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MASTERS IN

MANAGEMENT AND INDUSTRIAL STRATEGY

MASTER'S FINAL WORK

DISSERTATION

UNDERSTANDING THE LINK BETWEEN CIRCULAR STRATEGIES OF SUPPLIERS AND CUSTOMER-PERCEIVED VALUE

BEATRIZ RICARDO CASTANHAS

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SUPERVISION:

PROFESSOR JOSÉ NOVAIS SANTOS

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ABSTRACT

This dissertation explores the relationship between circular strategies adopted by suppliers and customer-perceived value in B2B settings. As businesses transition toward more sustainable models, the Circular Economy (CE) has emerged as a strategic alternative to the traditional linear take–make–dispose paradigm. In this shift, understanding Customer Value (CV) is essential not only to foster adoption but also to align business strategies with stakeholder expectations, making it a key enabler of circular practices. In Business-to-Business (B2B) contexts, CV plays a critical role in the successful implementation of circular strategies. Unlike traditional models where value is defined primarily by cost, ownership, and efficiency circular value propositions include dimensions such as sustainability, ethical sourcing, systemic benefits, and strategic adaptability. Grasping how business customers perceive and evaluate these emerging forms of value is vital for accelerating CE adoption and fostering long-term supplier–customer collaboration.

Focusing on the Fast-Moving Consumer Goods (FMCG) and pharmaceutical sectors in Portugal, a qualitative methodology was employed, based on six semi-structured interviews with suppliers and their respective customers. The analysis was structured around seven value dimensions—economic, functional, relational, identity, ethical, strategic adaptation, and systemic—bridging traditional and circular value frameworks.

Findings reveal that in the FMCG sector, circularity is strategically integrated, valued by customers, and supported by strong collaborative relationships. In contrast, in the pharmaceutical sector, adoption remains limited, constrained by regulatory and technical barriers, with weaker supplier–customer alignment.
This research enhances the understanding of value co-creation in circular contexts and offers practical guidance for managers aiming to develop circular business models aligned with evolving customer expectations.

Keywords: Circular Economy; Customer Value; FMCG; Pharma; Business Relationships.

RESUMO

As empresas têm vindo a transitar para modelos mais sustentáveis, onde a Economia Circular (EC) surgiu como uma alternativa estratégica ao paradigma linear tradicional de extrair-produzir-descartar. Nessa mudança, compreender o Valor para o Cliente (VC) é essencial não só para promover a adoção, mas também para alinhar as estratégias de negócio com as expectativas das partes interessadas, tornando-o um facilitador fundamental das práticas circulares. Em contextos Business-to-Business (B2B), o VC desempenha um papel crítico na implementação bem-sucedida de estratégias circulares. Ao contrário dos modelos tradicionais onde o valor é definido principalmente pelo custo, propriedade e eficiência, as propostas de valor circulares incluem dimensões como sustentabilidade, ética, benefícios sistémicos e adaptabilidade estratégica. Compreender como os clientes empresariais percebem e avaliam estas formas emergentes de valor, é vital para acelerar a adoção da EC e promover a colaboração a longo prazo entre fornecedores e clientes.

Esta dissertação explora a relação entre as estratégias circulares adotadas pelos fornecedores e o valor percecionado pelos clientes em contextos B2B. Com foco nos setores de produtos de grande consumo (FMCG) e farmacêutico em Portugal, foi utilizada uma metodologia qualitativa, baseada em seis entrevistas semiestruturadas com fornecedores e os alguns clientes. A análise foi estruturada tendo por base as sete dimensões de valor — económica, funcional, relacional, identidade, ética, adaptação estratégica e sistémica —, alinhando as estruturas de valor tradicionais e circulares.

Os resultados revelam que, no setor dos produtos de grande consumo, a circularidade está estrategicamente integrada, é valorizada pelos clientes e apoiada por fortes relações de colaboração. Em contrapartida, no setor farmacêutico, a adoção continua a ser limitada, e condicionada por barreiras regulamentares e técnicas, com um alinhamento mais fraco entre os fornecedores e clientes.
Esta investigação melhora a compreensão da cocriação de valor em contextos circulares e oferece orientações práticas para gestores que pretendem desenvolver modelos de negócio circulares alinhados com as expectativas em evolução dos clientes.

Palavras-chave: Economia Circular; Valor para o Cliente; FMCG; Pharma, Relações de Negócio.

ACKNOWLEDGEMENTS

As I reach the end of this stage, one of the most challenging of my life, I feel deeply grateful to all the people who, in their own way, contributed to my achieving this goal. I am privileged to be surrounded by incredible people, and while it is not possible to thank everyone individually, I want you to know that you have been a fundamental support throughout this journey.

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To my parents, no academic degree in the world compares to the education you gave me. The person and professional I am today reflect the values and principles you instilled in me. Especially to my mother. Only she knows the journey we have walked together and shares this achievement as if it were her own. Mom, we did it!

To my family, who have always been my escape when I needed to disconnect. Thank you for being a constant source of unconditional love.

To my boyfriend, thank you for your tireless love, support, understanding, and motivation. Even in the moments when I felt lost, your calm presence and encouragement made a difference in the most difficult moments.

To everyone, my most sincere thanks.

GLOSSARY

B2B – Business to Business

CE - Circular Economy

CSCs – Circular Supply Chains

CV – Customer Value

FMCG – Fast-Moving Consumer Goods

PPWR - Packaging and Packaging Waste Regulation

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1. Introduction

The concept of sustainability is not new, but, due to its complexity, it can be quite ambiguous, which means there are multiple definitions and interpretations of sustainability, the Brundtland Commission's definition, originally introduced in the 1987 report "Our Common Future," is the most widely accepted. This report defines sustainability as the "development that is able to meet the current needs of the population without compromising future generations to meet their own needs" (Gro Harlem Brundtland,1987). Figure 1 represents three dimensions on sustainability:

- Environmental dimension: requires the preservation of the natural capital without the degradation of source and sink functions of the environment.
- Social dimension: requires that the cohesion of society and its ability to work towards common goals be maintained.
- Economic dimension: implies financial viability, while development moves towards social and environmental sustainability.

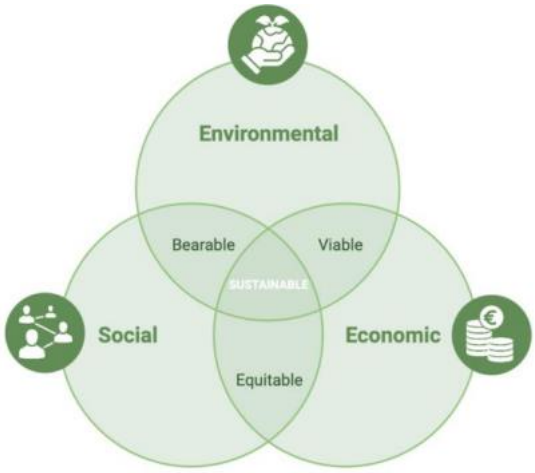

Figure 1. The three dimensions of sustainability

In today's global economy, businesses face increasing pressure to adopt sustainable practices, and in this context, the adoption of circular business models has emerged as a promising approach to the current challenges, promoting a more efficient and responsible use of resources (Korhonen et al., 2018; Merli et al., 2018).

The economy and operations of organizations in multiple sectors began by being based on a linear model, characterized by the extraction of natural resources, the production of various goods, and eventually the waste of those goods. The linear economy causes several environmental problems, as it needs to take into account the limits of the planet, while the natural resources are finite.

The massive extraction of materials and associated production of waste causes immense pollution and creates significant pressure on the environment.

The circular economy model is a sustainable alternative to the linear economy and intends to solve the associated environmental problems (Ghisellini et al., 2016).This change must be made not only because greater consumption also leads to greater waste (Piscicelli & Ludden, 2016), but also because natural resources—namely raw materials, water, and non-renewable sources of energy—are being used without due concern (Geissdoerfer et al., 2017) which could lead to their collapse.

The concept of the Circular Economy (CE) has emerged as an alternative to the Linear Economic model, an economic model based on the use of natural resources that are discarded at the end of their life (Astrolábio, 2021), i.e., a system that does not reintroduce products into the economic cycle. Thus, the CE emerges as a promising approach to the current challenges, promoting a more efficient and responsible use of resources (Korhonen et al., 2018; Merli et al., 2018). It thus enables the development of new products, services, and business models that contribute to a more balanced and creative relationship between companies, consumers, and natural resources, and that at the end of the cycle, products are reincorporated into the production process for creating new products (BSCD, 2023). Companies are also increasingly aware of the opportunities promised by the CE and have started to realize its value potential for themselves and their stakeholders (EMF, 2013b).

According to the European Parliament “Circularity and sustainability must be incorporated in all stages of a value chain to achieve a fully CE: from design to production and all the way to the consumer. The Commission action plan sets down seven key areas essential to achieving a circular economy: plastics; textiles; e-waste; food, water and nutrients; packaging; batteries and vehicles; buildings and construction” (European Parliament, 2024). The EU has taken many actions on the CE since the implementation of its action plan in 2015 (European Commission, 2015). Although there is greater focus at the European level, in Portugal there is still a gap in the implementation of a CE, and according to Eurostat, in 2022, the circular material use rate for Portugal was 2.6, compared to 11.5 for the European Union.

Although multiple industries have gained traction in the CE, an important gap exists in the understanding of customer-perceived and supplier-perceived value in circular contexts. Most studies focus on CV as a multidimensional construct and often consider it in linear economies. However, a deeper exploration of how CE is transformed by circular offerings and their implications for customer–supplier relationships is necessitated.

Suppliers often failed to consider this value dimension, which led to misalignment. Given the frequent divergence between customers' value

perceptions and sellers' value propositions, fostering mutual understanding and alignment around CV is crucial. Misalignments in CV not only strain relational interactions between suppliers and customers but can also impede the effective system-level implementation of the CE (Sairanen et.al., 2024).

This study aims at understanding the link between circular strategies of suppliers and customer-perceived value. Considering that customers are increasingly adopting sustainability strategies, we argue that this adoption influences the perceived value of their suppliers' efforts towards the circular economy. In this context, this study poses the following research question: How customer-perceived value of circular economy strategies of suppliers is affected by the customer's sustainability strategy?

The present research explores this link through the lens of two industries – FMCG and Pharmaceuticals. Closing this knowledge gap can contribute for nurturing the understanding between the suppliers and customers which will ensure that circularity is effectively implemented and also help in the system change towards sustainable business practices. Additionally, this study shows that misalignments between supplier strategies and customer perceptions could hinder relational dynamics and the broader adoption of CE.

This dissertation's structure comprises five chapters: (1) Introduction, (2) Literature Review, (3) Methodology, (4) Data analysis and Results and (5) Conclusions, Limitations, and Future Recommendations.

2. Literature Review

2.1 Customer Value

The circular economy is a restorative and regenerative economic system designed to optimize resource utilization, minimize waste, and foster innovative value creation opportunities in Business to Business (B2B) markets (Bocken, de Pauw, et al., 2018) that has affected all major industrial business sectors, and the transition from a linear to a CE necessitates that industry sectors and their companies transform and enhance critical aspects of their operations, including business models, supply chains, value propositions, and overall strategies. (Aarikka- Stenroos, et al., 2020). This transition from a linear to a circular economy changes value creation and delivery and it redefines CV while it is difficult for suppliers' existing views and strategies. In traditional business models, customer value is often centered on cost, efficiency, and product ownership.

However, in the CE, value extends beyond these factors to include sustainability, longevity, and resource efficiency. For that reason, understanding

the CV of CE offerings is essential because, like any innovation, their success depends on the extent to which they deliver value to customers, stakeholders, and society (Anderson, et al., 1998).

The shift to CE not only transforms how suppliers create value but also reshapes how customers perceive it. Previous research suggests that CE broadens customers' value perceptions and enhances suppliers' value propositions, particularly in terms of environmental and social benefits (Frishammar & Parida, 2019; Geissdoerfer, Morioka, Monteiro de Carvalho, & Evans, 2018; Patala et al., 2016).

To fully grasp how CE transforms value perception, it is essential to examine the role of CV as a strategic tool for both suppliers, customers and stakeholders (Eggert, Ulaga, Frow, & Payne, 2018; Payne, Frow, & Eggert, 2017), as their success depends on how much value is generated for customers and stakeholders (Aarikka-Stenroos, Don Welathanthri, & Ranta, 2021). CV is strongly influenced by the processes of value creation that involve both suppliers and customers (Grönroos & Voima, 2013; Plewa, Sweeney, & Michayluk, 2015). In the context of CE, value creation and perception are shaped by its systemic, multi-actor nature (Fehrer & Wieland, 2021). Given that no single company can implement circularity in isolation, understanding how customers engage in co-creation processes is critical for CE adoption. For that reason, successful circular material flows, economic value generation, and knowledge advancement rely on collaboration across the entire value chain and ecosystem (Fehrer & Wieland, 2021; Harala, Alkki, Aarikka-Stenroos, Al-Najjar, & Malmqvist, 2023).

Consequently, in circular value chains, existing actors often adopt new roles to fulfill emerging tasks (Ranta et al., 2018). This shift frequently requires close, actively managed customer relationships that foster collaborative innovation (De Angelis, Howard, & Miemczyk, 2018; González-Sánchez, Settembre-Blundo, Ferrari, & García-Muiña, 2020). Research rarely explores how circularity impacts customer value perceptions or how customers evaluate circular offerings (Sairanen et al., 2024).

Some studies have examined value dimensions between both business and consumer customers. Findings indicate that customers appreciate the convenience of using circular products and services, particularly the functional value dimension, while also recognizing direct and indirect economic benefits (Aarikka-Stenroos et al., 2021). Research on CE customer experiences (Pekorari & Lima, 2021; Ta, Aarikka-Stenroos, & Litovuo, 2022) suggests that consumer experiences are dynamic and multidimensional, whereas B2B customers' experiences are largely influenced by proactive suppliers and efficient customer service.

Studies on CE consumer acceptance (Camacho-Otero, Boks, & Pettersen, 2019; Kuah & Wang, 2020) highlight that economic and quality considerations are often the most critical factors for consumers. Additionally, research has shown that customers frequently distrust circular offerings due to concerns over quality and unforeseen risks (Tingley, Cooper, & Cullen, 2017), which can negatively impact their perceived value. Despite the advantages of CE, customers often hesitate due to concerns over product quality, reliability, and financial risks, which can diminish perceived value. Given that these studies are both recent and limited, they provide only an initial understanding of how circularity contributes to value creation for B2B customers (Sairanen, Aarikka-Stenroos, & Kaipainen, 2024).

2.2 Customer Value Dimension in B2B

CV is a well-established concept in marketing, traditionally viewed as either a trade-off between benefits and costs (Anderson & Narus, 1998; Zeithaml, 1988) or as a contribution to goal achievement (Kleinaltenkamp et al., 2022; Woodruff, 1997). This thesis adopts the latter approach, as it better aligns with the motivations and goals of B2B customers.

Despite the growing interest in CE, research in B2B contexts remains disproportionately focused on how suppliers create value rather than how customers perceive and evaluate circular offerings (Ranta et al., 2020). While established CV research has explored various value dimensions (Zeithaml, Verleye, Hatak, Koller, & Zauner, 2020), the integration of CE perspectives into CV studies is still underdeveloped.

While traditional CV dimensions provide a useful framework for understanding value in linear business models, they fall short in capturing the complexities of the CE. This approach introduces new priorities, such as sustainability, resource efficiency, and systemic collaboration, which necessitate the expansion of CV dimensions. This section explores how traditional dimensions evolve and new dimensions emerge in CE contexts.

Regarding the formation of customer value perceptions, studies suggest that value is not fully perceived before an offering is used, and that customers actively participate in value creation alongside suppliers (Aarikka-Stenroos & Jaakkola, 2012; Grönroos & Voima, 2013; Woodruff, 1997). This highlights the crucial role of customers' actions and capabilities in the value-creation process (Macdonald et al., 2016). While the specific dimensions of CV vary depending on context and conceptualization, each dimension represents a distinct facet of value as perceived by customers (Sweeney & Soutar, 2001; Ulaga, 2003).

A goal-based perspective on CV is necessary to better understand its role in B2B and CE contexts, particularly given that most research on customer value has traditionally focused on B2C markets and linear business models (Sairanen, Aarikka-Stenroos, & Kaipainen, 2024). Existing literature widely recognizes four key CV dimensions: economic, functional, relationship, and symbolic value.

Economic Value: There is ongoing debate about whether the offering price should be considered part of CV (Anderson & Narus, 1998; Ulaga, 2003). Some argue that altering the price does not affect CV itself but rather influences a customer's purchasing incentives (Sairanen, Aarikka-Stenroos, & Kaipainen, 2024).

Functional Value: This dimension relates to an offering's perceived characteristics, quality, and utility. Some scholars extend functional value to include benefits derived from supplier relationships and interactions (Rintamäki et al., 2007), whereas others argue that functional value is strictly tied to an offering's inherent attributes (Sheth et al., 1991).

Relationship Value: This dimension arises from ongoing interactions with suppliers and access to supplier resources over time, contributing to long-term value creation (Lapierre, 2000; Ravald & Grönroos, 1996).

Symbolic Value: This refers to the external and internal perceptions associated with an offering. The external brand and image subdimension encompass the potential benefits or risks to a customer's reputation resulting from an offering or a partnership with a supplier (Parasuraman, 1997; Smith & Colgate, 2007).

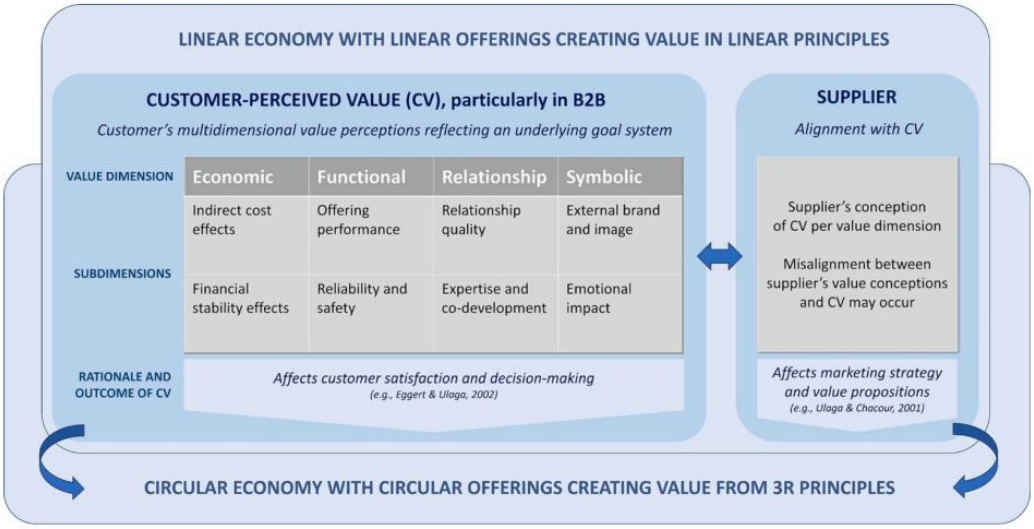

Figure 2. The initial framework for examining CV in the CE (Sairanen et al, 2024, p 325)

While these traditional CV dimensions have been widely studied in linear business models, the shift to circular economy principles introduces new priorities and value drivers. In circular business models, sustainability goals, resource efficiency, and long-term collaboration reshape how customers perceive and derive value. Research in CE suggests that circularity-driven CV consists of seven key dimensions: economic, functional, relationship, identity, ethical, strategic adaptation, and systemic value.

Four of these—economic, functional, relationship, and symbolic value—originate from the initial framework, and symbolic value - often related to branding and external perceptions in a circular economy - shifts towards identity value, which encompasses a company's alignment with sustainability principles and its role in a responsible business ecosystem. This shift reflects how circularity affects corporate reputation, stakeholder relationships, and long-term brand positioning. (Sairanen, Aarikka-Stenroos, & Kaipainen, 2024).

Additionally, the analysis identified three emerging dimensions:

Ethical Value: Reflects a company's commitment to sustainability, corporate responsibility, and ethical sourcing. For example, a B2B customer may perceive higher value in suppliers that offer fully recyclable materials or transparent sustainability reporting.

Strategic Adaptation Value: Refers to how circularity strengthens a company's competitive positioning, innovation capabilities, and regulatory compliance. For instance, adopting a closed-loop production system can differentiate a company in markets with strict environmental regulations.

Systemic Value: Captures the interconnected benefits of participating in circular business ecosystems, such as shared logistics, collaborative innovation, and reduced waste. An example is industrial symbiosis, where businesses exchange by-products as resources, enhancing overall value creation.

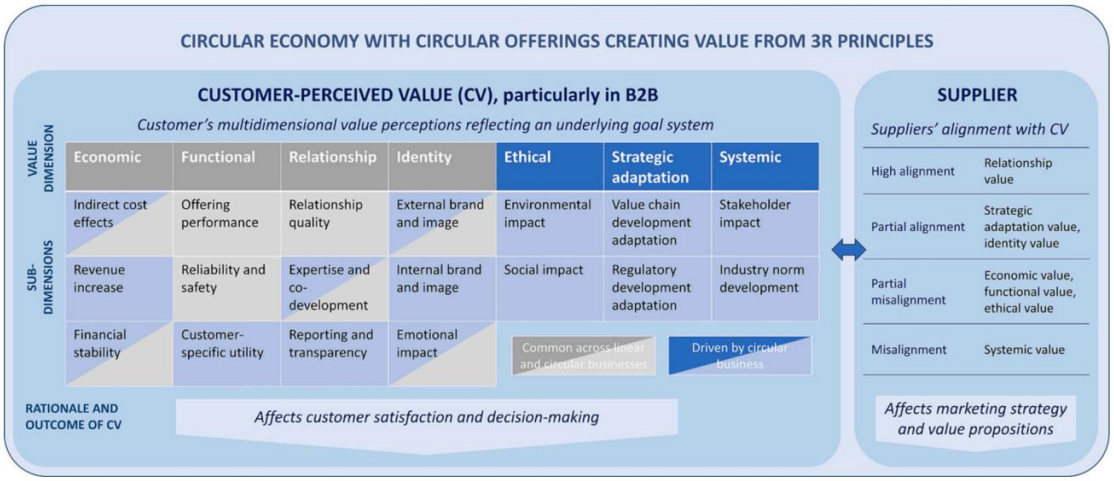

Figure 3. Conceptual framework of CV in the CE (Sairanen et al, 2024, p 334)

Each of these dimensions is linked to specific customer goals, such as operational performance objectives (Sairanen, Aarikka-Stenroos, & Kaipainen, 2024). Notably, the newly identified circularity-driven CV dimensions are influenced by evolving goals, particularly environmental performance aspirations, further reinforcing the complex and multidimensional nature of value perception in circular business models. These findings highlight the evolving nature of CV in circular business models, emphasizing the need for companies to reassess how they create and communicate value in sustainability-driven B2B markets. Despite the growing interest in CE-driven CV, several gaps remain in the literature, such as how B2B customers perceive and prioritize emerging dimensions like systemic value and strategic adaptation value.

2.3 Building Resilient Circular Economy Networks

We can define stakeholders as individuals or organizations that have influence on the matter of interest (Freeman and Reed, 1983), and those who may be impacted by the matter even if they have no influence (Bryson et al., 2002). In the specific case of CE, the stakeholders involved form a large and diverse group, where cooperation throughout the supply chain is crucial to redefine business practice (Deutz, et al., 2024).

CE networks face significant challenges, including scarcity of secondary raw materials, unpredictable availability of end-of-life materials, and complications in reverse logistics. These disruptions threaten the sustainability of the entire network, necessitating resilience and adaptability (De Angelis, 2022), so complexity will influence the environmental impacts associated with each stage of production. Transitioning from linear to circular business models requires companies across various industries to transform critical aspects of their

operations, including supply chains, value propositions, and strategies (Aarikka-Stenroos, Chiaroni, Kaipainen, & Urbinati, 2022; Ranta, Keränen, & Aarikka-Stenroos, 2020). This shift not only redefines value creation processes but also alters B2B customers' perceptions of CV, challenging suppliers to adapt their understanding of customer needs (Sairanen, Aarikka-Stenroos, & Kaipainen, 2024).

Supply chain actors play a crucial role in advancing the CE by embedding circular thinking within organizations and reshaping production systems for greater sustainability and efficiency. Achieving this transformation requires strengthening multi-stakeholder engagement and fostering long-term supplier partnerships (Alonso-Muñoz, González-Sánchez, Siligardi, & García-Muiña, 2021). A firm's dependence on a partner depends on its need to keep a relationship with the partner to achieve its goals (Ren et al., 2010).

Achieving CE objectives requires close coordination among upstream and downstream value chain partners (Urbinati et al., 2017). Unlike traditional green supply chains, Circular Supply Chains (CSCs) demand extensive inter-organizational collaboration, as well as engagement with institutional, governmental, and societal actors. Establishing regulatory, fiscal, and cultural frameworks, alongside smart technologies, is essential for effective CSCs (González-Sánchez et al., 2020; Govindan & Hasanagic, 2018). Strong connections and trust among stakeholders, supported by transparent knowledge-sharing and external capital integration, are critical for fostering collaboration and enabling coordinated actions (Alonso-Muñoz et al., 2021).

A critical factor in CE adoption is how suppliers create and communicate CV, as this directly influences purchasing decisions (Payne et al., 2017; Bischoff et al., 2023). However, many B2B firms struggle to quantify and communicate value effectively (Anderson et al., 2007; Hinterhuber, 2008). To enhance competitiveness, suppliers must collaborate with multiple partners and clearly articulate how their circular innovations deliver value to customers and stakeholders (Kapitan et al., 2019; Patala et al., 2016; Sairanen et al., 2024).

Implementing CE principles often requires firms to rethink their technologies, products, services, operations, and business models (Ranta, Aarikka-Stenroos, & Mäkinen, 2018), and rarely achieved in isolation rather, it demands extensive collaboration with other stakeholders to enable circular business transformation.

CE principles like recycling, reuse, and reduction require firms to redesign their relationships and supply chains to close material loops (Geissdoerfer et al., 2018; Kaipainen & Aarikka-Stenroos, 2021). Implementing Circular Business Models compels companies to rethink value creation, transfer, and capture beyond organizational boundaries, with CSCs providing a strategic approach to

managing the flow of products, by-products, and waste (Farooque et al., 2019). Circular business models vary significantly, ranging from recycling-focused strategies to service-based approaches that extend product life cycles through repair, reuse, and digital marketplaces (Ranta et al., 2018).

At the systemic level, firms and stakeholders within industries increasingly collaborate to drive institutional change, reshaping shared norms and redefining future value creation strategies (Fehrer, Kemper, & Baker, 2023; Harala et al., 2023). As research B2B and sustainability indicates, the CE transformation is fundamentally altering how suppliers create value with and for their customers.

To navigate CE uncertainties, industrial actors collaborate with institutional and public-sector partners, addressing regulatory challenges, securing investments, and facilitating technological advancements (Lacoste, 2016; de Abreu et al., 2020; Ranta et al., 2020; Oskam et al., 2021).

For all the reasons described above, it is important to have leaders in various sectors who prioritize sustainability and who can influence organizational culture and encourage the implementation of sustainable practices. The transition to a CE demands a fundamental rethinking of business models, supply chains, and value creation processes. Success hinges on collaboration, supply chain integration, and effective communication of circular value. By fostering resilient partnerships, embracing innovation, and engaging with institutional actors, firms can navigate CE complexities and drive long-term sustainability. Future research should quantify the economic impact of circular supply chain collaborations and develop standardized metrics for success.

3. Methodology

To understand how customer-perceived value of circular economy strategies of suppliers is affected by the customer's sustainability strategy, two case studies were developed. This empirical method allows for an in-depth exploration of the phenomenon under investigation (Yin, 2018). These cases were purposefully chosen based on their relevance to the research objectives and potential to generate meaningful insights.

A qualitative approach was taken. The case studies were mainly supported by six semi-structured interviews with suppliers and customers. The characterization of the interviews is presented in Table 1. All interviews were carried out through an online platform one to one and recorded to enable future analysis of the responses provided. On average, the time frame per interview was 40 to 50 minutes each.

For the purposes of this study, four different companies were interviewed, two from the FMCG sector and two from the Pharma industry. In addition, two retailers were interviewed on the customer side, one from the consumer goods sector and the other from the pharmaceutical industry. To ensure the confidentiality of the companies interviewed, they will identify as follows:

Company	Method	Time Interval	Position	Years of Experience
FMCG A	Microsoft Teams - Online Meeting	12:00 am - 12:45 am	Scientific and Regulatory Affairs Director	18 years
FMCG B	Microsoft Teams - Online Meeting	9:00 am - 9:45 am	Head of Supply Chain	7 years
Customer FMCG	Microsoft Teams - Online Meeting	17:00 pm - 17:50 pm	Sustainability Manager	4 years
Pharma A	Microsoft Teams - Online Meeting	15:15 pm - 15:55 pm	Brand Manager	3 years
Pharma B	Microsoft Teams - Online Meeting	17:00 pm - 17:40 pm	Head of Supply Chain	30 years
Customer Pharma	Microsoft Teams - Online Meeting	10:00 am - 10:50 am	Senior Commercial Manager	19 years

Table 1. Interviews

Prior to conducting the interviews, an interview guide, holding a list of key topics and questions to be addressed, was developed. The scripts used during the interviews, both for suppliers and their customers (APPENDIX 1 and 2). The questions differ between interviews, depending on the flow of conversation. Thus, the order and compliance with the script varied from interview to interview. The information collected was first recorded and then transcribed.

Each interview guide was divided into five sections considering the knowledge needed to answer each question. A pre-test interview was conducted with one supplier and one customer prior to the interviews with all other participants to ensure that all questions were clear. The interview guide was then revised based on the feedback received during the pre-test interview. All interviews were carried out in Portuguese, as it is the interviewees' native language, thus there was the need to translate the scripts. The interviews were conducted according to the availability of the participants, with no particular order. Secondary data was also considered. Secondary data allowed to prepare for the interviews. Further, it was possible to access secondary data provided by the companies interviewed, such as annual reports. These data significantly enhance validity and reliability (Voss et al., 2002).

Thus, the main objective of this study was to analyze the adoption of the CE by suppliers and the value of these practices for their customers—from a B2B

perspective—in different sectors. To achieve this objective, certain aspects had to be explored:

- Each supplier's commitment to the transition to a CE;
- The value of this transition for their customers;
- Identification of the main barriers;
- How they have been collaborating to ensure that this transition is gradual and brings advantages to both sides.

4. Data analysis and results

4.1 Companies Characterization

The sample is made up of four suppliers - two from the FMCG sector and two from the Pharma sector - as well as two retailers with a significant presence in the national market, one in the food distribution area and the other in the parapharmaceutical channel.

As part of this research, a supplier from the FMCG sector was interviewed - which will be referred to as **FMCG A** - whose operations stand out internationally in the cosmetics and personal care segment. This company has a strong global presence and a consolidated history of investment in innovation and has been progressively integrating sustainability and CE practices into its value chain. In recent years, the company has developed an ambitious environmental strategy, which aims not only to respond to regulatory and social demands, but also to create value for its commercial partners, namely retailers.

To explore how a multinational company in the food sector is implementing circular economy strategies and how these are perceived by its business customers in the domestic market, **FMCG B** was interviewed, specializing in the areas of food and nutrition. This company, with a consolidated multinational presence, has been recognized for integrating sustainability and circular economy principles into its operations and business strategies at a global level.

To analyze the value perceived by customers in this sector, we interviewed **FMCG Customer**, one of Portugal's leading retailers in the food and consumer goods sector, with a nationwide presence and a key role in the distribution chain in Portugal. As a market leader, this operator has made a clear commitment to sustainability and the promotion of more circular business models. With a vast

network of suppliers, it plays an influential role in promoting the circular transition throughout the supply chain.

To infer the adoption of a CE and its value to the customer in the pharmaceutical industry, two other suppliers and one customer were interviewed. **Pharma A** belongs to the dermocosmetics and pharmaceutical care sector, specializing in products for skin health and personal care. The company is part of a multinational group with a strong presence in the European market, which has been communicating its strategic approach to sustainability.

Another Pharma company interviewed was **Pharma B**, with a strong international presence and a focus on research, development, and marketing of innovative medicines in critical therapeutic areas. This organization operates with a science- and health-centered approach, investing significantly in R&D.
In the Pharma retail component, the sample included **Pharma Customer**, a leading Portuguese operator in the parapharmacy segment. This retailer has been integrating sustainability concerns into its strategy.

The selection of the six entities included in this research aimed to provide a balanced analysis of the adoption of the CE and perceived value in the context of B2B relationships in strategic sectors such as consumer goods and healthcare. The choice of suppliers was guided by sector relevance, organizational size, degree of involvement in sustainability practices, willingness to participate, and access to strategic information about their operations.
In turn, the inclusion of two Portuguese retailers with distinct profiles—a large distribution operator and a retailer specializing in health and wellness—provides access to the perspective of the business customer as a key link in the valuation and transmission of circular practices to the end consumer in different sectors.

Thus, the composition of the sample allows for a cross-analysis between different sectors and perspectives of the value chain, contributing to a deeper understanding of the dynamics of circular economy adoption in different business contexts and between the two sides of the chain (suppliers and retailers).

4.2 Integration of the Circular Economy

FMCG

In recent years, companies have placed greater importance on sustainability—particularly the Circular Economy (CE)—which has gained strategic relevance across industries, including the FMCG sector. In this context, it becomes important to understand which concrete CE practices are being implemented by suppliers and how these are recognized and valued by their customers from a B2B perspective.

First, suppliers were asked about the role of CE in their operations, and two key points were identified in both sectors: the focus on product circularity, and investment in innovation and research partnerships.

FMCG A indicates that for them, “eco-design of packaging is crucial”, but also highlights that “it is still necessary to involve and work with our suppliers in terms of raw materials so that they are renewable.” FMCG B added that “we have been supporting new recycling technologies in order to close the loop on packaging waste.”

To assess whether customers also view CE as a strategic element, they were asked about its role in their operations. The FMCG Customer was well aligned with suppliers, stating that “we have implemented a waste management system for the recovery and recycling of products.” However, for this to function ideally, “it was and continues to be essential to collaborate with our suppliers to optimize the reuse of materials and reduce waste.”

In the FMCG sector, the maturity of these practices is particularly evident, with the critical role of eco-design and collaboration across the supply chain consistently highlighted as key enablers of an effective transition to a CE (Kapitan et al., 2019; Patala et al., 2016; Sairanen et al., 2024). Another highly relevant factor is the support for emerging recycling technologies as a means of promoting circularity and reducing packaging waste (Ranta, Aarikka-Stenroos, & Mäkinen, 2018).

From the customer's perspective, there is also strong alignment with suppliers, evidenced by the implementation of waste management systems aimed at product recovery and recycling. This operational commitment (Sairanen, Aarikka-Stenroos, & Kaipainen, 2024) is further reinforced by ongoing collaboration with suppliers to maximize material reuse and minimize waste (Geissdoerfer et al., 2018; Kaipainen & Aarikka-Stenroos, 2021). In this way, systemic value is emphasized through joint efforts to achieve common goals.

Pharma

From a pharmaceutical perspective, Pharma A states that it intends to have “100% of plastic packaging made from recycled or renewable materials” on the market but admits that there are still no concrete measures in place to achieve this goal. This is aligned with Pharma B, which mentions that “we are taking a systematic approach to integrate environmental considerations into each phase of the product life cycle.” In other words, although these intentions exist, no practical actions have been implemented yet.

When asked about its orientation towards CE, the Pharma Customer indicated that this is already a strategic priority, stating they are part of “a global group of sustainable best practices” and have already set goals, such as “replacing plastic packaging with alternative materials, such as bottles made from sugar cane.” However, despite having these goals, they are not yet collaborating with any suppliers on this matter, although “we have been acting proactively in this area, particularly in the field of private label products.”

In the pharmaceutical sector, although there are clearly defined goals for the coming years, concrete measures have not yet been implemented and remain largely in the strategic planning phase. Customers express concern about sustainability, but this is mainly reflected in private label products, where they have more control over design and material choices. While there is recognition of ethical value in the market, these efforts are not yet a critical factor in supplier selection, as they do not carry sufficient weight in negotiations. This leads to the conclusion that—contrary to what has been proposed by Aarikka-Stenroos & Jaakkola (2012), Grönroos & Voima (2013), and Woodruff (1997)—there is still no alignment between partners that enables value creation in this sector.

4.3 Customer Value in the Context of the Circular Economy

FMCG

Following the identification of implemented circular practices, it is crucial to explore the value attributed to CE by customers and retailers in relation to their suppliers. The interviews revealed that circularity has transitioned from a peripheral concern to an increasingly strategic criterion in supplier selection.

As previously discussed, there is strong commitment from FMCG suppliers to integrating circularity into their operations. FMCG A emphasized the importance of working with customers who “are increasingly focused and already have very clear goals and a clear trajectory in terms of product circularity and the ecological aesthetics of the product itself.” FMCG B also highlighted the importance of ongoing feedback from retailers

regarding “packaging needs and sustainability goals,” which has been instrumental in driving their transition to a CE. In addition, retailers do not ignore the cost implications of sustainable practices, seeking products that are both sustainable and “offer competitive pricing, especially in this market where price sensitivity is rising.”

Despite the various benefits associated with CE, suppliers noted that customers tend to value practices that align with end-consumer expectations and regulatory demands. FMCG A pointed out that “meeting the expectations of the end consumer is one of the biggest challenges in the supply chain” because even if a product “has a very low environmental impact,” it is still crucial to “win over the end consumer.” As a result, circularity has become “an increasingly recurring theme in meetings with retailers.”

FMCG B added that growing regulation around packaging and waste management is another factor valued by customers, noting that demand has increased for compliant products that “avoid potential penalties and maintain their market position.”

To analyze the customers’ perspective, they were asked about the value of CE for their operations. The FMCG Customer noted that “five years ago we didn't talk about circularity,” but now there is a growing trend: “it was a nice-to-have, and now it is a selection criterion—not the only one, but increasingly relevant.” This alignment with suppliers is largely driven by “the value it adds to the brand and consumer perception.”

Commitment and direction in the FMCG sector are largely reinforced by supplier positioning, as customers become more demanding and sensitive to product sustainability. The importance of collaboration and continuous feedback is emphasized as a catalyst for circular transition, reinforcing existing literature on the role of value co-creation in B2B sustainability (Aarikka-Stenroos et al., 2021). In particular, **symbolic** and **ethical** value dimensions appear to influence brand positioning and supplier–customer dynamics (Sairanen, Aarikka-Stenroos, & Kaipainen, 2024).

However, suppliers recognize that customers primarily value circular practices that emphasize two dimensions: **symbolic value**, through alignment with end-consumer expectations, and **strategic adaptation value**, through compliance with growing regulatory requirements. From the customer's side, the **ethical value** of CE has evolved, now becoming a consideration in supplier selection. This increasing demand is largely driven by the symbolic value circular practices add to brands and the heightened perception of value among consumers—echoing the literature, which notes how circularity influences corporate reputation and long-term brand positioning (Sairanen, Aarikka-Stenroos, & Kaipainen, 2024).

Pharma

From the perspective of suppliers in the pharmaceutical sector, although circularity is something they aim to develop in the coming years, Pharma A acknowledged that “there has been an increase in customer expectations regarding sustainability.” Similarly, Pharma B identified one of its main objectives as “the search for solutions that can replace aluminum and plastic,” but acknowledged the challenge in finding alternatives that “guarantee the quality of the medicine during its shelf life.” Consequently, CE “is not the focus at this time,” as “the most important factors are price and service.”

One of the main constraints—price—is largely driven, according to Pharma B, by the fact that “the pharmaceutical industry is highly regulated and has very low margins.” While “in recent years we have seen slight price increases,” these are insufficient to generate high profitability. Supporting this view, Pharma A explained that although circularity is “a path we are taking in other countries,” in Portugal the focus is still on “revenue and volume, because it is the only way to achieve profitability and reduce fixed costs.”

To assess the value of CE from the customer's perspective, the Pharma Customer was asked whether suppliers had presented proposals and whether this was a decisive factor in supplier selection. They noted that efforts have been made internally, especially regarding their own brand, stating that “this is where we have the greatest influence over the design of products and their packaging.” However, they acknowledged that the industry is still “very motivated by commercial returns, and not so much focused on the circular economy and sustainability.”

Suppliers thus reveal a lower level of maturity in integrating CE into commercial relationships, although they recognize increasing ethical value on the part of customers—consistent with the literature on circularity’s impact on brand and corporate reputation (Sairanen, Aarikka-Stenroos, & Kaipainen, 2024).
Additionally, significant technical limitations—notably the need to ensure medicine stability and efficacy—were highlighted as barriers to adopting alternative materials. In this sector, price is seen as a major obstacle to circular practice implementation due to low margins and strict regulations. As such, the economic and functional dimensions of customer value remain central (Camacho-Otero, Boks, & Pettersen, 2019; Kuah & Wang, 2020), in line with the existing literature.

On the Pharma Customer’s side, there is growing interest in CE; however, the data suggest that this concern does not significantly influence supplier selection, as the sector continues to prioritize commercial returns and cost efficiency—placing circularity in a secondary role. This reinforces that, in the pharmaceutical

industry, the value proposition remains primarily grounded in economic value, with limited emphasis on environmental or social benefits (Frishammar & Parida, 2019; Geissdoerfer, Morioka, Monteiro de Carvalho, & Evans, 2018; Patala et al., 2016).

4.4 Alignment and Collaboration

4.4.1 Strategic Alignment

FMCG

As CE practices evolve from operational adjustments to strategic imperatives, alignment between suppliers and customers becomes central to value co-creation. To assess the extent of active collaboration on circularity, suppliers were asked whether customers proactively request circular solutions, and both suppliers are involved in working groups developed by the customers themselves.

FMCG A reveals that customers themselves are already very aligned with circular practices and are therefore able to “work in partnership to achieve our goals,” which is consistent with FMCG B, which has been contacted by customers to “collaborate to innovate and develop circular products.” A particularly illustrative case is FMCG A’s refill bag initiative “which requires working closely with retailers to identify the best strategies for promoting and positioning such products in the market, aiming for win–win solutions.”

This type of collaboration has become essential because, ultimately, everyone has the common goal of product circularity, associated with value for the end consumer.

FMCG supplier A gave an example of the importance of collaboration with its customers in the refill bag project, where consumer education is essential to facilitate adoption of these product innovations. As the customer itself is developing these refill systems under its own brand, they are studying together “what kind of tools we can develop to communicate with consumers.”

In the interest of assessing the value of this joint work from a circularity perspective, the FMCG customer was asked what it considered essential to align its strategy with its suppliers, reinforcing once again the importance of collaborating with suppliers and jointly aligning how they can help each other, considering the objectives set by each side. This Customer also highlighted the importance of communication with suppliers aligned with the priorities of both sides. As a food distribution chain, our strategic focus remains primarily on the food sector, and therefore it is important to align with non-food suppliers, who sometimes prioritize food suppliers.

As this is something that is highly valued in the FMCG sector, strategic alignment between suppliers and customers is essential, and customers themselves have been proactive in seeking circular solutions, participating in working groups created by retailers — supports existing literature that argues B2B customer experiences are largely influenced by proactive suppliers (Pekorari & Lima, 2021; Ta, Aarikka-Stenroos, & Litovuo, 2022). This partnership goes even further, extending to the development of joint communication tools that contribute to educating consumers and encouraging the adoption of these products (Aarikka-Stenroos & Jaakkola, 2012; Grönroos & Voima, 2013; Woodruff, 1997).

This perspective is also validated by the customer side, where the success of the circular strategy depends heavily on continuous communication with suppliers and clear alignment on common goals. However, it can also be concluded that collaboration with suppliers occurs by priority, with priority given to those suppliers that offer greater strategic impact, particularly in terms of Strategic Adaptation Value.

Pharma

Given that in the previous topic it was noted that there are still no practices implemented in the pharma industry, the questions were reformulated to understand the extent to which companies are collaborating to make the transition to the circular economy a reality.

Both suppliers have been gathering information on what is being done internationally, in other markets where they are present and where practices are already in place. Pharma A gave the example of existing legislation in the sector, such as the EU Packaging and Packaging Waste Regulation (PPWR), which is "pushing our industry to improve and design product packaging in order to reduce waste and be circular," which means that they are analyzing what can be done to align with this legislation. On the other hand, Pharma B considers that "although some customers actively request circular solutions, it is still necessary to educate them, and therefore we feel that circularity in this sector in Portugal is not yet a priority."

Still from this perspective, when asked about actively seeking circular solutions, the Pharma Customer indicated that "although we have an internal focus, we do not have enough power—especially with international laboratories, for which the Portuguese market represents a small share—to request that the industry focus more and collaborate with us from a circularity and sustainability perspective."

Thus, the evidence points to a significantly lower level of strategic alignment, given that circularity practices are still in their infancy. From the customer's perspective, the market assumes an internal orientation towards sustainability, but does not have sufficient influence over its suppliers, especially in the case of

international laboratories demanding concrete measures in this area. Based on this information, we can conclude that although the existing literature points out that suppliers must collaborate with multiple partners and clearly articulate how their circular innovations deliver value to customers and stakeholders, this isn't a reality in this sector.

4.4.2 Collaboration throughout the Supply Chain

FMCG

As mentioned in the literature review, although the research focuses on the relationship between the supplier and the customer, the other players in the supply chain—from the supply of raw materials to transportation to the customer—must be aligned with the defined strategy. For this reason, suppliers were asked about the importance of involving additional companies in the development of circular practices, which emphasized the need for multi-stakeholder engagement throughout the process.

According to FMCG A, this collaboration has taken various forms and including the "creation of internal funds to support start-ups in areas such as biotechnology-based plastic recycling". In other words, to achieve the goal of changing the material of products, they have been supporting innovation. In addition, FMCG B adds that they have been actively collaborating with "various stakeholders, including raw material suppliers and NGOs, to develop effective collection and recycling systems" so that they are aligned with their practices.

In this context, FMCG suppliers have demonstrated a more proactive and structured approach, including direct support for start-ups focused on circularity, particularly in areas such as biotechnology applied to plastic recycling. These investments in innovation aim to accelerate the development of new raw materials and more sustainable processes (González-Sánchez et al., 2020; Govindan & Hasanagic, 2018), contributing to the achievement of their circularity goals (Ren et al., 2010).

Other stakeholders, such as raw material suppliers and NGOs, also serve as facilitators within a collaborative ecosystem framework (Deutz et al., 2024), in a collaborative ecosystem logic. This approach not only ensures greater effectiveness in the implementation of circular solutions but also strengthens the credibility of their sustainability practices with consumers and regulators. In this way, a clear trend can be observed in this sector toward collaboration aimed at aligning circularity objectives — corroborating the idea that stakeholder collaboration is increasingly seen as a means to achieve common goals (Aarikka-Stenroos, Don Welathanthri, & Ranta, 2021).

Pharma

Although they are not yet actively implementing circular solutions, both pharmaceutical suppliers have initiated collaborations with various partners to identify the best approach to circular transition and “to enhance the credibility of its sustainability claims,” according to Pharma B. This type of collaborative ecosystem is still uncommon in the pharmaceutical sector, but suppliers consider these initiatives essential for planning and developing their transition to a CE.

As highlighted in the literature review, the transition to a CE requires a joint effort that goes beyond the direct relationship between supplier and customer, which within the pharmaceutical sector, the adoption of circular practices is informed by the monitoring of international trends, which serves as a reference for internal adaptation, which allows them to internally assess how they can adapt their processes. However, despite this realization of the importance of collaboration, CV success in this sector does not follow the same pattern, as success in this sector is more closely tied to the economic value generated for customers and stakeholders as said by the literature (Aarikka-Stenroos, Don Welathanthri, & Ranta, 2021), being strongly related with economic factors.

4.5 Challenges and Barriers to Implementing the CE

FMCG

Despite growing recognition of the importance of the CE, its adoption still faces several operational, strategic, and even cultural challenges. This section explores the types of resistance that persist within supplier–customer relationships, and how companies deal with these situations to be more effective in promoting circular solutions to their customers.

Among suppliers in the FMCG sector, resistance to the adoption of circular practices is less frequent today than in previous years, but barriers persist, mainly related to the costs and complexity of implementation. FMCG A shares that, although there is growing interest on the part of retailers, “there remains a need to educate certain customers about the tangible benefits and impacts of circular solutions, especially when they involve changes in packaging or additional costs.”

FMCG B reinforces this idea, indicating that “resistance tends to arise when there is a direct impact on profitability or end consumer perception,” necessitating evidence-based justifications supported by measurable impact data. Both emphasize that close collaboration and co-development of solutions are effective tools for overcoming the identified barriers.

Conversely, the FMCG customer notes that, even with a proactive stance, implementing circular solutions is not always simple and requires internal

adjustments. Still, they recognize that “supplier involvement from the outset is essential to ensure the success of initiatives,” highlighting that the most effective collaborations are “those where there is a common vision and aligned objectives from the outset.” In FMCG, although resistance to circularity has decreased in recent years, obstacles persist, particularly those concerning implementation costs and the operational complexity of altering existing processes and products. It was therefore necessary to develop practices to mitigate these concerns among customers, enabling solutions to be found to balance circular innovation with economic viability and positive consumer perception.

From the customer's standpoint, even with a proactive approach towards circularity, the implementation of the proposed solutions is not always straightforward, requiring significant internal adjustments, from logistics to consumer communication. However, the importance of involving suppliers from the outset is recognized for projects to have a higher success rate. Thus, the effectiveness in overcoming obstacles depends heavily on strategic coordination between parties as identified by the literature (Lacoste, 2016; de Abreu et al., 2020; Ranta et al., 2020; Oskam et al., 2021).

Pharma

The pharmaceutical sector is heavily constrained by legal and operational requirements, which introduces additional barriers to the implementation of circular measures. Both suppliers identify the strict regulation of the sector, the low profit margin of products, and the lack of viable technological alternatives that guarantee the safety and efficacy of medicines. As Pharma B points out, “it is difficult to find solutions that meet the required technical criteria and are economically viable at the same time.” Thus, customer resistance is often passive rather than explicit, in that there is no active demand for circular solutions, but there is also no concrete pressure or incentive in this direction.
The Pharma customer confirms this reality, indicating that, although there is a willingness to move forward, “our primary focus remains on competitiveness and operational efficiency,’ while many suppliers ‘have yet to present viable circular proposals”.

Thus, the main barriers that suppliers face are high regulation, technical requirements, and reduced profit margins, which in this context means that resistance on the part of customers tends to translate into a lack of pressure to motivate suppliers to innovate in this area.

This lack of incentive slows progress and makes it dependent, above all, on global strategic guidelines or legal requirements imposed by other markets, which elevates the need for collaboration to navigate CE uncertainties. So, although the regulatory challenges are mentioned as an obstacle to circularity implementation,

this sector is not align with the literature (Lacoste, 2016; de Abreu et al., 2020; Ranta et al., 2020; Oskam et al., 2021) as they do not leverage collaboration with partners to address these regulatory challenges.

4.6 Future and Opportunities for Improvement

FMCG

To conclude the interviews, companies were asked to reflect on the future of the circular economy, in order to assess their strategic ambition and medium- to long-term vision. This section identifies enabling factors, trends, and innovations with the potential to enhance the perceived value of CE by B2B customers in the sectors analyzed.

Suppliers in the FMCG sector revealed a clear and proactive outlook regarding the future of circularity. For FMCG B, one of the main opportunities lies in expanding cross-sector collaboration and creating “innovation partnerships with retailers to scale up circular projects that are currently still in the pilot phase.” The company also highlights the growing importance of transparent communication with end consumers, who “are increasingly oriented towards the sustainability of the products they use.”

FMCG A echoes this perspective, emphasizing that the adoption of circular practices “will increasingly depend on the technologies developed” for recycling, eco-design, reverse logistics, and the integration of new sustainable materials. Both companies underline that regulatory pressure will become a decisive driver of circularity in the coming years. Far from viewing this as a barrier, FMCG B suggests it “helps consolidate circularity as a mandatory criterion rather than a voluntary one.”

On the customer side, expectations are aligned: suppliers who can deliver sustainable solutions without compromising price or performance will hold a clear competitive advantage. The retailer also highlights the need for the “democratization of access to sustainable products”, shifting them from a niche offering to a market standard.

In conclusion, the FMCG sector demonstrates a strategically mature vision for the CE, viewing inter-organizational collaboration, consumer communication, and regulatory evolution as key enablers. End consumers are increasingly influencing supplier priorities, and regulation is seen as a lever for transformation, not as an impediment (Fehrer, Kemper, & Baker, 2023; Harala et al., 2023). On the retailer’s side, the future lies in scalable, affordable, and sustainable offerings, making value alignment a competitive imperative.

Pharma

In contrast, in the pharmaceutical sector—where the transition to CE is still in an early stage—expectations for the future are more cautious and constrained by existing barriers.

Pharma A believes the sector “could benefit from the emergence of alternative and biodegradable materials that guarantee the integrity of medicines,” enabling a gradual replacement of conventional packaging. However, it acknowledges that such a transition will only be feasible “with innovation across the value chain and support from policymakers.”

Pharma B similarly anticipates that technological breakthroughs “may open space for new solutions,” but stresses that “without public incentives, it will be difficult to prioritize circularity in the face of the sector’s economic constraints.”

The Pharma Customer sees potential in private label products, which allow for greater control over formulation and packaging. Still, for circular innovations to expand beyond private labels, a “joint commitment between suppliers, regulators, and logistics operators” will be needed. According to the company, “suppliers should take the first step,” as systemic transformation depends on collective alignment across the value chain.

Overall, in the pharmaceutical sector, the outlook on CE remains measured and dependent on external enablers, namely regulatory incentives, technological innovation, and the ability to maintain product safety and compliance. However, the potential is recognized, especially in areas where companies can exercise more control—such as private labels. The future transition will thus require collective mobilization and coordination across stakeholders.

The following table provides a comparative overview of the customer-perceived value dimensions identified in the two sectors. The dimensions are grouped into seven categories—four traditionally associated with linear business logic and three (highlighted in green) reflecting the emerging values driven by the circular transition. This comparison allows for a clearer understanding of how sectoral context shapes value prioritization.

	FMCG Sector	Pharmaceuticals Sector
Economic Revenue and finantial stability	Moderate: Cost-effective solutions	High: Conditioning for the transition to a CE, due to low margins
Functional Offering performance and customer specific utility	High: Solutions that are functional, with special concern for operational ease	High: Essential to guarantee product conditions
Relationship Expertise, co-development, reporting and transparency	High: Partnerships and co-development with suppliers	Low: No active collaboration with suppliers
Identity External and internal image	High: Criterion of image and reputation with consumers	Moderate: Considered ethical, but only implemented in private label
Ethical Environmental and social impact	High: Decision criteria for selecting suppliers and products	Moderate: Considered essential, but without the market power to make it a selection criterion
Strategic Adaptation Value chain and regulatory adaptation	High: Alignment with regulatory requirements, and in line with business priorities	High: Considered strategic but dependent on legal pressure and advantage for the sector
Systemic Stakeholder impact and industry norm development	Moderate: Collaboration is valued, including partnerships for the collection of recycled products	Low: Ecosystem model not yet manifested

Table 2. Summary of the CV in the FMCG and Pharmaceutical Sectors

5. Conclusions, Limitations, And Future Research

5.1 Conclusions

This study aimed to explore the link between circular strategies adopted by suppliers and the customer-perceived value (CV) in B2B contexts, focusing on two distinct sectors: Fast-Moving Consumer Goods (FMCG) and Pharmaceuticals. The study was based on the premise that the perception of value by business customers is not homogeneous across sectors and that this perception evolves depending on factors such as the regulatory context, the maturity of the sector, and emerging challenges related to sustainability and innovation. To this end, seven dimensions of value were explored—economic, functional, relational, identity, ethical, strategic adaptation, and systemic—with the first four typical of the logic of a linear economy and the last three associated with the principles and requirements of the circular economy. Through qualitative case studies and semi-structured interviews with suppliers and customers, the research uncovered key insights into how circularity is implemented, perceived, and valued across different supply chain dynamics.

In the FMCG sector, findings indicate a higher degree of maturity and strategic alignment between suppliers and customers (Aarikka-Stenroos, Don Welathanthri, & Ranta, 2021). Circular practices such as eco-design, waste

reduction, and material innovation are actively implemented and co-developed (Kapitan et al., 2019; Geissdoerfer et al., 2018). Customers increasingly consider circularity not only as a differentiator but as a meaningful selection criterion—particularly due to symbolic, strategic, and ethical value dimensions (Sairanen, Aarikka-Stenroos, & Kaipainen, 2024). Collaboration has proven to be a key success factor, with both suppliers and customers working jointly on circular initiatives and communication strategies—validating prior research that emphasizes the role of stakeholder alignment in delivering value (Aarikka-Stenroos et al., 2021).

Conversely, in the pharmaceutical sector, the adoption of CE strategies remains limited and is largely at the planning stage. Regulatory constraints, low profit margins, and technical requirements present substantial barriers (Frishammar & Parida, 2019; Camacho-Otero et al., 2019). Although there is growing ethical awareness and strategic intent, the practical implementation of circular practices is hindered by systemic and economic limitations. Customers in this sector continue to prioritize economic and functional value, reflecting a more conservative posture toward CE adoption (Kuah & Wang, 2020).

Overall, this research highlights the importance of alignment and collaboration in realizing the potential of CE strategies (Aarikka-Stenroos et al., 2020). It demonstrates that customer value is shaped not only by operational efficiency or cost but also by the extent to which circularity aligns with stakeholder expectations, regulatory developments, and long-term brand positioning (Sairanen et al., 2024; Smith & Colgate, 2007). While the FMCG sector is advancing in this direction, the Pharmaceutical industry highlights the need for external enablers—such as public policy support and innovation incentives—to foster similar progress.
In summary, this thesis reinforces the idea that value in the B2B context is not a static concept, but rather a dynamic, multidimensional construct that is sensitive to the sectoral and macroeconomic context. In a scenario of increasing complexity, environmental pressures, and digital transformation, understanding what business customers value is not only a competitive advantage but a necessary condition for the survival and relevance of organizations in the medium and long term.

5.2 Theoretical and Managerial Contributions

The practical implications of this study are considerable. Theoretically, can expand the understanding of CV within CE contexts, especially in B2B relationships addressing a relatively underexplored area: how customers in B2B contexts perceive the value of their suppliers' circular strategies.

First, the study extends existing customer value theory in B2B contexts by exploring how traditional value dimensions (economic, functional, relationship, and symbolic) are complemented by emerging CE-specific dimensions such as ethical value, strategic adaptation value, and systemic value (Ulaga, 2003; Zeithaml, 1988; Sairanen et al., 2024). These additions help refine the understanding of how value is perceived in sustainability-driven supply chains and offer a more nuanced, multidimensional view of CV in circular contexts.

Second, the research highlights the importance of sectoral dynamics in shaping the adoption and perception of circular strategies. By comparing two distinct industries—FMCG and Pharmaceuticals—the study demonstrates that perceived value is not determined solely by a supplier's CE initiatives, but also by contextual factors such as regulatory environments, consumer influence, and margin constraints (Ranta et al., 2020; Patala et al., 2016).

Finally, by integrating empirical insights from semi-structured interviews with an updated conceptual framework of CV in CE, the study contributes to the operationalization of abstract CE concepts. It bridges a theoretical gap by framing circularity not only as an environmental imperative but as a strategic value proposition that reshapes how businesses co-create and deliver value across supply chains (Aarikka-Stenroos et al., 2021; Fehrer & Wieland, 2021).

From a business perspective, the results of this study can serve as guidelines for managers interested in developing or adapting circular business models in their organizations. Understanding the dimensions that make up the customer value proposition in different sectors allows managers to align their strategies not only with environmental objectives, but also with the expectations of customers and other stakeholders. In addition, the framework developed can be used as a practical tool to support decision-making, helping to identify underexploited value elements, operational barriers, and opportunities for collaborative innovation.

5.3 Limitations and Future Recommendations

While this research offers valuable insights, several limitations must be acknowledged. The study was limited to two sectors and six organizations, which restricts the generalizability of findings (Saunders et al., 2019) to other industries or geographic contexts. Additionally, the reliance on qualitative interviews, while rich in depth, may be subject to interviewer and respondent bias—particularly regarding self-reported sustainability efforts (Voss et al., 2002).
Many CE strategies discussed are still in preliminary phases; as such, the study reflects intentions and perceptions rather than long-term, measurable outcomes. Furthermore, the absence of performance metrics or consumer data limits the ability to directly link CE practices to customer behavior or business performance (Grönroos & Voima, 2013).

To build on this research, future studies should focus on sectoral and geographic scope to include more sectors and include cross-country comparisons to explore how different regulatory and cultural environments influence CE and CV dynamics.

Additionally combining qualitative insights with quantitative data would allow for stronger causal inferences and empirical validation of CE value frameworks.

Investigating how circular strategies evolve over time within the same sectors would provide a richer understanding of their long-term impact and organizational transformation.

Finally, a key insight from this study—especially within the pharmaceutical sector—was the gap between stated sustainability ambitions and concrete action. Several companies demonstrated strong public commitments to circular principles, yet implementation remains limited. This opens a promising line of inquiry into symbolic circularity, or the strategic use of CE messaging for reputational purposes without substantive follow-through. Researchers could examine the impact of this phenomenon on trust, supplier selection, and long-term B2B collaboration. Additionally, a potential research question: “To what extent does symbolic circularity influence supplier selection and long-term partnerships in B2B relationships?”

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Appendix

APPENDIX 1 – SUPPLIER'S INTERVIEW SCRIPT

1. Economia Circular

1.1 Qual é o papel da economia circular na sua indústria e na sua empresa?

1.2 Pode dar exemplos concretos de como a economia circular se traduz nas práticas do dia a dia?

2. Economia Circular e Expectativas dos Clientes

2.1 Na sua experiência, quais aspetos da economia circular os clientes mais valorizam? Como esses aspetos influenciam as suas decisões de compra?

2.2 Nos últimos anos, notou mudanças nas expectativas dos clientes em relação à sustentabilidade e economia circular?

3. Alinhamento com os Clientes e Colaboração

3.1 Os clientes solicitam ativamente soluções circulares ou ainda é necessário educá-los sobre os seus benefícios?

3.2 Quais são os principais desafios que enfrenta ao alinhar sua estratégia circular com as expectativas dos clientes? Pode dar um exemplo concreto?

3.3 Os clientes ajudaram no desenvolvimento da ideia e alinhamento? Os clientes tiveram de realizar ajustes? Quais?

3.4 Na conceção da solução os clientes estiveram envolvidos? Como?

3.5 Estão envolvidas outras empresas além dos clientes para tornar possível a solução?

3.6 Como selecionou as empresas envolvidas nessa solução? Que atividades (ou papel) desempenham nessa solução de EC?

4. Desafios, Resistência e Relação com os clientes

4.1 Já experienciou resistência dos clientes ao transitar para modelos circulares?

4.2 Como é que a empresa lida com isso?

4.3 Que tipo de colaboração tem sido mais eficaz para impulsionar a adoção da economia circular pelos seus clientes?

4.4 Como é que a economia circular influenciou a forma como a sua empresa constrói e mantém relações com os clientes B2B?

5. Tendências Futuras e Oportunidades

5.1 O que poderia tornar a economia circular mais atrativa para os clientes no futuro?

5.2 Existe alguma tendência ou inovação que acredita que poderá aumentar ainda mais o valor da economia circular para os clientes?

APPENDIX 2 – CUSTOMER'S INTERVIEW SCRIPT

1. Economia Circular

1.1 Qual o papel da economia circular no seu setor e na sua empresa?

1.2 Pode dar exemplos concretos de como a economia circular se reflete nas suas operações e na relação com fornecedores?

2. Expectativas em Relação aos Fornecedores

2.1 A economia circular influência as suas decisões de compra e negociação com fornecedores?

2.2 Quais aspetos da economia circular mais valoriza ao escolher fornecedores e produtos?

2.3 Nos últimos anos, notou mudanças na oferta dos fornecedores em termos de sustentabilidade e economia circular?

2.4 Essas mudanças têm ido ao encontro das suas necessidades? Porquê?

3. Alinhamento com Fornecedores e Colaboração

3.1 Como os seus fornecedores se têm adaptado às suas exigências de economia circular? Considera que têm sido proativos ou ainda é necessário incentivá-los?

3.2 Que desafios enfrenta ao tentar alinhar as estratégias de economia circular dos fornecedores com as necessidades do seu negócio?

3.3 Já participou em algum projeto ou parceria com fornecedores para desenvolver soluções mais circulares? O que funcionou melhor nesse tipo de colaboração?

4. Desafios

4.1 Já experienciou dificuldades ou resistência por parte dos fornecedores na adoção de práticas circulares? Como lida com essas situações?

4.2 Que barreiras encontra na integração de produtos e soluções circulares no seu portefólio?

5. Tendências Futuras e Oportunidades

5.1 O que poderia tornar a economia circular mais atrativa e acessível para o seu negócio?

5.2 Que tendências ou inovações acredita que poderão aumentar o valor da economia circular para o seu setor?