

UNDERSTANDING THE CONSUMER PERSPECTIVE IN CIRCULAR SYSTEMS: EXPLORING THE COMPLEXITY OF TRANSITION TO A CIRCULAR ECONOMY

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Abstract

This study addresses the critical yet underexplored role of consumers in the transition toward a circular economy, a shift necessitated by intensifying environmental degradation and resource scarcity. Despite the proliferation of academic literature on the circular economy, existing research often conceptualizes consumers as passive recipients rather than as dynamic agents capable of catalysing or impeding systemic change. To bridge this gap, the study employs a systematic literature review methodology, synthesizing insights from 156 screened academic articles to map the multidimensional interactions between consumers and other stakeholders within circular ecosystems. The analysis integrates the Multi-Level Perspective (MLP) and Stakeholder Theory, enabling a nuanced examination of how consumer behaviours interact with niche innovations, established market regimes, and broader policy landscapes. Findings reveal that increased consumer adoption of circular practices at the micro level stimulates business innovation and market expansion, while at the meso level, collaborative value creation and infrastructure development reinforce consumer participation. At the macro level, growing consumer demand incentivizes policy support and infrastructural investment, creating a feedback loop that accelerates systemic change. The study identifies leverage points for effective consumer engagement, such as targeted education, behavioural incentives, and multi-stakeholder collaboration, and offers practical implications for policymakers, businesses, and civil society. By reframing consumers as active co-creators, this study advances theoretical and practical understanding of their pivotal role in circular economy transitions, providing a comprehensive framework for future research and policy development.

Keywords: *circular economy; consumer engagement; multi-level perspective; stakeholder theory.*

JEL Classification: Q56

1. INTRODUCTION

The accelerating depletion of natural resources and mounting environmental degradation have brought the limitations of the traditional linear economic model – take, make, dispose – into sharp relief, necessitating a fundamental shift toward

more sustainable paradigms. The circular economy (CE) has emerged as a compelling alternative, aiming to decouple economic growth from resource consumption by promoting the continual use, reuse, and regeneration of materials and products (Nguyen *et al.*, 2023). In this context, the role of consumers has gained increasing attention, as their choices and behaviours are pivotal in driving or hindering the adoption and diffusion of circular practices across markets and societies.

Despite the growing body of literature on circular economy strategies, the majority of research has historically focused on supply-side innovations, business models, and policy frameworks, often relegating consumers to the role of passive recipients of circular solutions (Carreira *et al.*, 2023; Vidal-Ayuso *et al.*, 2023). This perspective overlooks the complex, multidimensional ways in which consumers actively shape the success or failure of circular transitions through their purchasing decisions, use patterns, and end-of-life product management (Duarte *et al.*, 2024). Recent studies underscore a persistent gap between consumers' positive attitudes toward circularity and their actual engagement in circular behaviours, with barriers such as insufficient information, limited accessibility, and inadequate economic incentives impeding widespread adoption. This disconnect highlights the need for a more nuanced understanding of consumers not merely as end-users, but as dynamic agents whose actions, motivations, and interactions with other stakeholders can catalyse or constrain systemic change.

The problem, therefore, lies in the lack of comprehensive frameworks that capture the full spectrum of consumer roles within circular ecosystems and elucidate how their behaviours interact with innovations at the micro (individual and niche), meso (organizational and regime), and macro (policy and societal) levels. Without such frameworks, policymakers and practitioners risk designing interventions that fail to address the root causes of consumer inertia or resistance, ultimately limiting the effectiveness of circular economy initiatives. Addressing this gap is critical, as evidence suggests that consumer engagement is not only necessary for the operationalization of circular business models but also for driving market shifts, influencing policy, and normalizing sustainable consumption patterns.

To respond to this challenge, the present study adopts a systematic literature review methodology, screening and synthesizing insights from 156 academic articles to map the multidimensional interactions between consumers and other stakeholders in circular ecosystems. Methodologically, the review is guided by the integration of the Multi-Level Perspective (MLP) (Geels, 2004) and Stakeholder Theory (Freeman *et al.*, 2010), which together provide a robust theoretical lens for analysing how consumer behaviours interact with niche innovations, established market regimes, and broader policy landscapes. The MLP framework allows for the identification of systemic barriers and leverage points across different levels of the circular transition, while Stakeholder Theory unpacks

the conflicts, collaborations, and co-creation processes among consumers, businesses, policymakers, and civil society actors.

The findings reveal that consumers play a tri-dimensional role in the circular economy: as customers making product choices, as users influencing the longevity and maintenance of goods, and as end-of-life product holders determining the fate of materials post-consumption. At the micro level, increased consumer adoption of circular practices – such as purchasing durable, repairable, or second-hand products – stimulates business innovation and market expansion, reinforcing positive feedback loops through social proof and word-of-mouth. At the meso level, collaborative value creation and infrastructure development – such as repair networks, sharing platforms, and co-design initiatives – enhance accessibility and normalize circular behaviours. At the macro level, growing consumer demand incentivizes policy support and infrastructural investment, creating a societal shift that accelerates the normalization of circular economy principles. However, the study also identifies persistent barriers, including the dominance of price-quality considerations, convenience, and information deficits, which must be addressed through targeted education, behavioural incentives, and multi-stakeholder collaboration.

Theoretically, this research advances the field by reframing consumers as active co-creators in circular ecosystems, rather than passive recipients, and by providing an integrative framework that links individual behaviours to systemic change through the lenses of MLP and Stakeholder Theory. Practically, the study offers actionable recommendations for policymakers, businesses, and civil society, the development of transparent information systems, and the alignment of policy incentives with consumer motivations. These contributions are intended to inform the design of more effective interventions that can bridge the gap between consumer intention and action, thereby accelerating the transition to a circular economy.

The remainder of the article is structured as follows. The next section reviews the relevant literature on the circular economy and consumer engagement. This is followed by a detailed account of the methodology. The subsequent section presents the preliminary results and discussion, mapping the multidimensional roles of consumers and identifying leverage points for effective engagement. The article concludes with a synthesis of theoretical and practical implications, limitations, and directions for future research.

2. LITERATURE BACKGROUND

The linear economic model, characterized by its "take-make-dispose" paradigm, has precipitated unprecedented environmental degradation, resource depletion, and climate instability (Geissdoerfer *et al.*, 2017). In response, the circular economy (CE) has emerged as a transformative framework that redefines production and consumption systems by prioritizing resource efficiency, waste

minimization, and regenerative design (Ahmadov *et al.*, 2025). Unlike linear systems, CE aims to decouple economic growth from finite resource extraction through strategies such as reuse, repair, remanufacturing, and recycling (Blomsma *et al.*, 2019). This shift is not merely an environmental imperative but a socioeconomic necessity, as global waste generation is projected to exceed 3.4 billion metric tons annually by 2050, exacerbating landfill pollution and greenhouse gas emissions (World Bank, 2021).

Academic consensus underscores CE's potential to mitigate climate change, enhance resource security, and foster innovation. Moreover, CE principles are increasingly integrated into policy frameworks, such as the European Green Deal, which mandates member states to adopt circular strategies to achieve carbon neutrality (European Commission, 2020). Despite these advancements, the transition remains uneven, with systemic barriers persisting across industries and geographies. A critical lacuna in current research lies in understanding the role of human agency – particularly consumers – in driving or inhibiting CE transitions (Bucur, 2023).

Consumers are central to CE ecosystems, yet their agency has historically been underestimated in both academic literature and practice. Traditional CE scholarship has focused disproportionately on supply-side innovations, such as closed-loop manufacturing and industrial symbiosis, while relegating consumers to passive recipients of circular products (Carreira *et al.*, 2023; Vidal-Ayuso *et al.*, 2023). This oversight is paradoxical, given that consumer decisions directly influence material flows at every lifecycle stage – from purchasing durable goods to participating in sharing economies and proper waste segregation (Duarte *et al.*, 2024).

Behavioural barriers – including lack of awareness, economic disincentives, and infrastructural limitations – hinder widespread consumer engagement. For example, convenience-driven consumption habits and perceived hygiene risks deter participation in product-service systems like clothing rentals (Bucur, 2023). Additionally, informational asymmetries persist: eco-labelling and transparency mechanisms often fail to communicate the environmental benefits of circular products effectively (Geissdoerfer *et al.*, 2017). Nevertheless, emerging evidence suggests that targeted interventions, such as behavioural nudges and financial incentives, can amplify consumer adoption. In Sweden, deposit-return schemes for beverage containers achieved a 90% recycling rate by aligning economic rewards with environmental action (Lacey & Rutqvist, 2015). Such examples underscore the untapped potential of consumer-centric CE strategies.

Existing CE literature provides robust insights into technological and regulatory dimensions but inadequately addresses the sociopolitical dynamics of consumer engagement (Ahmadov, 2025). First, while studies acknowledge consumers as "co-creators" in circular value chains, their interactions with other stakeholders – businesses, policymakers, NGOs – remain underexplored (Heikkinen *et al.*, 2023). For instance, collaborative platforms enabling consumer

feedback loops in product design are rare, despite their potential to enhance circularity (Blomsma *et al.*, 2019). Second, the temporal and spatial dimensions of consumer behaviour are neglected. Cross-cultural analyses reveal significant disparities: European consumers prioritize product longevity, whereas Asian markets emphasize cost-effectiveness, complicating global CE standardization (Govindan *et al.*, 2018).

Theoretical frameworks capable of bridging these gaps are scarce. Most CE models, such as the Ellen MacArthur Foundation's "butterfly diagram," focus on material flows rather than human behaviours. This reductionist approach overlooks the multilevel complexities of consumer decision-making, which operates within nested systems of individual preferences, institutional norms, and macroeconomic policies (Geels, 2004). To address this, scholars advocate integrating the MLP and Stakeholder Theory – two complementary lenses that collectively illuminate the interplay between micro-level actions and systemic change (Blomsma *et al.*, 2019; Heikkinen *et al.*, 2023).

The MLP, rooted in transition studies, conceptualizes societal change as the outcome of interactions across three tiers: niches (innovative experiments), regimes (dominant practices), and landscapes (exogenous trends) (Geels, 2002). Applied to CE transitions, MLP elucidates how consumer-driven niches – such as repair cafés or clothing swaps – challenge incumbent regimes (e.g., fast fashion) by normalizing circular behaviours (Blomsma *et al.*, 2019). Landscape pressures, such as climate policies or raw material shortages, further destabilize regimes, creating windows of opportunity for niche innovations to scale (Geels, 2011).

However, MLP's structural focus risks oversimplifying the agency of individual actors. Stakeholder Theory complements this by examining how diverse actors – consumers, firms, governments – collaborate or conflict in value creation processes (Freeman, 1984). In CE contexts, stakeholders often pursue divergent interests: consumers prioritize affordability, businesses seek profitability, and regulators enforce compliance (Heikkinen *et al.*, 2023). Successful CE transitions thus depend on aligning these interests through co-design, transparency, and shared incentives. For instance, blockchain-enabled traceability systems in the textile industry have bolstered consumer trust in recycled materials by verifying sustainability claims (Bocken *et al.*, 2016).

The integration of MLP and Stakeholder Theory offers a holistic framework to analyse CE transitions. MLP identifies systemic leverage points – such as policy reforms or niche upscaling – while Stakeholder Theory unpacks the relational dynamics enabling or constraining collective action (Ahmadov *et al.*, 2025). Together, they provide a roadmap for fostering consumer agency across micro, meso, and macro levels. At the micro level, educational campaigns can address knowledge gaps; at the meso level, multi-stakeholder partnerships can co-create circular infrastructure; and at the macro level, regulatory frameworks can

internalize environmental costs, incentivizing sustainable consumption (Geissdoerfer *et al.*, 2017).

3. METHODOLOGY

This study employed a systematic literature review (SLR) methodology to synthesize existing academic knowledge on consumer roles in CE transitions, adhering to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to ensure methodological rigor and transparency. The review integrated the MLP and Stakeholder Theory as analytical frameworks to examine interactions between consumers, businesses, and policymakers across micro, meso, and macro levels.

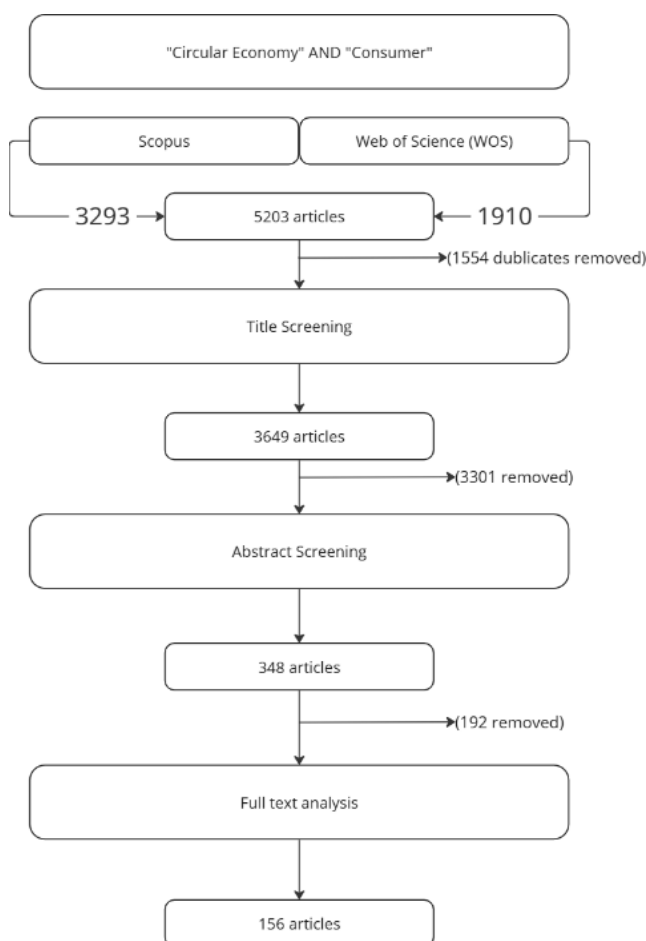


Figure 1. Systematic Literature Review Flow Diagram
Source: Author's own

The figure 1 illustrates the stepwise selection process for the systematic literature review on the intersection of the circular economy and consumer research. The initial database search using the terms "Circular Economy" AND "Consumer" yielded a total of 5,203 articles – 3,293 from Scopus and 1,910 from Web of Science. After removing 1,554 duplicates, 3,649 unique articles remained for title screening. This phase excluded 3,301 records, leaving 348 articles for abstract screening. Following the exclusion of 192 articles at this stage, 156 articles were subjected to full-text analysis and ultimately included in the final review. This transparent and rigorous process ensures that only the most relevant and high-quality academic studies inform the synthesis of consumer roles in circular economy transitions

4. RESULTS AND DISCUSSION

At the micro level, the adoption of circular practices by consumers serves as a critical driver for business innovation and market expansion. As recent studies have shown, consumer choices and behaviours – shaped by personal values, knowledge, habits, price sensitivity, perceived product quality, and social influence – play a decisive role in stimulating firms to develop and improve circular offerings (Dentchev *et al.*, 2018; Shevchenko *et al.*, 2023). When consumers opt for circular products or services, they not only create immediate demand but also send strong market signals that encourage businesses to invest in innovation, expand product accessibility, and enhance the overall value proposition of circular solutions (Nguyen *et al.*, 2023; Vidal-Ayuso *et al.*, 2023).

Positive consumer experiences and the spread of word-of-mouth further reinforce these dynamics, normalizing circular consumption and creating social proof that encourages broader uptake (Perez-Castillo & Vera-Martinez, 2021). This aligns with the MLP, which positions individual behaviours and niche innovations as foundational to systemic transitions (Geels, 2002; UNIDO, 2024). Stakeholder Theory complements this by framing consumers as active co-creators who directly engage with other actors – such as businesses and NGOs – to shape new practices and values within the system (Heikkinen *et al.*, 2023).

However, persistent barriers remain. Awareness and knowledge gaps, limited economic incentives, and accessibility issues continue to constrain consumer participation in circular models. Overcoming these challenges requires targeted education, behavioural nudges, and the design of products that are modular and repairable, thereby empowering consumers to participate meaningfully in the circular economy (Sabbaghi & Behdad, 2018).

At the meso level, the interplay between consumers and circular business models (CBMs) becomes more pronounced. As more consumers engage with CBMs – such as product-service systems, rental schemes, and sharing platforms – businesses are incentivized to expand and refine their circular offerings (Bocken *et al.*, 2016; Scholz *et al.*, 2016). This creates a virtuous cycle: improved offerings

make circular options more attractive and accessible, which in turn encourages greater consumer participation (Carreira *et al.*, 2023).

Social acceptance and the normalization of circular practices are crucial at this stage. The availability of CBMs, supportive social norms, effective marketing, and a conducive retail environment all contribute to reinforcing both consumer behaviour and business innovation. Collaborative value creation – where firms, consumers, and NGOs co-design solutions – emerges as a key mechanism for driving regime adaptation and shifting established market practices (Heikkinen *et al.*, 2023).

Stakeholder Theory highlights the importance of these partnerships, noting that consumer engagement can pressure businesses to innovate and align their strategies with evolving social expectations (Blomsma *et al.*, 2019). Policy advocacy, such as campaigns for repair rights, and the development of local infrastructure (e.g., repair cafés, sharing platforms) further facilitate this transition (UNIDO, 2024). Yet, challenges persist in the form of marketing communication gaps and limited accessibility to repair and reuse infrastructure, which can hinder the broader diffusion of circular practices.

At the macro level, growing consumer demand for circular products exerts pressure on governments and institutions to strengthen supportive policies and invest in enabling infrastructure (Nguyen *et al.*, 2023). Systemic policy mixes – combining regulatory frameworks, economic incentives, and infrastructural investments – are increasingly recognized as essential for scaling circular economy principles across societies (European Commission, 2020).

Societal shifts in attitudes, driven by consumer advocacy and behaviour, can accelerate the normalization of circular economy principles at the macro level. As cultural norms evolve and cross-sector coalitions form, there is greater alignment of incentives among governments, industry, and NGOs to support circular transitions (UNIDO, 2024). The MLP framework identifies these landscape pressures – such as policy reforms, technological advancements, and cultural change – as central to destabilizing incumbent regimes and opening pathways for systemic transformation (Geels, 2004).

However, the effectiveness of macro-level interventions depends on their ability to address context- and sector-specific barriers. For instance, in regions where CBM infrastructure is lacking, initial policy focus must be on building availability and access, while in more mature contexts, shifting social norms and individual behaviours becomes paramount. Stakeholder Theory emphasizes the need for cross-sector collaboration and the alignment of diverse interests to ensure that policy and infrastructure upgrades translate into meaningful changes in consumer behaviour and systemic outcomes (Heikkinen *et al.*, 2023).

A key insight emerging from this analysis is the presence of strong feedback loops across all three levels. At the micro level, consumer adoption of niche innovations pressures firms to mainstream circular options, which in turn

normalizes sustainable habits (Blomsma *et al.*, 2019). At the meso level, consumer engagement leads businesses to expand and improve their offerings, further increasing participation and reinforcing the cycle of innovation and adoption (Scholz *et al.*, 2016). At the macro level, consumer demand prompts policy and infrastructure upgrades, enabling more circular behaviour and reinforcing systemic change.

These findings underscore the necessity of integrated, multi-level strategies for advancing the circular economy. Policymakers, businesses, and civil society must coordinate efforts to address barriers and leverage points at each level, ensuring that interventions are mutually reinforcing and contextually appropriate (UNIDO, 2024; Nguyen *et al.*, 2023).

5. CONCLUSION

This study has sought to illuminate the pivotal and multidimensional role of consumers in the transition toward a circular economy, integrating insights from the MLP and Stakeholder Theory to provide a nuanced understanding of how consumer behaviours interact with business innovation, policy, and systemic change. The findings underscore that consumers are not merely passive recipients of circular solutions but active agents whose choices, advocacy, and participation can catalyse shifts across micro, meso, and macro levels of the circular ecosystem (Shevchenko *et al.*, 2023; Dentchev *et al.*, 2018). At the micro level, consumer adoption of circular practices stimulates business innovation and market expansion, reinforcing positive feedback loops through social proof and word-of-mouth. At the meso level, engaged consumers drive the evolution of circular business models, influence policy advocacy, and contribute to the normalization of sustainable consumption patterns. At the macro level, collective consumer demand incentivizes policy reform, infrastructure investment, and the alignment of societal norms with circular economy principles (Nguyen *et al.*, 2023; Vidal-Ayuso *et al.*, 2023).

Despite these promising dynamics, several persistent barriers must be addressed to fully realize the transformative potential of consumer engagement. Awareness and knowledge gaps, limited accessibility to circular options, and insufficient economic incentives remain significant obstacles. The literature also highlights the need for systemic approaches that combine targeted education, behavioural nudges, and supportive policy frameworks to empower consumers and facilitate meaningful behavioural change. Moreover, the transition to a circular economy requires robust stakeholder collaboration, as the interdependence between consumers, businesses, governments, and civil society is essential for joint value creation and the scaling of circular innovations (Bocken *et al.*, 2018; Geissdoerfer *et al.*, 2017).

There are, however, notable limitations to this research. The systematic literature review, while comprehensive, is constrained by the predominance of

studies from high-income and European contexts, potentially underrepresenting the perspectives and challenges faced in the Global South. The exclusion of grey literature, while ensuring academic rigor, may omit valuable practical insights from industry and policy practice. Additionally, the evolving and context-specific nature of consumer engagement in circular transitions suggests that findings may not be universally generalizable, and further empirical research is needed to capture diverse consumer experiences and sectoral variations.

Future research should prioritize the development of context-sensitive interventions and policy toolkits that address the specific barriers and motivations of different consumer segments. Longitudinal and cross-cultural studies are needed to deepen understanding of how consumer engagement evolves over time and across regions. Furthermore, interdisciplinary approaches that integrate behavioural science, design thinking, and digital innovation hold promise for unlocking new pathways to consumer empowerment and systemic change.

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