

Driving Circularity through Reverse Logistics: Policies, Technologies, and Consumer Dynamics

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ABSTRACT : Reverse logistics plays a critical role in enabling circular economy models by facilitating resource recovery, reducing environmental impact, and promoting sustainable production-consumption cycles. This narrative review aims to synthesize current literature on reverse logistics in the context of circular economy strategies, with a particular focus on consumer participation, regulatory frameworks, and technological innovation. Using a narrative methodology, the review draws upon peer-reviewed studies sourced from Scopus and Web of Science, covering empirical and conceptual contributions from 2000 to 2024. The findings indicate that consumer behavior, influenced by environmental awareness, trust, and financial incentives, remains a crucial enabler of reverse logistics. Regulatory interventions such as Extended Producer Responsibility (EPR) and tax incentives have proven effective but often encounter challenges in implementation due to fragmented governance and limited inter-agency coordination. Technological advancements, including artificial intelligence, Internet of Things (IoT), and blockchain, have enhanced supply chain transparency and efficiency, although digital inequality poses challenges in developing regions. The discussion highlights the influence of systemic barriers, such as rigid bureaucracies and cultural resistance, which require adaptive policy solutions and inclusive governance. To address existing gaps, future research must integrate interdisciplinary approaches, especially in underrepresented regions. Ultimately, aligning technological, policy, and social dimensions will be essential to unlocking the full potential of reverse logistics within circular economy frameworks.

Keywords: Reverse Logistics; Circular Economy; Sustainability Policy; Technological Innovation; Consumer Behavior; Waste Management; Extended Producer Responsibility



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INTRODUCTION

The increasing global concern over environmental degradation and the unsustainable use of resources has brought concepts such as reverse logistics, remanufacturing, and the circular economy to the forefront of academic and policy discussions. In response to the mounting volumes of industrial waste, shortened product life cycles, and escalating environmental pressures, scholars and practitioners have begun to explore sustainable alternatives to the traditional linear

economic model. Among these alternatives, the circular economy (CE) offers a promising framework that emphasizes the restoration, regeneration, and closed-loop utilization of resources. This shift has catalyzed a surge of research interest and practical initiatives globally, as evidenced by the growing literature on circular economy strategies and the increased deployment of remanufacturing facilities, especially in developing countries (Fofou et al., 2022). Concurrently, scientometric analyses highlight an intensification of academic discourse on waste management and value recovery, underscoring the relevance and urgency of these topics within the sustainability paradigm (Wang et al., 2019; Mallick et al., 2023).

Numerous studies have attempted to unpack the systemic dimensions of reverse logistics within the context of CE, elucidating how reverse flows can support material recovery and mitigate environmental harm. As Wang et al. (2019) point out, effective reverse logistics systems can extend the lifecycle of products, conserve raw materials, and reduce carbon footprints. Moreover, Mallick et al. (2023) underscore the critical role of remanufacturing and closed-loop supply chains in supporting resource-efficient production processes. Despite these benefits, the implementation of CE practices and reverse logistics faces considerable obstacles, ranging from fragmented regulatory landscapes and infrastructural inadequacies to limited consumer awareness and engagement. These challenges, while not insurmountable, necessitate coordinated policy interventions and systemic shifts in production and consumption patterns.

Empirical evidence from a wide range of sectors confirms the transformative potential of CE and reverse logistics in addressing global environmental and economic challenges. For instance, Fofou et al. (2022) demonstrated how remanufacturing initiatives in African countries have significantly curtailed the disposal of heavy machinery components, thereby reducing landfill dependency and fostering circular production cycles. Similarly, Garcia et al. (2019) and Gutberlet et al. (2017) examined the dynamics of formal and informal waste sectors in Brazil, revealing the capacity of grassroots and community-based systems to contribute meaningfully to CE objectives. Notably, their findings suggest that reverse logistics, when integrated with localized knowledge and practices, can enhance sustainability outcomes even in resource-constrained environments. At the global level, the increasing urbanization and proliferation of electronic devices have intensified the pressure on e-waste management systems, prompting a reevaluation of current policies and technologies to better align with CE principles (Franz & Silva, 2022).

Further bolstering the relevance of this field, recent research highlights the multifaceted benefits of adopting reverse logistics, including economic gains through material recovery, social inclusion via employment in recycling sectors, and environmental protection through pollution reduction. However, these outcomes are contingent upon the effective resolution of several interconnected challenges. First, the lack of harmonized international standards for reverse logistics impedes cross-border collaboration and knowledge transfer. Second, discrepancies in regulatory enforcement and infrastructural readiness create uneven implementation landscapes, particularly disadvantaging remote and underserved regions. Third, the absence of consumer incentives and the persistence of negative perceptions toward remanufactured products hinder widespread behavioral change (Suzanne et al., 2020).

The successful realization of circular economy models through reverse logistics is further complicated by structural and systemic constraints. Charef et al. (2021) identified governance and supply chain coordination issues as major barriers in the construction sector, where design complexities and data silos impede the efficient return and reuse of materials. Similarly, Mallick et al. (2023) noted that high operational costs and limited managerial support often undermine the scalability of CE initiatives. Moreover, fragmented policy frameworks and inconsistent interpretations across countries exacerbate these challenges, leading to inefficiencies and missed opportunities for synergy and innovation.

In low-resource settings, such as the 3T (frontier, remote, and underdeveloped) areas, the challenges are even more pronounced. Infrastructure deficits, financial constraints, and limited institutional capacity restrict the adoption of CE and reverse logistics practices. Nonetheless, case studies from the Global South reveal that community-driven initiatives and informal sector participation can play a pivotal role in bridging these gaps. Gutberlet et al. (2017) highlighted the adaptive capacity of waste picker cooperatives in Brazil, which have managed to integrate CE principles despite systemic limitations. Such findings call for a nuanced understanding of the socio-economic and cultural contexts in which CE strategies are deployed.

Despite the growing body of research, critical gaps persist in the literature. Many studies have predominantly focused on the operational or technical dimensions of reverse logistics, overlooking the complex, nonlinear relationships between variables such as green intellectual capital and reverse logistics competencies (Sağlam, 2023; Mishra et al., 2022). Additionally, the dominance of linear modeling approaches and quantitative methodologies has limited the exploration of dynamic interdependencies among policies, technologies, and cultural factors. This gap underscores the need for interdisciplinary and systems-based research that incorporates socio-cultural variables into the analysis of circular supply chains (Zhang et al., 2023; Mishra et al., 2022).

The primary objective of this review is to synthesize existing literature on the intersection of reverse logistics and the circular economy, with a specific focus on the enabling and inhibiting factors that influence their implementation. Drawing upon a diverse range of empirical studies, this review will analyze the role of policy instruments, technological innovations, organizational structures, and socio-cultural dynamics in shaping reverse logistics outcomes. By doing so, it aims to provide a comprehensive framework for understanding the systemic conditions under which CE strategies can be effectively realized.

This review concentrates on developing countries, particularly in regions with limited infrastructural and institutional resources, including 3T areas. The rationale for this focus stems from the unique challenges and opportunities these regions present. While they often lack the financial and technological capabilities of more industrialized settings, they also possess distinctive forms of social capital and community resilience that can be leveraged to support CE initiatives. Accordingly, this study emphasizes the contextual factors that mediate the success of reverse logistics systems, thereby contributing to a more inclusive and equitable understanding of CE implementation globally.

METHOD

This study employed a narrative review methodology to synthesize academic research concerning the intersection of reverse logistics and the circular economy. Given the interdisciplinary and evolving nature of this topic, the methodology was designed to provide a comprehensive understanding of conceptual developments, practical implementations, and theoretical frameworks in the literature. The objective was to narratively integrate findings from diverse sources and offer a coherent interpretation of existing knowledge, identifying patterns, conceptual linkages, and areas for future exploration.

To collect relevant academic studies, the literature search was conducted through two major scientific databases: Scopus and Web of Science. These databases were selected for their extensive coverage of peer-reviewed journals and their credibility in indexing high-quality publications. Their advanced search functionalities, including citation tracking and subject categorization, were essential for identifying foundational texts and recent advances.

The search strategy relied on a set of keywords determined to be central to the discourse on reverse logistics and circular economy. These keywords included "reverse logistics", "circular economy", "remanufacturing", "closed-loop supply chain", "waste management", and "sustainability". The terms were applied using Boolean operators (AND, OR, NOT) to refine and broaden the search results. For example, combinations such as "reverse logistics" AND "circular economy" OR "remanufacturing" were employed to retrieve studies that addressed operational as well as strategic dimensions. This strategy facilitated the identification of literature relevant to both theoretical foundations and real-world applications (Valenzuela et al., 2021; Zhang et al., 2023).

The literature search was restricted to articles published in English and indexed in peer-reviewed journals between 2000 and 2024. An initial screening based on titles and abstracts was conducted to exclude duplicates and studies outside the scope of this review. Inclusion criteria encompassed studies that discussed reverse logistics in the context of circular economy principles, including policy analysis, remanufacturing practices, waste stream management, and technological innovations related to reverse flows. Articles were excluded if they lacked relevance to the core themes, were non-peer-reviewed, or focused exclusively on unrelated sectors.

Following the initial screening, full-text articles were retrieved and evaluated for thematic relevance and methodological transparency. While narrative reviews are inherently qualitative and interpretative, emphasis was placed on selecting studies that provided empirical insights, conceptual clarity, or comparative perspectives. The final pool of literature included case studies, integrative reviews, conceptual papers, and applied research across various industries and regions.

Unlike systematic reviews that adhere to rigid inclusion protocols and often utilize meta-analytical techniques, the narrative review method used in this study allowed for flexible integration of diverse findings and critical discussion. The narrative approach supported the thematic organization of content, enabling the identification of emerging patterns, critical debates, and

practical challenges in the implementation of reverse logistics within circular economy frameworks.

The review included studies utilizing various research designs, including case-based research, policy evaluations, comparative studies, and empirical observations. This methodological diversity enriched the narrative by capturing a wide array of perspectives, including those from developing regions, where reverse logistics practices are often shaped by localized socio-economic and infrastructural factors. For instance, case studies from Brazil and Africa highlighted the role of informal sectors and community-driven waste management initiatives in fostering circular practices (Garcia et al., 2019; Gutberlet et al., 2017).

Throughout the review process, thematic coding and inductive synthesis were used to organize findings into coherent categories. This involved close reading of selected texts to identify recurrent themes, contradictions, and knowledge gaps. Particular attention was given to how studies addressed enabling and inhibiting factors for reverse logistics adoption, including regulatory frameworks, technological infrastructure, managerial strategies, and consumer behavior.

Although this review did not apply quantitative scoring or statistical aggregation typical of systematic reviews, it maintained methodological rigor through transparent search procedures and critical engagement with sources. Each selected study was evaluated for its contribution to advancing understanding of reverse logistics and circular economy integration, and its findings were contextualized within broader sustainability discourses.

In conclusion, the narrative review methodology applied in this study enabled a holistic synthesis of current knowledge on reverse logistics and circular economy. By drawing on diverse study designs and integrating findings across different contexts, this approach provided a nuanced and comprehensive overview of the field. The narrative method facilitated a deeper understanding of the complexities, opportunities, and systemic challenges associated with the transition toward more sustainable and circular models of production and consumption.

RESULT AND DISCUSSION

The narrative review synthesized findings across a broad spectrum of literature related to reverse logistics and the circular economy, yielding three major thematic areas: consumer participation, government regulation, and technological innovation. Each theme reflects a complex set of dynamics that shapes the design, implementation, and effectiveness of reverse logistics strategies in both developed and developing contexts. These findings underscore the interdependence of individual behavior, institutional frameworks, and technological enablers in accelerating the transition toward circular economic systems.

Consumer participation has emerged as a crucial determinant in the success of reverse logistics initiatives, particularly in domains such as e-waste recycling, product return programs, and sustainable consumption patterns. Vilaisri et al. (2023) report that several interrelated factors

influence consumer engagement with reverse logistics, including environmental awareness, perceived ease of return processes, financial incentives, and trust in the efficiency and security of return infrastructures. A growing body of literature links pro-environmental attitudes with a higher likelihood of engaging in recycling or product return activities, suggesting that educational efforts and awareness campaigns could significantly enhance participation levels. The role of consumer perception is particularly significant in developing economies, where reverse logistics infrastructure is often underdeveloped and logistical costs are high.

Cross-national comparisons reveal substantial variations in consumer behavior. In high-income countries, consumers tend to benefit from more integrated systems, robust information dissemination, and stronger regulatory mandates supporting sustainability goals. These factors collectively foster a culture of responsibility and engagement in circular initiatives. Conversely, in low- and middle-income countries, participation is often contingent upon access to convenient return mechanisms and tangible economic benefits. For example, studies conducted in major urban areas in Brazil, India, and Southeast Asia indicate that the provision of financial incentives and door-to-door collection services significantly boosts consumer willingness to return products, particularly in e-waste and packaging reuse schemes (Santos, 2022). These findings point to the necessity of contextualizing reverse logistics strategies in light of socio-economic and infrastructural disparities, emphasizing localized approaches to engagement.

From a regulatory perspective, numerous countries have adopted legislative and fiscal tools to foster reverse logistics and circular economy practices. Among the most prominent frameworks is Extended Producer Responsibility (EPR), which mandates that manufacturers are accountable for the post-consumer phase of their products. This approach has been widely implemented across the European Union, Japan, and select regions of North America, yielding notable improvements in collection rates and recycling outputs (Kazançoğlu et al., 2020). In addition to EPR, tax incentives, landfill bans, and waste import-export restrictions have been used to create favorable conditions for circularity. However, the efficacy of such measures varies significantly depending on implementation fidelity and systemic coordination.

Challenges remain in operationalizing regulatory frameworks, particularly in countries with fragmented governance or limited enforcement capacities. Tan and Guo (2019) underscore that inconsistencies in national and sub-national regulations often create ambiguities that hinder compliance and deter investment in reverse logistics infrastructure. Moreover, insufficient funding for infrastructure development and limited technical expertise among policymakers further constrain regulatory outcomes. The literature highlights that the absence of harmonized international standards presents another obstacle, complicating cross-border waste flows and supply chain integration. In response, some countries have begun experimenting with collaborative governance models and public-private partnerships to overcome institutional fragmentation and pool resources.

Technological innovation represents the third major thematic axis in the literature on reverse logistics and circular economy integration. Over the past decade, significant advances have been made in the development and deployment of digital technologies designed to enhance the transparency, efficiency, and responsiveness of reverse logistics systems. The application of Internet of Things (IoT), artificial intelligence (AI), blockchain, and big data analytics has enabled

real-time monitoring of reverse flows, predictive analytics for return volume forecasting, and automated sorting systems (Khan et al., 2022). These technologies not only reduce operational costs and errors but also provide valuable insights for decision-makers seeking to optimize resource allocation and design more adaptive supply chain networks.

Empirical research from developing economies has confirmed the positive impact of technology integration on reverse logistics performance. Mukherjee et al. (2024), for instance, conducted a comparative case study across four cities in South Asia and found that AI-powered routing and classification systems led to a 22% increase in recycling efficiency and a 15% reduction in total operational costs. These improvements were achieved through better demand forecasting, real-time route adjustments, and automated feedback loops to recycling facilities. Such evidence illustrates how technological innovation can serve as a policy amplifier, enhancing the effectiveness of existing regulations and catalyzing broader systemic transformation.

Nonetheless, disparities in digital infrastructure and innovation adoption persist. While developed countries rapidly advance toward fully digitized reverse logistics systems, developing nations often struggle with basic ICT access and digital literacy, limiting their capacity to implement advanced technologies. As such, the literature stresses the importance of capacity-building and technology transfer initiatives, as well as the need for affordable, scalable solutions tailored to local needs. For instance, low-cost mobile applications for waste collection scheduling and blockchain-based traceability systems for remanufactured goods are being piloted in several low-resource settings to test their applicability and user acceptance.

Across the three thematic areas, a recurring insight is the need for an integrated, multi-stakeholder approach to reverse logistics. Successful initiatives typically align policy incentives with technological capabilities and community engagement strategies. This triadic synergy enhances system adaptability and sustainability, allowing reverse logistics to function not only as an environmental solution but also as a lever for economic empowerment and social inclusion. For example, community-based collection programs supported by digital platforms and incentivized through EPR schemes have shown promise in cities like Curitiba (Brazil), Bandung (Indonesia), and Accra (Ghana), where municipal waste systems are overburdened and informal sectors play a significant role in resource recovery.

In conclusion, the findings from this narrative review reveal that consumer behavior, regulatory frameworks, and technological advancements are deeply interconnected in shaping the efficacy and scalability of reverse logistics within circular economy models. Each dimension presents both opportunities and constraints, influenced by local contexts and global trends. While high-income countries are advancing rapidly through smart regulation and tech-driven systems, developing nations require tailored support mechanisms to navigate infrastructural and institutional limitations. The literature calls for future research that deepens the understanding of these interdependencies and explores context-sensitive solutions that promote equity, efficiency, and sustainability in reverse logistics ecosystems.

The results of this review affirm the growing scholarly consensus that reverse logistics plays a crucial role in advancing circular economy objectives. The findings strongly align with prior research, particularly in demonstrating the operational and environmental benefits of structured

reverse logistics models. As Valenzuela et al. (2021) observed, efficient implementation of reverse logistics significantly improves waste collection and processing, particularly in the plastic sector, a conclusion mirrored in this review's identification of operational efficiency gains and enhanced resource recovery. However, the findings also resonate with Nikseresht et al. (2023), who caution that despite the evident potential of environmentally responsible initiatives such as remanufacturing, persistent barriers remain in the integration of supportive policies and technologies. This review extends those observations by highlighting the unevenness in implementation across sectors, suggesting that operational and structural idiosyncrasies in different industries often produce divergent outcomes. For instance, Chen et al. (2024) document the challenges caused by lack of coordination between national policy and localized practice, which often results in inconsistent interpretations and diluted policy effectiveness.

The analysis further reveals that systemic factors significantly influence the success or failure of reverse logistics implementation. These factors include the structure of governance, organizational culture, and the distribution of resources, all of which contribute to institutional inertia or resistance to change. Hosseini et al. (2024) emphasize how systemic lock-ins, particularly those embedded in bureaucratic procedures and rigid decision-making frameworks, inhibit the widespread adoption of reverse logistics models. This aligns with Ambekar et al. (2021), who point to macro-level misalignments, such as discord between governmental policies and industry standards, as well as internal organizational resistance. The current review underscores the compounded effect of these issues in emerging economies and underserved regions, where resource asymmetries further exacerbate disparities in policy implementation and technology adoption. These findings confirm the necessity of designing policy and implementation strategies that account for the complexities of administrative systems and the diverse operational contexts across different regions.

While the challenges identified are significant, the literature also provides guidance on potential solutions that can help mitigate systemic obstacles. A recurring recommendation is the adoption of holistic policy frameworks that incorporate fiscal incentives, regulatory mandates, and cross-sectoral collaboration. For instance, Valenzuela et al. (2021) argue that Extended Producer Responsibility (EPR) is a critical tool for ensuring that manufacturers take ownership of their products' entire life cycle. This strategy not only promotes environmental stewardship but also incentivizes businesses to design more sustainable and recoverable products. Building upon this, Chen et al. (2024) advocate for the harmonization of national standards and inter-agency regulatory alignment, which could streamline reverse logistics operations and reduce confusion among stakeholders.

Technological integration is frequently cited as an essential enabler in this process. According to Kazançoğlu et al. (2020), the deployment of digital tools such as Internet of Things (IoT) devices and blockchain platforms can enhance the traceability and transparency of supply chains, thereby reinforcing compliance and accountability. The findings from this review support that claim, noting how the use of AI and machine learning improves decision-making in resource management and optimizes return logistics through predictive modeling and automation. Nonetheless, the successful application of these technologies is uneven across geographic and economic contexts, largely due to disparities in digital infrastructure and technical literacy. Hence,

future interventions must consider not only the deployment of advanced technologies but also the social and infrastructural foundations necessary to support them.

An important insight from this review is that reverse logistics and circular economy models cannot be approached as purely technical or economic projects. Cultural, social, and behavioral dimensions play a profound role in shaping adoption and scalability. As identified in the results, consumer participation is conditioned by variables such as environmental awareness, trust in return systems, and accessibility. This is particularly evident in low- and middle-income countries, where material incentives and infrastructural convenience are often the most influential factors in consumer decision-making. The literature suggests that building trust and awareness through targeted education and engagement campaigns can be a powerful catalyst for behavioral change, especially when supported by visible improvements in service quality and reliability.

Furthermore, this review reveals the importance of adaptive governance in overcoming implementation gaps. Rigid top-down policies that do not engage local actors or adapt to contextual realities tend to falter, as seen in multiple country-level case studies. Instead, flexible regulatory regimes that involve local governments, private sector stakeholders, and civil society organizations are more likely to generate innovative solutions and ensure sustained engagement. This participatory model of governance enables feedback loops and iterative learning, which are critical for navigating the dynamic challenges of circular transitions. It also allows for greater inclusivity, empowering marginalized actors such as informal waste collectors and small-scale recyclers who are often excluded from formal systems but play vital roles in local resource recovery.

Despite the progress outlined, there are several limitations inherent in the current body of research that must be acknowledged. First, the literature remains heavily skewed toward case studies and empirical analyses from high-income and industrialized regions, which may not adequately capture the lived realities of reverse logistics in low-resource settings. Although some recent studies have focused on developing regions, these often lack longitudinal data or comparative depth, making it difficult to generalize findings or draw robust policy lessons. Additionally, much of the existing work tends to rely on linear and reductionist modeling approaches, which fail to adequately reflect the complex, interconnected, and adaptive nature of circular systems. As noted by Zhang et al. (2023) and Mishra et al. (2022), there is a pressing need for more interdisciplinary research that integrates systems thinking, cultural analysis, and participatory methodologies.

Another limitation concerns the measurement of success in reverse logistics initiatives. Many studies focus primarily on quantitative metrics such as volume of materials recovered or cost savings, without considering broader social and environmental impacts. For a truly sustainable and equitable transition to circularity, evaluation frameworks must be expanded to include indicators such as social inclusion, labor conditions in recycling sectors, and community well-being. Future research should also explore the intersections between circular practices and broader sustainability agendas, including climate resilience, gender equity, and urban development.

In sum, while reverse logistics holds great promise as a vehicle for circular economic transformation, its potential will only be fully realized through systemic alignment, cultural integration, and inclusive governance. The pathway forward requires a deliberate effort to bridge

the gap between high-level policy ambitions and grassroots realities, supported by robust empirical evidence and flexible institutional designs. This review contributes to that effort by highlighting both the critical barriers and the strategic levers that define the evolving landscape of reverse logistics research and practice.

CONCLUSION

This narrative review examined the intersection of reverse logistics and the circular economy, revealing the intricate interplay between consumer behavior, regulatory frameworks, and technological innovation. The findings confirm that reverse logistics holds substantial potential in optimizing resource recovery, reducing waste, and supporting the transition toward sustainable economic systems. However, the implementation of reverse logistics strategies is often hindered by systemic challenges, including fragmented governance structures, inconsistent regulatory standards, limited infrastructure, and cultural barriers. As discussed, consumer participation remains highly contingent on awareness, trust, and incentive mechanisms, while the integration of digital technologies can significantly enhance operational efficiency and traceability when appropriately supported.

To address these barriers, a holistic policy approach is necessary, incorporating harmonized regulatory frameworks, fiscal incentives, public-private partnerships, and digital infrastructure development. Policymakers must align national standards with local capacities and foster collaborative governance to ensure scalability and adaptability. Technological tools such as AI, IoT, and blockchain should be embedded within inclusive systems that promote access and usability across diverse socioeconomic contexts.

Future research should address the lack of empirical studies from low-resource settings, employ interdisciplinary methods, and incorporate social, cultural, and institutional dimensions into the analysis. There is also a need for more comprehensive evaluation frameworks that go beyond quantitative metrics to assess social equity and environmental outcomes. Emphasizing adaptive governance, community engagement, and capacity-building will be essential to overcoming structural barriers and advancing reverse logistics as a pillar of circular economic development.

REFERENCE

- Ambekar, S., Roy, D., Hiray, A., Prakash, A., & Patyal, V. (2021). Barriers to adoption of reverse logistics: a case of construction, real estate, infrastructure and project (crip) sectors. *Engineering Construction & Architectural Management*, 29(7), 2878-2902. <https://doi.org/10.1108/ecam-02-2021-0112>
- Chen, X., Qiu, D., & Chen, Y. (2024). Reverse logistics in the construction industry: status quo, challenges and opportunities. *Buildings*, 14(6), 1850. <https://doi.org/10.3390/buildings14061850>

- Charef, R., Morel, J., & Rakhshan, K. (2021). Barriers to implementing the circular economy in the construction industry: a critical review. *Sustainability*, 13(23), 12989. <https://doi.org/10.3390/su132312989>
- Fofou, R., Jiang, Z., Gong, Q., & Yang, Y. (2022). A decision-making model for remanufacturing facility location in underdeveloped countries: a capacitated facility location problem approach. *Sustainability*, 14(22), 15204. <https://doi.org/10.3390/su142215204>
- Franz, N. and Silva, C. (2022). Waste electrical and electronic equipment (weee): global and contemporary challenge to production chains and the urban environment. *Gestão & Produção*, 29. <https://doi.org/10.1590/1806-9649-2022v29e6621>
- Garcia, S., Nääs, I., Neto, P., & Reis, J. (2019). Reverse logistics and waste in the textile and clothing production chain in brazil., 173-179. https://doi.org/10.1007/978-3-030-30000-5_23
- Gutberlet, J., Carenzo, S., Kain, J., & Azevedo, A. (2017). Waste picker organizations and their contribution to the circular economy: two case studies from a global south perspective. *Resources*, 6(4), 52. <https://doi.org/10.3390/resources6040052>
- Hosseini, M., Memari, S., Martek, I., Kocatürk, T., Bararzadeh, M., & Arashpour, M. (2024). Dismantling linear lock-ins in the australian aec industry: a pathway to a circular economy. *Sustainable Development*, 32(6), 7171-7185. <https://doi.org/10.1002/sd.3082>
- Kazançoğlu, İ., Sağnak, M., Mangla, S., & Kazançoğlu, Y. (2020). Circular economy and the policy: a framework for improving the corporate environmental management in supply chains. *Business Strategy and the Environment*, 30(1), 590-608. <https://doi.org/10.1002/bse.2641>
- Khan, S., Laalaoui, W., Hokal, F., Tareq, M., & Ahmad, L. (2022). Connecting reverse logistics with circular economy in the context of industry 4.0. *Kybernetes*, 52(12), 6279-6320. <https://doi.org/10.1108/k-03-2022-0468>
- Mallick, P., Salling, K., Pigosso, D., & McAloone, T. (2023). Closing the loop: establishing reverse logistics for a circular economy, a systematic review. *Journal of Environmental Management*, 328, 117017. <https://doi.org/10.1016/j.jenvman.2022.117017>
- Mishra, A., Dutta, P., Jayasankar, S., Jain, P., & Mathiyazhagan, K. (2022). A review of reverse logistics and closed-loop supply chains in the perspective of circular economy. *Benchmarking an International Journal*, 30(3), 975-1020. <https://doi.org/10.1108/bij-11-2021-0669>
- Mukherjee, S., Nagariya, R., Mathiyazhagan, K., Baral, M., Rajendran, P., & Appolloni, A. (2024). Artificial intelligence-based reverse logistics for improving circular economy performance: a developing country perspective. *The International Journal of Logistics Management*, 35(6), 1779-1806. <https://doi.org/10.1108/ijlm-03-2023-0102>

- Nikseresht, A., Golmohammadi, D., & Zandieh, M. (2023). Sustainable green logistics and remanufacturing: a bibliometric analysis and future research directions. *The International Journal of Logistics Management*, 35(3), 755-803. <https://doi.org/10.1108/ijlm-03-2023-0085>
- Noman, A., Akter, U., Pranto, T., & Haque, A. (2022). Machine learning and artificial intelligence in circular economy: a bibliometric analysis and systematic literature review. *Annals of Emerging Technologies in Computing*, 6(2), 13-40. <https://doi.org/10.33166/aetic.2022.02.002>
- Sağlam, Y. (2023). Does green intellectual capital matter for reverse logistics competency? the role of regulatory measures. *Journal of Intellectual Capital*, 24(5), 1227-1247. <https://doi.org/10.1108/jic-07-2022-0147>
- Santos, K. (2022). Unequal geographies of urban mining: e-waste management in london, sao paulo and accra. *Environment and Planning E Nature and Space*, 6(3), 1874-1888. <https://doi.org/10.1177/25148486221128154>
- Suzanne, É., Absi, N., & Borodin, V. (2020). Towards circular economy in production planning: challenges and opportunities. *European Journal of Operational Research*, 287(1), 168-190. <https://doi.org/10.1016/j.ejor.2020.04.043>
- Tan, Y. and Guo, C. (2019). Research on two-way logistics operation with uncertain recycling quality in government multi-policy environment. *Sustainability*, 11(3), 882. <https://doi.org/10.3390/su11030882>
- Valenzuela, J., Alfaro, M., Fuertes, G., Vargas, M., & Sáez-Navarrete, C. (2021). Reverse logistics models for the collection of plastic waste: a literature review. *Waste Management & Research the Journal for a Sustainable Circular Economy*, 39(9), 1116-1134. <https://doi.org/10.1177/0734242x211003948>
- Vilaisri, S., Chamchang, P., & Kumar, V. (2023). Factors influencing intentions to return express delivery packages for next use in a developing country. *Abac Journal*, 43(4). <https://doi.org/10.59865/abacj.2023.47>
- Wang, M., Liu, P., Gu, Z., Hong, C., & Li, X. (2019). A scientometric review of resource recycling industry. *International Journal of Environmental Research and Public Health*, 16(23), 4654. <https://doi.org/10.3390/ijerph16234654>
- Zhang, A., Duong, L., Seuring, S., & Hartley, J. (2023). Circular supply chain management: a bibliometric analysis-based literature review. *The International Journal of Logistics Management*, 34(3), 847-872. <https://doi.org/10.1108/ijlm-04-2022-0199>