checklists. This includes targeted incentives for sustainable innovation adoption (e.g., tax reliefs or innovation vouchers for circular product design), consumer-facing measures such as clearer eco-labelling and education campaigns to build trust in circular business models (e.g., resale and rental), and investment in enabling infrastructure, such as local repair hubs and reverse logistics systems. These tools must be coordinated across departments (such as environmental policy, industrial strategy, and consumer protection) and sectors to close institutional voids that quietly undermine otherwise well-intentioned sustainability strategies.

Building on the policy implications, this study highlights that the viability of CETs in practice depends on firms' ability to respond to and shape the broader institutional landscape. In contexts where regulatory tools are insufficiently transformative, businesses cannot afford to rely solely on compliance to demonstrate sustainability leadership. Instead, they must adopt more purpose-driven strategies that embed circularity within their core operations, product offerings, and consumer engagement models.

As such, firms should invest in behavioural nudges, transparent communication, and design strategies that align circular offerings with consumer values and usability expectations. Moreover, as public policy begins to emphasise infrastructure (e.g., repair hubs, reverse logistics), firms have an opportunity, and arguably a responsibility, to co-create these systems through industry partnerships and ecosystem collaboration. A shift from firm-centric sustainability to networked practice is needed to close IVs, not just by adapting to regulation but by actively participating in shaping market conditions. In this way, firms become both recipients and co-producers of the systemic conditions necessary for CET.

6 | Conclusion

This study contributes to the theorisation of SOI and CET by moving beyond linear or decontextualised accounts of innovation impact. Prior literature (Adams et al. 2016) has often positioned SOI as an inherently progressive force. However, our findings reveal that its effects are contingent on institutional coherence and behavioural alignment rather than technical capacity alone.

This study reinforces that innovation alone cannot guarantee circular transformation; it requires synergy with institutional coherence and consumer intent. Policymakers need to move beyond compliance-driven approaches toward adaptive systems that nurture experimentation, trust, and long-term behavioural change. For scholars, it opens fertile ground to examine the paradoxes of sustainability-oriented innovation in mature economies, where progress often entails both disruption and renewal. In this sense, circular economy transitions may be viewed as a contemporary form of creative destruction, a process through which unsustainable systems give way to regenerative ones. The task ahead is to ensure that this destruction is purposeful, inclusive, and guided by institutional foresight.

6.1 | Limitations and Avenues for Future Research

This study is confined to the UK context, which inherently limits the generalisability of the findings to other countries with different institutional, cultural, or industrial characteristics. Hence, we recognise the need for caution in extrapolating the results to less regulated or structurally distinct economies and encourage future cross-country comparisons to enhance external validity.

Although considerable efforts were made to minimise methodological bias (e.g., we administered the survey to industry experts to ensure unambiguous item wording and to eliminate inflated responses), there remains a risk of perceptual or self-report bias inherent in survey-based studies. However, given that 53% of our respondents were SMEs, this design choice is appropriate as Kull et al. (2018) suggest that single-respondent surveys should not automatically be viewed as a limitation when observations are drawn from SMEs. Nonetheless, future studies could complement survey data with qualitative case studies, firm-level sustainability disclosures, or third-party audit reports to verify and triangulate responses.

A further limitation relates to the operationalisation of key constructs, particularly IV and WB. Both constructs were measured using theoretically grounded, perceptual survey items drawn from prior literature. However, given their conceptual complexity, alternative or complementary measurement strategies could enhance validity. For example, IVs are often proxied through secondary governance metrics such as the Worldwide Governance Indicators (WGI). While these indicators provide insights into dimensions such as regulatory quality and government effectiveness (Kaufmann et al. 2011), they are typically annual, national-level datasets, making them less applicable to single-country, firm-level cross-sectional studies like ours. Nonetheless, they could offer useful contextual benchmarks for longitudinal or multi-country designs in future research.

Similarly, WB, as a behavioural construct, is vulnerable to self-report biases and the well-documented intention–behaviour gap in sustainability research. While our measurement approach captures stated consumer attitudes towards circular offerings, future studies could strengthen construct validity by integrating behavioural trace data (e.g., participation in take-back or reuse schemes) or employing multi-method triangulation, such as pairing surveys with experimental or ethnographic insights. These approaches could offer a more comprehensive account of consumer behaviour and institutional constraints in circular economy transitions.

We also acknowledge that our study has not disaggregated behavioural dynamics across distinct demographic segments.[1] Our survey design and sample size did not permit detailed analysis by generational cohort, socio-economic status, or psychographic profile. Yet, such segmentation is critical for understanding differential responses to SOI, for instance, whether younger consumers are more receptive to circular models, or if affordability concerns dampen engagement among lower-income groups. As an important avenue for future research, we recommend multi-group SEM or mixed-method approaches to capture the heterogeneity of behavioural responses and their implications for SOI–ceT.

Another area for expansion lies in the cross-sectional nature of the data. While PLS-SEM provides valuable insights into the strength and direction of complex interrelationships among latent constructs, it cannot fully capture the evolution of SOI and CE practices over time. Panel data or longitudinal designs would allow researchers to examine not only causality but also the path-dependence of CET, particularly in response to shifting regulatory regimes, consumer trends, or technological disruption, not only from the previous paradigm to the CET paradigm but also within the CET paradigm from the early/installation phase to the deployment phase.

Finally, additional forces, particularly global supply chain dynamics, may exert significant influence on CET.[2] In the TC industry, value chains are often buyer-driven (Gereffi et al. 2005; Saha et al. 2021b), in which large brand manufacturers, retailers, and global buyers wield substantial power to dictate production standards, compliance requirements, and innovation pathways. Such upstream pressures, stemming from ESG reporting mandates, traceability requirements, or sustainability certifications, can compel suppliers and manufacturers to adopt circular practices irrespective of domestic consumer demand or regulatory environments. These transnational influences, while beyond the scope of our current model, likely interact with internal capabilities and local institutional frameworks to shape CET trajectories. Future research could expand the conceptual model by incorporating global buyer mandates, carbon border adjustment mechanisms, and international certification regimes as potential antecedents or moderators. Multi-level and cross-national designs would be especially valuable in unpacking how global and local logics converge, conflict, or co-evolve in driving firm-level circular economy outcomes.

Acknowledgements

The authors would like to thank the participating firms in the UK textile and clothing sector for their valuable time and insights. This research was supported in part by institutional funding from Birmingham City University.

Conflicts of Interest

The authors declare no conflicts of interest.

Endnotes

[1] We thank one of our anonymous reviewers for taking our attention to this point.

[2] We thank one of our anonymous reviewers for taking our attention to the role of global supply chains in SOI-CET relationship.

References

Adams, R., S. Jeanrenaud, J. Bessant, D. Denyer, and P. Overy. 2016. "Sustainability-Oriented Innovation: A Systematic Review." *International Journal of Management Reviews* 18, no. 2: 180–205. https://doi.org/10.1111/ijmr.12068.

Adebanjo, D., P.-L. Teh, and P. K. Ahmed. 2016. "The Impact of External Pressure and Sustainable Management Practices on Manufacturing Performance and Environmental Outcomes." *International Journal of Operations & Production Management* 36, no. 9: 995–1013. https://doi.org/10.1108/IJOPM-11-2014-0543.

Afeltra, G., S. A. Alerasoul, and F. Strozzi. 2023. "The Evolution of Sustainable Innovation: From the Past to the Future." *European Journal of Innovation Management* 26, no. 2: 386–421. https://doi.org/10.1108/EJIM-02-2021-0113.

Aghion, P., and P. Howitt. 1992. "A Model of Growth Through Creative Destruction." *Econometrica* 60, no. 2: 323–351. https://doi.org/10.2307/2951599.

Ajzen, I. 2020. "The Theory of Planned Behavior: Frequently Asked Questions." *Human Behavior and Emerging Technologies* 2, no. 4: 314–324. https://doi.org/10.1002/hbe2.195.

Alhola, K., S.-O. Ryding, H. Salmenperä, and N. J. Busch. 2019. "Exploiting the Potential of Public Procurement: Opportunities for Circular Economy." *Journal of Industrial Ecology* 23, no. 1: 96–109. https://doi.org/10.1111/jiec.12770.

Baxter, D., and M. Chipulu. 2023. "Developing a New Scale for Measuring Sustainability-Oriented Innovation." *Journal of Cleaner Production* 429: 139590. https://doi.org/10.1016/j.jclepro.2023.139590.

Berrone, P., A. Fosfuri, L. Gelabert, and L. R. Gomez-Mejia. 2013. "Necessity as the Mother of 'green' Inventions: Institutional Pressures and Environmental Innovations." *Strategic Management Journal* 34, no. 8: 891–909. https://doi.org/10.1002/smj.2041.

Bocken, N. M. P., J.-P. Kimpimäki, P. Ritala, and J. Konietzko. 2025. "How Circular Are Large Corporations? Evidence From a Large-Scale Survey With Senior Leaders." *Resources, Conservation and Recycling* 215: 108151. https://doi.org/10.1016/j.resconrec.2025.108151.

Boons, F., and F. Lüdeke-Freund. 2013. "Business Models for Sustainable Innovation: State-Of-The-Art and Steps Towards a Research Agenda." *Journal of Cleaner Production* 45: 9–19. https://doi.org/10.1016/j.jclepro.2012.07.007.

Boons, F., C. Montalvo, J. Quist, and M. Wagner. 2013. "Sustainable Innovation, Business Models and Economic Performance: An Overview." *Journal of Cleaner Production* 45: 1–8. https://doi.org/10.1016/j.jclepro.2012.08.013.

Bossle, M. B., M. Dutra de Barcellos, L. M. Vieira, and L. Sauvée. 2016. "The Drivers for Adoption of Eco-Innovation." *Journal of Cleaner Production* 113: 861–872. https://doi.org/10.1016/j.jclepro.2015.11.033.

Bromley, P., and W. W. Powell. 2012. "From Smoke and Mirrors to Walking the Talk: Decoupling in the Contemporary World." *Academy of Management Annals* 6, no. 1: 483–530. https://doi.org/10.5465/19416520.2012.684462.

Calzolari, T., A. Genovese, A. Brint, and S. Seuring. 2025. "Unlocking Circularity: The Interplay Between Institutional Pressures and Supply Chain Integration." *International Journal of Operations & Production Management* 45, no. 2: 517–541.

Cascavilla, A., I. D'Adamo, S. Desideri, and M. Iannilli. 2025. "Environmental Taxes and Subsidies for Sustainability: Experimental Evidence on Consumer Preferences for Business Strategy." *Business Strategy and the Environment*: bse.70338. https://doi.org/10.1002/bse.70338.

Coherent Market Insights. 2025. "Global Sustainable Fashion Market YoY Growth Rate, 2025–2032. Coherent Market Insights." https://www.coherentmarketinsights.com/industry-reports/global-sustainable-fashion-marketn.

Colasante, A., and I. D'Adamo. 2021. "The Circular Economy and Bioeconomy in the Fashion Sector: Emergence of a "Sustainability Bias"." *Journal of Cleaner Production* 329: 129774. https://www.sciencedirect.com/science/article/pii/S0959652621039500?casa_token=ZftDtFC8ZycAAAAA:6kbZJZq4KNmLK025SXXWNimu44QlkbdviLUnXsV3W7YLZLBsgg-p1kqdWNZ_qdrZ8YJMs0xdT24.

Colucci, M., and A. Vecchi. 2024. "Tackling Climate Change With End-of-Life Circular Fashion Practices—Remade in Italy With Amore." *British Journal of Management* 35, no. 3: 1157–1179. https://doi.org/10.1111/1467-8551.12806.

Cruciata, P., D. Pulizzotto, and C. Beaudry. 2024. "First Impressions on Sustainable Innovation Matter: Using NLP to Replicate B-Lab Environmental Index by Analyzing Companies' Homepages." *Technological Forecasting and Social Change* 205: 123455. https://doi.org/10.1016/j.techfore.2024.123455.

De, D., S. Chowdhury, P. K. Dey, and S. K. Ghosh. 2020. "Impact of Lean and Sustainability Oriented Innovation on Sustainability Performance of Small and Medium Sized Enterprises: A Data Envelopment Analysis-Based Framework." *International Journal of Production Economics* 219: 416–430. https://doi.org/10.1016/j.ijpe.2018.07.003.

Dey, P. K., C. Malesios, S. Chowdhury, K. Saha, P. Budhwar, and D. De. 2022. "Adoption of Circular Economy Practices in Small and Medium-Sized Enterprises: Evidence From Europe." *International Journal of Production Economics* 248: 108496.

Dey, P. K., C. Malesios, D. De, S. Chowdhury, and F. B. Abdelaziz. 2020. "The Impact of Lean Management Practices and Sustainably-Oriented Innovation on Sustainability Performance of Small and Medium-Sized Enterprises: Empirical Evidence From the UK." *British Journal of Management* 31, no. 1: 141–161. https://doi.org/10.1111/1467-8551.12388.

DiMaggio, P. J., and W. W. Powell. 1983. "The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields." *American Sociological Review* 48, no. 2: 147–160.

Ecer, F., and A. E. Torkayesh. 2024. "A Stratified Fuzzy Decision-Making Approach for Sustainable Circular Supplier Selection." *IEEE Transactions on Engineering Management* 71: 1130–1144. https://doi.org/10.1109/TEM.2022.3151491.

Finnigan, K. 2025. "Phoebe English, Britain's Quiet Fashion Warrior." Financial Times.

Fischer, A., and S. Pascucci. 2017. "Institutional Incentives in Circular Economy Transition: The Case of Material Use in the Dutch Textile Industry." *Journal of Cleaner Production* 155: 17–32. https://doi.org/10.1016/j.jclepro.2016.12.038.

Freeman, C. 1991. "Networks of Innovators: A Synthesis of Research Issues." *Research Policy* 20, no. 5: 499–514. https://doi.org/10.1016/0048-7333(91)90072-X.

Freeman, C., and C. Perez. 1988. "Structural Crises of Adjustment: Business Cycles." In *Technical Change and Economic Theory*. Pinter.

Geels, F. W. 2002. "Technological Transitions as Evolutionary Reconfiguration Processes: A Multi-Level Perspective and a Case-Study." *Research Policy* 31, no. 8: 1257–1274. https://doi.org/10.1016/S0048-7333(02)00062-8.

Gereffi, G., J. Humphrey, and T. Sturgeon. 2005. "The Governance of Global Value Chains." *Review of International Political Economy* 12, no. 1: 78–104.

Goworek, H., C. Land, G. Burt, et al. 2018. "Scaling Sustainability: Regulation and Resilience in Managerial Responses to Climate Change." *British Journal of Management* 29, no. 2: 209–219. https://doi.org/10.1111/1467-8551.12295.

Hair, J. F., W. C. Black, B. J. Babin, R. E. Anderson, and R. L. Tatham. 2019. "Multivariate Data Analysis".

Hair, J. F., C. M. Ringle, and M. Sarstedt. 2011. "PLS-SEM: Indeed a Silver Bullet." *Journal of Marketing Theory and Practice* 19, no. 2: 139–152. https://doi.org/10.2753/MTP1069-6679190202.

Henseler, J., T. K. Dijkstra, M. Sarstedt, et al. 2014. "Common Beliefs and Reality About PLS: Comments on Rönkkö and Evermann (2013)." *Organizational Research Methods* 17, no. 2: 182–209. https://doi.org/10.1177/1094428114526928.

Huq, F. A., I. N. Chowdhury, and R. D. Klassen. 2016. "Social Management Capabilities of Multinational Buying Firms and Their Emerging Market Suppliers: An Exploratory Study of the Clothing Industry." *Journal of Operations Management* 46: 19–37. https://doi.org/10.1016/j.jom.2016.07.005.

Huq, F. A., and M. Stevenson. 2020. "Implementing Socially Sustainable Practices in Challenging Institutional Contexts: Building Theory From Seven Developing Country Supplier Cases." *Journal of Business Ethics* 161, no. 2: 415–442. https://doi.org/10.1007/s10551-018-3951-x.

Huq, F. A., M. Stevenson, and M. Zorzini. 2014. "Social Sustainability in Developing Country Suppliers: An Exploratory Study in the Ready Made Garments Industry of Bangladesh." *International Journal of Operations & Production Management* 34, no. 5: 610–638. https://doi.org/10.1108/IJOPM-10-2012-0467.

Hussain, T., K. Kuzmina, and M. Koria. 2025. "The Emperor's Old Clothes: A Critical Review of Circular Fashion in Gray Literature." *Frontiers in Sustainability* 6: 1499273. https://doi.org/10.3389/frsus.2025.1499273.

Ishaq, S., U. Tanveer, T. G. Hoang, and F. Wamba Samuel. 2025. "From Linear to Circular: Capabilities, Defensive Reasoning and Supply Chain Collaborations in Manufacturers' Circular Economy Transition." *British Journal of Management* 1–16. https://doi.org/10.1111/1467-8551.12932.

Kaufmann, D., A. Kraay, and M. Mastruzzi. 2011. "The Worldwide Governance Indicators: Methodology and Analytical Issues." *Hague Journal on the Rule of Law* 3, no. 2: 220–246. https://doi.org/10.1017/S1876404511200046.

Khitous, F., A. Urbinati, and K. Verleye. 2022. "Product-Service Systems: A Customer Engagement Perspective in the Fashion Industry." *Journal of Cleaner Production* 336: 130394.

Klewitz, J., and E. G. Hansen. 2014. "Sustainability-Oriented Innovation of SMEs: A Systematic Review." *Journal of Cleaner Production* 65: 57–75.

Kühl, C., H. D. Skipworth, M. Bourlakis, and E. Aktas. 2022. "The Circularity of Product-Service Systems: The Role of Macro-, Meso- and Micro-Level Contextual Factors." *International Journal of Operations & Production Management* 43, no. 4: 619–650. https://doi.org/10.1108/IJOPM-01-2022-0055.

Kull, T. J., J. Kotlar, and M. Spring. 2018. "Small and Medium Enterprise Research in Supply Chain Management: The Case for Single-Respondent Research Designs." *Journal of Supply Chain Management* 54, no. 1: 23–34. https://doi.org/10.1111/jscm.12157.

Lehmann, H., C. Hinske, V. de Margerie, and A. Slaveikova Nikolova, eds. 2023. *The Impossibilities of the Circular Economy: Separating Aspirations From Reality*. Taylor & Francis. https://doi.org/10.4324/9781003244196.

Mahapatra, S. K., R. Narasimhan, and P. Barbieri. 2010. "Strategic Interdependence, Governance Effectiveness and Supplier Performance: A Dyadic Case Study Investigation and Theory Development." *Journal of Operations Management* 28, no. 6: 537–552. https://doi.org/10.1016/j.jom.2010.04.001.

Manika, D., P. Antonetti, S. Papagiannidis, and X. Guo. 2021. "How Pride Triggered by Pro-Environmental Technology Adoption Spills Over Into Conservation Behaviours: A Social Business Application." *Technological Forecasting and Social Change* 172: 121005. https://doi.org/10.1016/j.techfore.2021.121005.

Manolchev, C., R. Cherrington, and G. Crabolu. 2024. "Untangling Circularity: Transitioning to a Regional Circular Economy in the Clothing and Textile Sector in England." *Journal of Cleaner Production* 482: 144188. https://doi.org/10.1016/j.jclepro.2024.144188.

Mehrabi, S., M. Mahdad, J. Bijman, C. Cholez, J. C. P. Mesa, and C. Giagnocavo. 2025. "Microfoundations of Dynamic Capabilities Enabling Scaling Pathways of Sustainability-Oriented Innovation Business Models." *Business Strategy and the Environment* 34, no. 1: 849–871. https://doi.org/10.1002/bse.4004.

Milgrom, P., and J. Roberts. 1995. "Complementarities and Fit Strategy, Structure, and Organizational Change in Manufacturing." *Journal of Accounting and Economics* 19, no. 2–3: 179–208.

Moore, D. 2020. "UK Named Fourth Largest Textile Waste Producer in Europe." Circular Online. https://www.circularonline.co.uk/news/uk-named-fourth-largest-textile-waste-producer-in-europe/.

North, D. C. 1990. *Institutions, Institutional Change and Economic Performance*. Cambridge University Press.

North, D. C. 2016. "Institutions and Economic Theory." *American Economist* 61, no. 1: 72–76. https://doi.org/10.1177/0569434516630194.

Peng, M. W., S. L. Sun, B. Pinkham, and H. Chen. 2009. "The Institution-Based View as a Third Leg for a Strategy Tripod." *Academy of Management Perspectives* 23, no. 3: 63–81. https://doi.org/10.5465/amp.2009.43479264.

Perez, C. 2002. *Technological Revolutions and Financial Capital: The Dynamics of Bubbles and Golden Ages*. Edward Elgar Publishing. https://doi.org/10.4337/9781781005323.

Perotti, F. A., C. C. Amitrano, M. A. Camilleri, and C. Troise. 2025. "Equity Crowdfunding: An Open Innovation Tool to Attain Corporate Sustainability." *Innovation: Organization and Management. Scopus*: 1–21. https://doi.org/10.1080/14479338.2025.2478082.

Petri, L., and S. Seuring. 2025. "Sustainability Paradoxes in Supply Chains: Analyzing the Effects of Public and Private Regulations." *Business Strategy and the Environment*: 1–19. https://doi.org/10.1002/bse.70199.

Podsakoff, P. M., N. P. Podsakoff, L. J. Williams, C. Huang, and J. Yang. 2024. "Common Method Bias: It's Bad, It's Complex, It's Widespread, and It's Not Easy to Fix." *Annual Review of Organizational Psychology and Organizational Behavior* 11, no. 2024: 17–61. https://doi.org/10.1146/annurev-orgpsych-110721-040030.

Rainville, A. 2021. "Stimulating a More Circular Economy Through Public Procurement: Roles and Dynamics of Intermediation." *Research Policy* 50, no. 4: 104193. https://doi.org/10.1016/j.respol.2020.104193.

Ramírez-Escamilla, H. G., M. C. Martínez-Rodríguez, A. Padilla-Rivera, D. Domínguez-Solís, and L. E. Campos-Villegas. 2024. "Advancing Toward Sustainability: A Systematic Review of Circular Economy Strategies in the Textile Industry." *Recycling* 9, no. 5: 95. https://doi.org/10.3390/recycling9050095.

Ratsimandresy, A., and J. Miemczyk. 2025. "Made of Oysters, Hemp and Shuttlecocks: A Study of Cross-Industrial Collaboration for the Circular Economy." *International Journal of Operations & Production Management* 45: 1650–1685. https://doi.org/10.1108/IJOPM-07-2024-0613.

Reike, D., M. P. Hekkert, and S. O. Negro. 2023. "Understanding Circular Economy Transitions: The Case of Circular Textiles." *Business Strategy and the Environment* 32, no. 3: 1032–1058. https://doi.org/10.1002/bse.3114.

Rennings, K. 2000. "Redefining Innovation—Eco-Innovation Research and the Contribution From Ecological Economics." *Ecological Economics* 32, no. 2: 319–332. https://doi.org/10.1016/S0921-8009(99)00112-3.

Rigdon, E. E., M. Sarstedt, and C. M. Ringle. 2017. "On Comparing Results From CB-SEM and PLS-SEM: Five Perspectives and Five Recommendations." *Marketing ZFP* 39, no. 3: 4–16.

Rodríguez-Espíndola, O., A. Cuevas-Romo, S. Chowdhury, et al. 2022. "The Role of Circular Economy Principles and Sustainable-Oriented Innovation to Enhance Social, Economic and Environmental Performance: Evidence From Mexican SMEs." *International Journal of Production Economics* 248: 108495. https://doi.org/10.1016/j.ijpe.2022.108495.

Rogers, M. 2003. "A Survey of Economic Growth." *Economic Record* 79: 410979.

Rossi, L. A., and J. S. Srai. 2024. "The Role of Digital Technologies in Configuring Circular Ecosystems." *International Journal of Operations & Production Management* 45, no. 4: 863–894. https://doi.org/10.1108/IJOPM-12-2023-0973.

Saha, K., P. K. Dey, and V. Kumar. 2024. "A Comprehensive Review of Circular Economy Research in the Textile and Clothing Industry." *Journal of Cleaner Production* 444: 141252. https://doi.org/10.1016/j.jclepro.2024.141252.

Saha, K., P. K. Dey, and E. Papagiannaki. 2021. "Implementing Circular Economy in the Textile and Clothing Industry." *Business Strategy and the Environment* 30, no. 4: 1497–1530. https://doi.org/10.1002/bse.2670.

Saha, K., C. Malesios, S. Chowdhury, and P. K. Dey. 2023. "Impact of Institutional Voids on the Performance of Small and Medium-Sized Enterprises." *Journal of Strategy and Management* 16, no. 1: 1–27. https://doi.org/10.1108/JSMA-07-2021-0155.

Saha, K., S. Paladini, and M. Yarnall. 2023. "Sustainable Practices in the Animal Health Industry: A Stakeholder-Based View." *Business Strategy and the Environment* 33: 3356–3382. https://doi.org/10.1002/bse.3633.

Sarstedt, M., and Y. Liu. 2024. "Advanced Marketing Analytics Using Partial Least Squares Structural Equation Modeling (PLS-SEM)." *Journal of Marketing Analytics* 12, no. 1: 1–5. https://doi.org/10.1057/s41270-023-00279-7.

Schumpeter, J. A. 1943a. *Capitalism, Socialism and Democracy*. Routledge. https://doi.org/10.4324/9780203202050.

Schumpeter, J. A. 1943b. *Capitalism, Socialism and Democracy (Transferred to Digital Print)*. Routledge.

Scott, W. R. 2013. *Institutions and Organizations: Ideas, Interests, and Identities*. Sage Publications.

Siderius, T., and K. Poldner. 2021. "Reconsidering the Circular Economy Rebound Effect: Propositions From a Case Study of the Dutch Circular Textile Valley." *Journal of Cleaner Production* 293: 10–16. https://doi.org/10.1016/j.jclepro.2021.125996.

Stål, H. I., and H. Corvellec. 2022. "Organizing Means–Ends Decoupling: Core–Compartment Separations in Fast Fashion." *Business & Society* 61, no. 4: 857–885. https://doi.org/10.1177/00076503211001856.

Tanveer, U., T. G. Hoang, H. Q. Truong, S. Ishaq, Y. Gong, and Jack. 2024. "The Critical Role of Procurement in the Emergence of Circular Business Models: Insights From Multiple Cases of Vietnamese Manufacturers." *Business Strategy and the Environment* 33, no. 8: 7689–7707. https://doi.org/10.1002/bse.3888.

Testa, F., R. Iovino, and F. Iraldo. 2020. "The Circular Economy and Consumer Behaviour: The Mediating Role of Information Seeking in Buying Circular Packaging." *Business Strategy and the Environment* 29, no. 8: 3435–3448.

Tunn, V. S. C., E. A. Van den Hende, N. M. P. Bocken, and J. P. L. Schoormans. 2021. "Consumer Adoption of Access-Based Product-Service Systems: The Influence of Duration of Use and Type of Product." *Business Strategy and the Environment* 30, no. 6: 2796–2813. https://doi.org/10.1002/bse.2894.

UKFT. 2023. "About the UK Fashion and Textiles Industry." https://ukft.org/industry-reports-and-stats/.

Yerushalmi, E., and K. Saha. 2025. "How Circular Economy Innovation Can Backfire on the Environment: Quantifying the Rebound Effect of the Textiles and Clothing Sector." *Business Strategy and the Environment* 34, no. 8: 10495–10512. https://doi.org/10.1002/bse.70135.