



## THE ROLE OF CONSUMERS IN THE CIRCULAR ECONOMY: A LITERATURE REVIEW ON CONSUMER PROTECTION REGULATIONS AND SUSTAINABILITY

### PERAN KONSUMEN DALAM EKONOMI SIRKULAR: TINJAUAN PUSTAKA TERHADAP PERATURAN PERLINDUNGAN KONSUMEN DAN KEBERLANJUTAN

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#### Abstract

In facing global sustainability challenges, consumers play a strategic role in shaping the direction of the circular economy. This article presents a literature review on the relationship between consumer protection and the transition toward a sustainable consumption model. The main focus is directed at three key issues: the right to environmental information, the right to repair, and regulatory challenges related to greenwashing practices. By using a narrative literature review approach, this article examines various academic and policy sources to evaluate the extent to which consumer protection has been integrated into circular economy strategies. The findings show that although positive initiatives have been taken, regulatory implementation remains weak and often fails to provide effective protection mechanisms for consumers. The policy implications proposed include strengthening standards for environmental claims, expanding the right to repair across sectors, and increasing sustainability literacy at the consumer level. This article aims to enrich academic discourse and serve as a foundation for consumer-based policy development in support of the circular economy agenda.

**Keywords :** Circular economy, Consumer Protection, Sustainability, Right to Information, Right to Repair, Greenwashing.

#### Abstrak

Dalam menghadapi tantangan keberlanjutan global, konsumen kini memegang peran strategis dalam membentuk arah ekonomi sirkular. Artikel ini melakukan kajian literatur terhadap hubungan antara perlindungan konsumen dan transisi menuju model konsumsi berkelanjutan. Fokus utama diarahkan pada tiga isu kunci, yakni hak atas informasi lingkungan, hak atas perbaikan (right to repair), serta tantangan regulasi terhadap praktik greenwashing. Dengan mengadopsi pendekatan narrative literature



review, artikel ini mengkaji beragam sumber akademik dan kebijakan mutakhir untuk mengevaluasi sejauh mana perlindungan konsumen telah terintegrasi dalam strategi ekonomi sirkular. Temuan menunjukkan bahwa meskipun terdapat inisiatif positif, implementasi regulasi masih lemah dan seringkali gagal menghadirkan mekanisme perlindungan yang efektif bagi konsumen. Implikasi kebijakan yang diusulkan meliputi penguatan standar klaim lingkungan, perluasan hak perbaikan lintas sektor, serta peningkatan literasi keberlanjutan di tingkat konsumen. Artikel ini diharapkan dapat memperkaya diskursus akademik dan menjadi dasar pengembangan kebijakan berbasis konsumen dalam mendukung agenda ekonomi sirkular.

**Kata Kunci :** Ekonomi Sirkular, Perlindungan Konsumen, Keberlanjutan, hak atas informasi, right to repair, greenwashing.

## 1. INTRODUCTION

In recent decades, issues of sustainability and environmental protection have become major concerns in global policies. Reports from the Intergovernmental Panel on Climate Change (IPCC) state that if the world wants to limit the increase in global temperature to 1.5°C, the use of coal as an energy source must be stopped before 2050. Awareness of the dangers of climate change has encouraged various initiatives to integrate sustainability principles into economic systems, including through the concept of the circular economy.

The circular economy emphasizes the reuse of resources in a sustainable cycle, in contrast to the linear economic approach that has long dominated global production and consumption systems. In a linear economy, resources are used to produce goods that are discarded after their useful life ends. In contrast, the circular economy aims to minimize waste by recycling, repairing, or reusing products so that they remain in the economic cycle for as long as possible.

In the context of the circular economy, consumers play an important role as active actors in sustainability. The concept of consumers as citizens (consumer-citizens) assumes that consumers not only have rights as users of goods and services, but also responsibilities to support sustainability policies through more environmentally conscious consumption patterns. Within the European Union (EU) legal framework, various regulations have been implemented to encourage more sustainable consumer behavior, especially through information rights that allow consumers to make better decisions when choosing environmentally friendly products.

However, although efforts have been made to direct consumption behavior toward sustainability, existing regulations still have limitations in providing incentives for consumers to actively participate in the circular economy. Several challenges remain in the implementation of these policies, including:

- ✓ Lack of incentives for consumers to choose durable or repairable products. Many products are designed with a short lifespan (planned obsolescence), which encourages consumers to buy new products rather than repair old ones.
- ✓ The phenomenon of greenwashing that reduces transparency. Many companies market their products as environmentally friendly without clear standards, making it difficult for consumers to distinguish truly sustainable products from misleading claims.



- ✓ Limited regulations that encourage repair rather than replacement. Consumer protection regulations often support product replacement instead of repair, which hinders the circular economy that focuses on extending product lifespans.
- ✓ Low consumer participation in service-based business models (servitization). The concept of servitization, which shifts consumption from ownership to shared use (such as rental or leasing), is still not popular in many countries due to a lack of economic incentives and regulatory support.

### a. Research Objectives

This literature review aims to:

- ✓ Examine how current consumer protection policies contribute to the circular economy and whether existing regulations are effective in encouraging sustainable consumption behavior.
- ✓ Analyze the limitations of consumer protection regulations in the context of sustainability, particularly in relation to consumer information, the right to repair, and the prevention of greenwashing.
- ✓ Identify policies that can enhance the role of consumers in supporting the circular economy, both from a regulatory perspective and from the perspective of behavioral change.

### b. Circular Economy

The global environmental crisis caused by excessive exploitation of natural resources, pollution, and climate change has increased the urgency of shifting economic systems toward more sustainable models. One approach that has developed in this context is the circular economy, which seeks to minimize waste and maximize product value through the principles of reduction, reuse, and recycling. In the circular economy framework, consumers play a crucial role not only as end users but also as drivers of the success of sustainability cycles.

As a developing country, Indonesia has begun to show interest in implementing the circular economy through various government policies and initiatives. The government has promoted sustainable production and consumption practices, such as reducing plastic waste and strengthening green economy policies. At the same time, consumers have shown increasing awareness of sustainability issues. According to the PwC 2024 *Voice of the Consumer* survey, around 80% of global consumers are willing to pay more for sustainably sourced products, with an average premium of 9.7%, despite inflation and rising living costs. At the national level, data from Nielsen Indonesia in 2021 shows that approximately 83% of Indonesian consumers prefer products from brands that apply environmentally friendly business practices, indicating a growing domestic market preference for sustainability.

In response to this trend, the fast-moving consumer goods (FMCG) industry in Indonesia has begun to adapt to sustainability demands. Several large companies have integrated circular strategies into their business practices through the use of environmentally friendly materials, carbon footprint reduction, and more transparent sustainability reporting. However, challenges



remain, particularly in ensuring that these initiatives are not merely cosmetic or marketing strategies (greenwashing), but instead deliver real environmental and social impacts.

In this context, consumer protection regulation plays a strategic role in bridging the interests of producers and consumers in achieving a more socially and environmentally responsible economic system. Nevertheless, gaps still exist between current regulations and circular economy principles, especially in protecting the rights of consumers who wish to participate in sustainable consumption. Therefore, a literature review that examines the relationship between consumers, consumer protection regulation, and sustainability is important to identify areas of alignment between policy and consumption behavior in supporting the transition to a circular economy.

#### **c. Consumers as Citizens (Consumer-Citizen)**

In the context of the circular economy, consumers are expected not only to act as rational economic actors seeking personal utility, but also as citizens with social responsibilities toward collective sustainability. This concept is known as the consumer-citizen, where consumers make decisions based not only on personal preferences but also on environmental values, ethics, and social solidarity. Consumption behavior under this paradigm is more aware of long-term impacts on the environment and future generations.

This shift in consumer roles requires support from legal and policy systems that enable consumers to make ethically and environmentally sound choices. Therefore, education, information transparency, and access to sustainable products are essential conditions for developing active and responsible consumers who support the circular economy.

#### **d. Consumer Protection in the Context of Sustainability**

Traditional consumer protection law generally focuses on product safety, contract fairness, and transaction transparency. However, in the transition toward a circular economy, this approach must be expanded to include sustainability dimensions. Consumer protection should also cover environmental information rights, the right to repair, the right to access reusable or recyclable products, and protection against misleading marketing practices such as greenwashing.

Thus, the theoretical foundation of this study is not limited to neoclassical economic theory, but also integrates legal perspectives, environmental studies, and complex consumer behavior theories. A comprehensive understanding of the relationship between consumers, policy, and sustainability is essential for evaluating the effectiveness of existing regulations and for developing more progressive policy directions to support the circular economy.

## **2. RESEARCH METHOD**

This study uses a narrative literature review approach, which aims to identify, analyze, and synthesize various relevant literature on consumer protection and the circular economy without following the strict procedures of a systematic review (Nugraha, 2025). This approach is chosen because it is flexible and suitable for summarizing and critically reviewing theories,



policies, and practices across disciplines such as law, public policy, economics, and consumer behavior.

The literature review was conducted in stages, focusing on academic and policy sources with high credibility and relevance. The reviewed literature includes scholarly journal articles, publications from international organizations, official policy reports, and articles available in academic repositories and scientific databases.

The steps of the literature review include:

- ✓ Formulation of research topic and focus: The review focuses on the relationship between consumer protection and circular economy practices, particularly in three main aspects: information rights, the right to repair, and greenwashing practices.
- ✓ Source identification: Literature searches were conducted through academic databases such as Scopus, ScienceDirect, Google Scholar, and European Commission Publications. National journals indexed in SINTA 1–3 were also considered valid sources.
- ✓ Inclusion criteria: Selected literature includes thematically relevant scholarly journal articles published between 2014 and 2024, originating from recognized publishers or institutions such as academic journals, policy institutions, or reputable universities.
- ✓ Search keywords: Keyword combinations used include “consumer protection and sustainability,” “circular economy and consumer rights,” “greenwashing and regulation,” and “right to repair EU.”
- ✓ Selection and evaluation: Identified literature was selected based on substantive relevance, academic contribution, and connection to the research theme. Literature that was purely opinion-based or lacked academic grounding was excluded.
- ✓ Thematic synthesis: Selected literature was analyzed and classified into main themes, including information transparency, the right to repair, greenwashing, and service-based consumption models.

As part of the documentation and source-tracking process, the following table summarizes several key articles used as references in this study. The table aims to show the relevance, academic contribution, and diversity of approaches within the reviewed literature.

**Table 1. Ringkasan Literatur Utama yang Dikaji**

| No | Article Title                                     | Authors                                       | Year | Key Contribution   |
|----|---|---|------|--|
| 1  | From “right to repair” to “willingness to repair” | Roskladka, N., Jaegler, A., & Miragliotta, G. | 2023 | Identifies barriers and consumer readiness in applying the right to repair via Delphi study  |
| 2  | Circular economy and consumer protection          | Mak, V., & Terryn, E.                         | 2020 | Examines the role of consumer protection law in the circular economy and its limitations     |
| 3  | The competition law implications of servitization | Bostoen, F., & Devroe, W.                     | 2023 | Analyzes legal implications of subscription models on consumer rights and market competition |



| No | Article Title                                 | Authors    | Year | Key Contribution  |
|----|---|------------|------|---|
| 4  | The Role of Consumers in the Circular Economy | Lahlou, S. | 2021 | Explains the influence of consumer behavior in adopting circular economy models |

### 3. RESULTS AND DISCUSSION

This discussion aims not only to summarize the main findings from the literature, but also to evaluate the effectiveness of existing policies, identify implementation barriers, and offer critical reflections on the opportunities and challenges in developing sustainability strategies. By presenting the findings in an analytical manner, this article is expected to contribute to academic discourse and policy practice in the fields of consumer protection and the circular economy.

#### a. The Right to Information and Transparency Challenges

One of the main aspects of consumer protection in the context of the circular economy is the right to access accurate, complete, and reliable information regarding the sustainability characteristics of a product. Such information includes aspects of the product life cycle, raw materials used, environmentally friendly production processes, recycling potential, and the product's carbon footprint. The right to information not only enables consumers to make rational and environmentally conscious decisions, but also strengthens their bargaining position in encouraging producers to become more transparent and accountable.

However, in practice, the implementation of the right to information still faces serious challenges. One of the most significant issues is the widespread practice of greenwashing, which refers to misleading marketing strategies that create the impression that a product or company is environmentally friendly when it is not. Unverified sustainability claims, ambiguous environmental labels, and the lack of international standards for green product labeling represent major obstacles for consumers in evaluating the true sustainability value of products.

The literature indicates that existing regulations are not yet strong enough to effectively address greenwashing practices. In addition, legal gaps remain regarding the clarity of the format and content of information that must be provided to consumers. The lack of independent supervisory bodies with the authority to assess and audit sustainability claims further worsens this problem. Therefore, although the right to information is a fundamental pillar of the circular economy, its implementation still needs to be strengthened through stricter policies, auditable transparency mechanisms, and adequate consumer education.

#### b. The Right to Repair

Several policies in the European Union have introduced consumers' rights to repair electronic products. However, their implementation faces technical, economic, and institutional challenges.

Research by Roskladka, Jaegler, and Miragliotta (2023) presents a Delphi study involving a panel of experts from various countries, including Italy, France, the Netherlands,



Australia, and the United States. The study identifies five main barriers to the implementation of the right to repair: (1) high repair costs, (2) limited availability of spare parts, (3) product designs that do not support repairability, (4) lack of technical information, and (5) insufficient local repair services. The assessment was conducted using a weighted priority scale.

The following table presents the average weighted scores of these five barriers:

| Barriers in RtR               | Weighted Average (0-1) |
|-------------------------------|------------------------|
| High repair costs             | 0.81                   |
| Limited spare parts           | 0.74                   |
| Non-repairable design         | 0.69                   |
| Lack of technical information | 0.63                   |
| Lack of local repair services | 0.58                   |

These findings indicate that the effectiveness of right to repair policies depends not only on regulation itself, but also on the availability of supporting infrastructure and accessible information for consumers.

A study by Mak and Terryn (2020) further reinforces the importance of strengthening right to repair (RtR) regulations, showing that the current EU legal framework still provides excessive flexibility for producers to refuse repairs based on cost considerations. The article emphasizes the need for revisions to consumer law that explicitly incorporate sustainability factors into the right to repair and the use of refurbished products.

### c. Regulation of Greenwashing

Greenwashing represents one of the most significant challenges in efforts to create a sustainable consumption ecosystem. In this context, greenwashing refers to corporate strategies that deliberately promote products or activities as environmentally friendly without adequate scientific evidence or transparency. Such practices can undermine consumer trust, distort market competition, and weaken the overall effectiveness of sustainability policies.

Several regulations in the European Union have attempted to address this challenge, including the Unfair Commercial Practices Directive (UCPD) and the proposed EU Green Claims Directive, which is currently under discussion. These policies aim to standardize the format of environmental claims and require companies to provide verifiable scientific evidence for any sustainability claims they make. However, in practice, these regulations still face several obstacles, including limited supervisory capacity of regulatory authorities, insufficient sanctions to create deterrent effects, and resistance from industry actors who perceive additional regulatory requirements as burdensome.

Mak and Terryn (2020) argue that existing regulations remain too weak to effectively prevent increasingly sophisticated greenwashing practices. They emphasize the importance of more proactive consumer protection and the explicit integration of sustainability into the consumer protection legal framework. Therefore, a more comprehensive and collaborative regulatory approach is required—one that involves not only state authorities but also consumer associations, independent auditing bodies, and business actors committed to sustainability.

### d. Service-Based Business Models and Consumer Participation



Service-based business models, or servitization, are one of the key pillars of the circular economy, aiming to shift consumption patterns from ownership toward shared use or subscription-based access. In this model, consumers no longer purchase products as personal assets, but instead obtain product benefits through rental, subscription, or sharing systems. Although this model theoretically extends product lifespans, reduces waste, and promotes resource efficiency, its implementation still faces various challenges from the perspectives of producers, regulation, and consumer perception.

A study conducted by Bostoen and Devroe (2023) explains that the transition to servitization can create new dilemmas in consumer protection. The study examines the case of Polestar, an electric vehicle manufacturer that offers its cars exclusively through a digital subscription model. Consumers are not given the option to purchase vehicles outright, but must use bundled services that include vehicle rental, insurance, and maintenance, all provided by authorized partners.

As a result, consumers experience a situation of double lock-in. First, they are tied to a single provider without alternative options. Second, after-sales services—such as independent repair shops, alternative insurance providers, or emergency service providers—are inaccessible due to contractual restrictions. This creates serious barriers for other market participants and raises concerns about the loss of consumer rights that were previously guaranteed under traditional ownership models.

Bostoen and Devroe also highlight that servitization models may pose risks to competition law principles. When producers tie core products with additional services—such as maintenance, insurance, and roadside assistance—consumers are forced to accept the entire package without choice. Under European Union law, such practices may be classified as tying or bundling, which can restrict competition and potentially violate Article 102 of the Treaty on the Functioning of the European Union (TFEU) concerning abuse of dominant position.

From a circular economy perspective, servitization should promote sustainability by extending product life cycles. However, without a legal framework that protects consumer access and choice, and ensures interoperability with third-party services, this model risks becoming a tool for producer exclusivity. Therefore, the implementation of servitization must be accompanied by regulations that guarantee:

- ✓ Consumers' right to freely choose service providers,
- ✓ Transparency in service contract structures, and
- ✓ Sustainability not only from the producer side, but also within market structures.

By addressing these aspects, servitization policies can be directed not only as business strategies, but also as instruments of consumer protection and long-term sustainability.

#### 4. CONCLUSION

This literature review confirms that consumers play a central role in the transition toward a sustainable circular economy. In the context of environmental change and evolving global regulations, consumer protection should not focus solely on traditional aspects such as product



safety and price transparency, but must also be expanded to include sustainability considerations, environmental information rights, and the right to repair. Consumer literacy regarding environmentally friendly products, along with regulations that support active consumer participation, are key factors for the success of a circular economic system.

Analysis of recent literature indicates that the rights to information and repair are not yet fully protected by existing legal frameworks. The increasing prevalence of greenwashing further worsens this situation, as many producers make manipulative sustainability claims. At the same time, new service-based consumption models such as servitization, while promising resource efficiency, risk creating new challenges for consumers if they are not regulated through clear and inclusive oversight mechanisms.

Overall, consumer protection regulation must shift from a reactive approach toward a proactive and participatory approach, in which consumers are positioned as citizens with a strategic role in sustainability decision-making.

## 5. REFERENCES

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