

Innovation Future Prospects in Retail: A Sustainable Approach

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Abstract. *In the retail sector where large-scale supply chains, resource-intensive operations, and consumer facing product systems intensify environmental and social pressures, innovation must evolve beyond traditional models to embed sustainability into everyday organisational practices. Despite the increasing focus on the topic of sustainability, there is still a critical need for deeper understanding on the development of a sustainable innovation environment in leading retail organisations. Accordingly, this paper investigates the following overarching question: how are sustainability initiatives distributed across the environmental, social/equity, and economic pillars, and how do sustainability-leading retailers differ in translating these priorities into organisational practices? Central to this approach is the cultivation of a culture of innovation that supports and sustains the establishment of sustainable innovation. To address this, the methodological approach chosen is a qualitative analysis based on a combination of a thematic analysis using NVivo software. Secondary data is targeted by analysing sources of annual reports and sustainability reports of two industry retail group leaders according to Dow Jones Sustainability Indices Europe in 2024 and Romania CST Index. Drawing on current trends, the paper outlines strategic pathways for stakeholders to align innovation practices, processes, systems, frameworks into the core of the organisations. By embracing a sustainable approach and nurturing an innovation-driven mindset, organisations can effectively position themselves as agents of meaningful and lasting change.*

Keywords: sustainable innovation, future of retail, organisational change, long-term resilience, value chain.

Introduction

The future prospects of innovation have increasingly become a point of interest in the context of today's complex and uncertain global environment. At the same time, sustainability has become an increasingly important issue, as more people recognize its potential impact on long-term economic growth. The link between innovation and sustainability has therefore gained considerable attention in academic research, as organisations look for ways to embed sustainability principles into their innovation strategies while strengthening their competitiveness and resilience. According to Morioka et al., (2016, p.659) "firms face the challenge of incorporating sustainability into their business, seeking to contribute to global sustainable development". Recent studies suggest that retail innovation has traditionally been overlooked compared with manufacturing and high-technology sectors. They also show that established retail firms face particular challenges when developing innovation capabilities in service-oriented, efficiency-focused environments (Paredes and Olander Roesse 2024). At the same time, emerging research explicitly conceptualizes

sustainability-oriented innovation in retailing, suggesting the field is developing but still requires stronger empirical mapping (Gil-Saura et al., 2024). These gaps are particularly important because, in retail, sustainability priorities are often addressed through operational and supply-chain innovations that affect environmental, social, and economic outcomes.

Despite the existing focus on these topics, there is still a need to understand the connection between them and the impact they have on the retail industry as based on the studied literature, this field needs a deeper look and investigation. As such, a thematic analysis is conducted to find out the current trends, best practices, processes and ways of doing things for promoting sustainability that retail organisations are making use of. To accomplish this, NVivo 15 software is used for organising, analysing, and visualising qualitative data extracted from official reports of the two selected retail companies.

The first part of the article focuses on bringing into discussion the theoretical background and academic literature that address this topic by tackling relevant authors and scientific articles. In the second part, the qualitative analysis is conducted by using secondary data extracted from official reports and analysed using NVivo 15 software. The final part is reserved for related results, discussions and conclusions connected to the theme of sustainable innovation.

Accordingly, the study focuses on two key research questions:

1. How are sustainability-oriented practices and innovation-related initiatives in retail distributed across the environmental, social/equity, and economic pillars in corporate sustainability reporting?
2. How do Carrefour SA and Kaufland Romania differ in how they prioritize and describe these practices/initiatives?

Theoretical background

In these challenging times, the strategy to foster innovation does not have a specific path, there are numerous ways to do that, and each organisation must find their direction (Leal Filho et al., 2025). Despite the relevance of this topic of innovation, a rising question is what kind of innovation is needed to address the challenges of sustainable development from a global perspective (Leal Filho et al., 2025).

Innovation is seen as a complex term that has various implications and as such the existence of different types of innovation which are distinguished by the level or amount of new knowledge they produce (Leal Filho et al., 2025). In this way, there has been the concept of sustainable innovation generated. Over the years, the definitions of it have evolved. In the view of Leal Filho et al. (2025), sustainable innovation is seen as different kinds of methods, approaches that tackle new social practices and technologies which help the community to be more sustainable using various means that foster sustainable innovations in terms of creation of new products, services or processes. In addition, sustainable innovation involves organisations adapting their products, services, processes, and business models to support sustainable development goals. This means reducing negative social and environmental impacts while also improving overall business performance (Kneipp et al., 2019). The authors, Adams et al. (2016), state that sustainable improvements tackle not only technological changes but also transformations in processes, operational practices, business models, mindsets, and overall business systems. Thus, the concept of sustainable innovation appeared under various names: “sustainability-led-innovation”, “sustainability-oriented innovation”, or “sustainability-related innovation (Maier et al. 2020).

Building a sustainability-oriented innovation culture is essential to emphasise that sustainability is not an option but a fundamental part of organisational culture (Jin et al. 2019).

According to the research, the authors concluded that a stronger sustainability orientation within organisations is linked to a more developed innovative culture, and that both this culture and its outcomes are influenced by such an orientation.

In a paper developed by Seebode et al. (2012), the authors explored a concept in which innovation development gave rise to a sixth-wave process. In this context, sustainability is regarded as the next wave of innovation, the 6th one (Silva & Di Serio, 2016). In a paper by Santos et al. (2021) it was concluded that studies focusing on sustainability are more numerous than those addressing innovation, while relatively few papers examine sustainability and innovation together (Polec et al., 2025). It is considered that “sustainability performance cannot be achieved without innovations” (Silvestre, 2015).

The existing literature suggests that organisations that initiate sustainable innovation move towards a stronger long-term competitive advantage, which, in turn, increases the firm's value (Adomako & Nguyen, 2023).

The common point in these definitions are the benefits that this type of innovation brings in terms of social, economic and environmental aspects emphasising the concept of the Triple Bottom Line of sustainability: people, planet and profits (Leal Filho et al., 2025), (Adomako & Nguyen, 2023), (Silvestre & Țîrcă, 2019). In order for an innovation to be considered sustainable, the social, environmental, and economic elements, known as the “Three E's of Sustainability” need to be integrated, differentiating sustainable innovation from traditional innovation (Adomako & Nguyen, 2023).

According to Yildiz Çankaya & Sezen (2019), the first element, the economic performance reflects the ability of manufacturing operations to minimize costs related to components, raw materials, water, energy consumption, and waste disposal. The second element, the environmental performance reflects the company's ability to minimize waste, pollution, chemicals, and emissions. The third element, the social performance reflects an organisation's ability to mitigate public risk and promote employee health and safety. In a more simplified version, the main targeted aspects are financial returns generated for shareholders, the commitment to positively impact community and the positive effects on the environment.

In addition, researchers Shakeel et al. (2020) developed a sustainable business model innovation which targets three main components: sustainable value propositions innovation, sustainable value creation and delivery and sustainable value capture innovation. Focusing on the component of sustainable value capture innovation, this one incorporates “firm’s ability to capture environmental, social, and economic value by designing new sustainable revenue models and cost structures” (Shakeel et al., 2020, p.9). Therefore, sustainable innovation brings together economic, social, and environmental goals. It focuses on creating long-term value by using resources more responsibly, improving business performance, and supporting social responsibility, in line with the Triple Bottom Line principle of people, planet, and profit.

Although sustainability and innovation are widely studied, there is limited research on how sustainable innovation can be fully integrated into organisational core processes and frameworks. The lack of practical models and empirical evidence leaves a gap in understanding how firms can align innovation together with sustainability for securing the long-time survival of the company. Research focused on retail suggests that the sector faces a particular challenge because of its significant sustainability impact and its position between suppliers and consumers. The key issue is how retailers turn sustainability commitments into practical, scalable innovations across their operations and value chains, while also providing sustainability disclosures that are credible and comparable (Naidoo and Gasparatos 2018). Moreover, a central discussion is that sustainable

innovation tends to emerge less from formal R&D and more from the adoption and diffusion of service, process, and business-model innovations across stores and supply chains, shaped strongly by consumer-facing dynamics and environmental uncertainty (Pantano 2014). Checking the existing literature, there exists several scientific publications which used before Dow Jones Sustainability Indices Europe for assessing or tackling sustainability of different organisations. Authors Tehrani et al. (2024) investigates whether this index is relatable or not. Other articles focusing on the index are (Denuwara et al., 2022), (Hawn et al., 2018) and other ones which tackle the relationship between the index and financial benefits for the organisations.

Methodology

The primary aim of this research is to explore the future of innovation by putting an emphasis on the development of the sustainability dimension, with the goal of identifying and integrating sustainable innovation practices, processes, systems, frameworks into the core of the organisations. To achieve this, a qualitative analysis is conducted using thematic analysis supported by NVivo 15 software through automated coding. Thematic analysis is defined as “identification of recurring patterns that are presented by researchers as overarching statements or themes” (Lochmiller, 2021, p.2029). One of the well-known studies of thematic analysis was done by authors Braun & Clarke (2006) who concluded that this type of analysis requires identifying consistent patterns of meaning within the dataset. Based on their research, the authors concluded that there are six phasis of this kind of analysis more exactly: “familiarizing yourself with your data, generating initial code, searching for themes, reviewing themes, defining and naming themes and producing the report” (Braun & Clarke, 2006, p. 87) which have been used for this research.

For applying this analysis, NVivo 15 software is used for supporting the research in handling data by facilitating the navigation, coding, and annotation of records, while also ensuring fast and precise access to the information. It equips researchers with tools to independently and systematically manage, analyse, and visualise qualitative data and documents (Dhakal, 2022).

In accordance with the subject of this paper and the chosen methodology, the targeted organisations were picked using Dow Jones Sustainability Indices Europe in 2024 and national awards. The Dow Jones Sustainability Index monitors publicly traded companies from major global industries listed on the S&P Global 1200 Index and its subsets, assessing their sustainability performance across three key dimensions: economic, social, and environmental (Tehrani et al., 2024).

As such, the two chosen organisations are Carrefour SA and Kaufland. Carrefour is part of the industry of Consumer Staples Distribution & Retail and has the highest ranking of sustainability from this industry. Kaufland has won first place in Best Practices in Corporate Sustainability, after Romania CST Index in 2024. This industry was targeted due to the fact that based on consider that the retail sector has been insufficiently addressed in terms of innovation due to the fact that researchers AlSaied & Alkhoraif (2024), Paredes & Olander Roesse (2024) and Jiao et al., (2025) state that previous researches have largely focused on high technology and manufacturing sectors, leaving retail innovation and sustainability relatively underexplored. The documents analysed consist of publicly available secondary data gathered from official company sustainability reports and annual reports available at the time of analysis (2022-2025). Documents were included if they were produced by the company or its group, contained initiative descriptions linked to at least one sustainability pillar (environment, social/equity, economy), and belonged to the latest available reporting cycle. Non-official media articles, social media content, duplicate versions, and promotional materials were excluded.

Furthermore, the information is selected based on specific criteria. The coding framework was developed based on two well-established conceptual models in sustainability research: the Triple Bottom Line which emphasizes People, Planet, and Profit and the Three E's of Sustainability: Environment, Economy, and Equity. These frameworks were synthesized to construct three main analytical criteria that guided the coding process and the methodological steps of the analysis as shown in Figure 1.

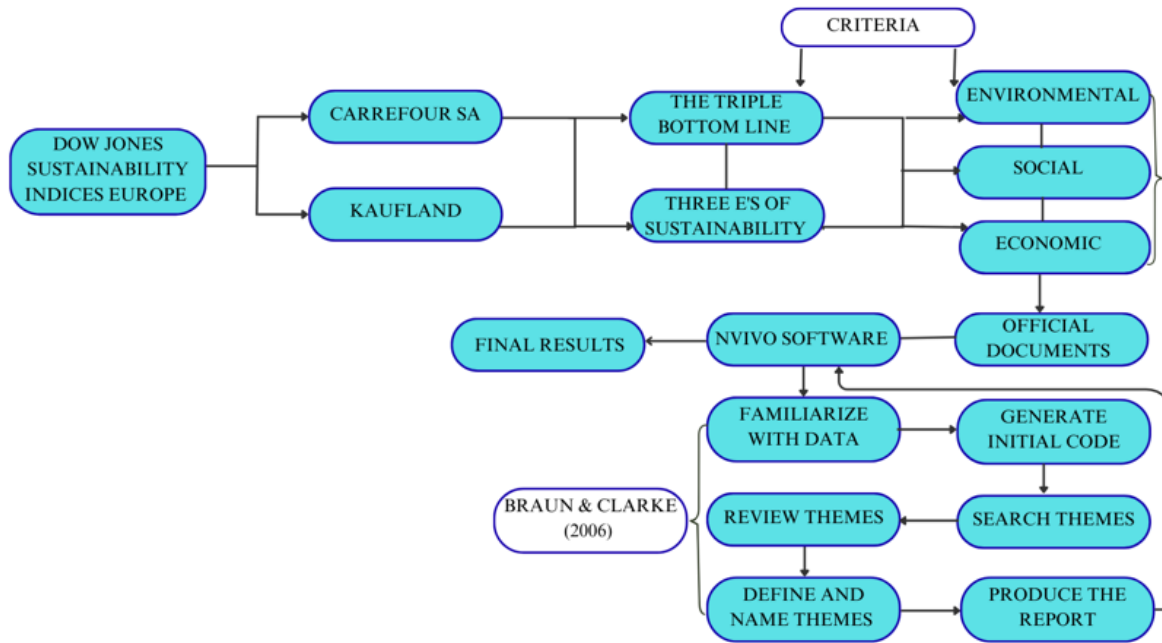


Figure 1. The Coding Framework

Source: Author's own research using (Braun & Clarke, 2006).

Results and discussions

For each one of the two organisations, an analysis was conducted using the Braun & Clarke (2006) Braun & Clarke (2006) model of applying thematic analysis and NVivo software, framework explained in **Error! Reference source not found..** The content of these official documents in the form of reports was examined with NVivo 15. Specific codes were created which resulted in the creation of three main themes: economic, environmental and social/equity aspects. For each theme, a series of codes were generated which represent specific aspects or dimensions of sustainability used in the company. Files represent the number of source documents included in the dataset, while references represent how many times a given code appears across those documents.

Addressing the first research question, when referring to Kaufland, the documents analyses were the Kaufland impact study 2024 (Kaufland 2024))(Kaufland 2024), Kaufland sustainability report 2023/2022 (Kaufland 2023b)(Kaufland 2023b) (Kaufland, 2022),(Kaufland, 2022), Kaufland community investments 2023 (Kaufland 2023a). Statista and Kaufland and Schwarz Group official website. Analysis of reference frequencies for Kaufland Romania indicates that the Economy theme has the highest level of representation, with 27 references, suggesting that economic dimensions of sustainability are most frequently emphasized within the dataset. The Environment theme follows with 19 references, whereas the Social/Equity theme is comparatively less prominent, with 14 references.

At the sub-code level, two categories demonstrate the strongest appearance: Responsible Consumption & Production within the Economy theme and Renewable Energy & Energy Efficiency within the Environment theme. Each of these sub-codes' accounts for 6 references, thereby representing the most consistently discussed or observed practices across the coded material. In second place, with a frequency of 5 references each, are Green Innovation & Technology (Economy), Climate Change Mitigation & Adaptation (Environment), and Fair Labor Practices (Social/Equity). Additional recurring sub-codes register 4 references each: Sustainable Business Practices and Green Jobs & Workforce Development (Economy), Sustainable Agriculture & Food Systems and Waste Reduction & Circular Economy (Environment), and Health & Well-being in Sustainable Development (Social/Equity) while Environmental Justice and Community Engagement & Empowerment are least represented, with 2 references each.

KAUFLAND ROMANIA			
THEMES	CODES	REFERENCES	FILES
ECONOMY 27 References	Sustainable Business Practices	4	9
	Responsible Consumption & Production	6	
	Green Innovation & Technology	5	
	Green Jobs & Workforce Development	4	
ENVIRONMENT 19 References	Renewable Energy & Energy Efficiency	6	
	Climate Change Mitigation & Adaptation	5	
	Sustainable Agriculture & Food Systems	4	
	Waste Reduction & Circular Economy	4	
SOCIAL/EQUITY 14 References	Fair Labor Practices	5	
	Health & Well-being in Sustainable Development	4	
	Environmental Justice	2	
	Community Engagement & Empowerment	2	

Figure 1. Thematic Distribution of Kaufland's NVivo Analysis

Source: Author's own research using NVivo 15 software.

Building on the reference distribution from your NVivo coding, the Economy theme shows the strongest emphasis (27 references), followed by Environment (19 references) and Social/Equity (14 references). At code level, the highest-frequency categories are Responsible Consumption & Production (6 references, Economy) and Renewable Energy & Energy Efficiency (6 references, Environment). The second most prominent cluster each with 5 references includes Green Innovation & Technology (Economy), Climate Change Mitigation & Adaptation (Environment), and Fair Labour Practices (Social/Equity).

For having a more sustained interpretation, best-practice examples were selected from the attached Kaufland Romania documents for the most-referenced areas. For the Economy theme, Kaufland's economic contribution is reflected in the 2024 impact study, which reports 2.80€ bn gross value added, 321€ m total taxes, and 2.93€ bn spent with Romanian suppliers (around 2,500 out of ~3,200 suppliers), alongside 9.5€ m invested in CSR projects. In line with Responsible Consumption & Production, Kaufland's food-waste work combines prevention, accelerated sales, and donation mechanisms. In 2023, accelerated sales enabled the sale of 34,741.48 tons across 12,700+ items, while the company reported 60.41 tons of food waste averted through donations and accelerated sales.

In parallel, the Social Canteen program linked food rescue with social support, donating 226 tons of food to cook around 248,000 meals for about 1,500 beneficiaries in 2023.

For the second-ranked economic code, Green Innovation & Technology, Kaufland expanded low-carbon mobility infrastructure: by the end of FY2023 it reached 131 EV-charging locations with 41 installed during 2023, supported by an investment of about 2.6€ m.

Within the Environment theme, the strongest code, Renewable Energy & Energy Efficiency is illustrated by Kaufland's large-scale renewable rollout and consumption-reduction measures. The 2023 sustainability report notes an additional 6.7€ m investment in photovoltaic installations during 2023, with the PV program generating 10,000+ MWh of green energy and reporting 10,061,594 kWh own renewable generation. Energy-efficiency actions (e.g., LED lighting and energy management systems) contributed to a continued decline in energy intensity, reaching 383.47 kWh/m² in 2023 (a 6.7% decrease vs. 2022). For Climate Change Mitigation & Adaptation, Kaufland reports measurable progress in emissions accounting and decarbonisation levers, including market-based emissions reduced to 0 in 2023 linked to renewable electricity procurement, while total market-based emissions decreased versus 2022.

Finally, for Social/Equity, the highest code is Fair Labour Practices, operationalised through supplier and partner requirements (e.g., prohibition of forced labor and child labor, freedom of association, non-discrimination) embedded in the Business Partner Code of Conduct, plus verification mechanisms. In 2023, Kaufland reports that 14 social audits were carried out for partners providing security, cleaning, and staff leasing services, and all received a "green" rating.

Complementing this, Kaufland's broader social footprint is also visible in its community investments, where the 2023 reporting documents a total community investment budget of 47,956,951 ron, implemented with 83 partner NGOs across 114 projects.

The Figure 2 shows Kaufland Romania's sustainability communication is dominated by energy and environmental action, with highlighted terms like energy, renewable, environment, efficiency, and climate, reflecting a strong focus on renewables and efficiency measures. Economic priorities are visible through economy and investment, while social commitments appear via equity, labour, fair, and audits. The prominence of food, waste, and donations/tons highlights continued emphasis on food-waste reduction and responsible consumption.

Source: Author's own research using NVivo 15 software.

At the sub-code level, the most frequently referenced category is Sustainable Agriculture & Food Systems within the Environment theme, which received 5 references. A second tier of consistently discussed sub-codes, each with 4 references, includes Waste Reduction & Circular Economy, Renewable Energy & Energy Efficiency, Water Conservation & Management, Biodiversity & Habitat Conservation, and Fair Labor Practices from both Environment and Social themes, along with Health & Well-being in Sustainable Development, Community Engagement & Empowerment, Sustainable Business Practices, and Responsible Consumption & Production.

CARREFOUR SA			
THEMES	CODES	REFERENCES	FILES
ENVIRONMENT 24 References	Sustainable Agriculture & Food Systems	5	3
	Waste Reduction & Circular Economy	4	
	Renewable Energy & Energy Efficiency	4	
	Water Conservation & Management	4	
	Biodiversity & Habitat Conservation	4	
	Climate Change Mitigation & Adaptation	3	
SOCIAL/EQUITY 21 References	Fair Labor Practices	4	
	Health & Well-being in Sustainable Development	4	
	Community Engagement & Empowerment	4	
	Environmental Justice	3	
	Access to Basic Services	3	
	Indigenous Rights & Traditional Knowledge	3	
ECONOMY 18 References	Sustainable Business Practices	4	
	Responsible Consumption & Production	4	
	Financial Incentives for Sustainability	3	
	Sustainable Urban Development	3	
	Green Innovation & Technology	2	
	Green Jobs & Workforce Development	2	

Figure 3. Thematic Distribution of Carrefour's NVivo Analysis

Source: Author's own research using NVivo 15 software.

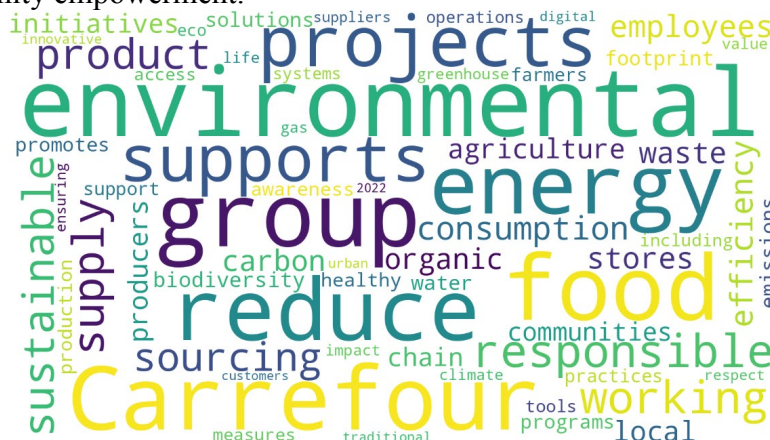
In addition, specific best practices examples were selected from the reports, Carrefour SA Report (2024) , Carrefour SA Universal Documents (2024),Carrefour SA Universal Documents (2024) and Carrefour SA (2025)Carrefour SA (2025), for each of the highest references. Focusing on the highest references, the environment theme, the company partnered with nearly 5,000 organic producers and offered multi-year contracts that provide stable income for farmers transitioning to organic methods, especially in France, Romania, and Taiwan. Carrefour also enforces strict responsible water use criteria requiring irrigation monitoring, drip irrigation, and use of alternative water sources such as rainwater or treated wastewater.

In France, Carrefour appointed anti-waste officers in every store to monitor waste flows and engage staff in prevention strategies. By 2024, it had signed nine Power Purchase Agreements (PPAs) across Europe and Latin America, securing nearly 480 GWh of renewable electricity annually. Solar installations now cover over 200 sites, supporting the Group's target of producing 1 TWh of renewable power annually by 2027. Carrefour mandates microbiological analysis of irrigation water bans gravity-fed irrigation and requires producers to adopt efficient systems such

On the consumer side, the Group reformulates Carrefour-brand products to reduce salt, sugar, and additives, while expanding its plant-based and organic ranges to provide healthier dietary options. Carrefour tracks these actions via its CSR & Food Transition Index, which integrates consumer satisfaction with healthy food offerings. In 2023, the Foundation distributed large volumes of food donations to NGOs, strengthening food security for vulnerable populations across Carrefour's markets.

For economic dimension, Carrefour applies the EU Green Taxonomy and CSRD standards in its reporting, enhancing transparency and accountability. Furthermore, Carrefour has introduced sustainable purchasing rules that added environmental and social criteria into procurement, particularly for high-risk commodities such as textiles, soy, and beef. Carrefour advances responsible consumption and production by promoting certified sustainable products and packaging innovation. It has committed to generate 8€ billion sales from certified products by 2026, including organic food, MSC/ASC-certified fish, FSC/PEFC-certified wood, and EU Ecolabel-certified goods.

The word cloud from Figure 4 illustrates Carrefour's core sustainability priorities, with dominant themes such as environmental, reduce, food, and energy highlighting the company's focus on lowering environmental impacts and transforming food systems. Prominent terms like responsible, sourcing, waste, carbon, and efficiency reflect commitments to responsible consumption, emissions reduction, and resource optimisation. Social dimensions, including employees, fair, local, and communities, further emphasise Carrefour's engagement with labor rights and community empowerment.



Source: Author's own research using NVivo 15 software.

Approaching the second research question, Carrefour and Kaufland pursue sustainability through complementary but distinct approaches. Carrefour's strategy is primarily consumer and food-system oriented, emphasising themes such as responsible consumption, food, waste reduction, sustainable sourcing, and links to agriculture and biodiversity, which aligns with a strategy of transforming food systems and supporting producers and communities. Kaufland Romania, by contrast, places a stronger emphasis on the economic pillar of sustainability, while

also maintaining a substantial focus on environmental action and social/equity commitments. Its leading priorities are Responsible Consumption & Production and Renewable Energy & Energy Efficiency are reflected in initiatives such as food-waste prevention and redistribution, investments in photovoltaic energy and energy-efficiency improvements, and decarbonisation measures. While both companies address fair labour and responsible supply-chain expectations, Carrefour appears comparatively stronger in food-system positioning and sourcing narratives, whereas Kaufland demonstrates a more investment and operations-driven approach, combining economic impact with measurable energy, climate, and compliance mechanisms.

Table 1. Comparative summary

Research question	Carrefour SA (summary)	Kaufland Romania (summary)
<i>RQ1: How are sustainability-oriented practices and innovation-related initiatives in retail distributed across the environmental, social/equity, and economic pillars in corporate sustainability reporting?</i>	Pillar emphasis: Environment (24) > Social/Equity (21) > Economy (18). Reporting profile indicates a comparatively balanced agenda across pillars. Recurring focus areas include sustainable agriculture/food systems, circularity and waste reduction, energy efficiency and renewables, water stewardship, biodiversity, fair labour, health & well-being, and community engagement.	Pillar emphasis (coded references): Economy (27) > Environment (19) > Social/Equity (14). Reporting profile foregrounds operational/economic framing, with environment as the second pillar. High-visibility areas include responsible consumption & production, renewable energy and energy efficiency, climate action, and green technology, complemented by labour and workforce-related themes.
<i>RQ2: How do Carrefour SA and Kaufland Romania differ in how they prioritize and describe these practices/initiatives?</i>	Frames sustainability-oriented practices as food-system and consumer-facing transformation (e.g., sourcing, waste reduction, responsible consumption) It emphasizes systemic change across the value chain and stakeholder outcomes, alongside operational measures. Descriptions tend to integrate environmental and social/equity aims with governance and monitoring language.	Emphasizes investment- and operations-led implementation (e.g., efficiency upgrades, renewables deployment, climate programs) and economic impact framing. Descriptions are more programmatic and metric-oriented, highlighting concrete implementation actions and routines. Strong visibility of compliance and structured initiatives (e.g., codes of conduct, audits, community programs).

Source: Author's own research.

As showed in Table 1, Carrefour frames sustainable innovation primarily around food-system transformation, emphasising responsible consumption, reduced waste, sustainable sourcing, and agriculture/biodiversity, alongside energy-related actions reflected in terms such as environmental, energy, and efficiency in its word cloud. Kaufland Romania, by contrast, shows the strongest emphasis on the economic pillar (27 references), complemented by robust environmental action (19 references) and social commitments (14 references), with leading priorities in Responsible Consumption & Production and Renewable Energy & Energy Efficiency (both 6 references). In practice, this is reflected in Kaufland's measurable investments and programs: renewable energy and efficiency measures, food-waste prevention and redistribution initiatives, and supplier/labor compliance mechanisms.

Conclusion

Innovation in retail is no longer just a driver of competitiveness but a crucial pathway toward sustainability and long-term resilience. The future of retail will be defined by innovation that is

powered by sustainability. Rather than treating sustainable responsibility as an added feature, retailers must see it as the foundation for new business models, technologies, and customer experiences. Sustainable practices create opportunities for innovation. By prioritizing sustainability as the core driver of innovation, the retail industry can secure long-term growth, strengthen consumer loyalty, and contribute meaningfully to global environmental and social goals. Overall, the findings suggest that sustainability-oriented innovation in retail is best understood as a portfolio of initiatives spanning operations, value-chain governance, and stakeholder-facing practices, and that credibility depends on how these initiatives are embedded in routines, responsibilities, and measurable targets.

Taken together, Carrefour and Kaufland illustrate two complementary pathways of sustainable innovation in retail: Carrefour's narrative centers on reshaping the food ecosystem, while Kaufland combines investment-led economic impact with operational decarbonisation, responsible consumption, and fair-labour governance, strengthening resilience and competitiveness through responsibility-driven growth.

Under the right circumstances, the future of retail lies in adopting solutions that reduce environmental impact, foster transparency, and create value for both businesses and society. Ultimately, sustainable innovation is not an option but a necessity for shaping a more adaptive, efficient, and responsible retail landscape. This transformation also requires collaboration across stakeholders: retailers, suppliers, consumers, and policymakers to accelerate the change and ensure that innovation leads not only to competitiveness but also to lasting environmental and social progress.

The limitations of this research are primary on the chosen field of activity, the retail industry, and on the selected criteria using Dow Jones Sustainability Indices Europe from 2024 and Romania CST Index which led to the focus on the two retail companies, Kaufland and Carrefour SA. In addition, the coding criteria represents another limitation.

Based on the findings of the analysis, future research should focus on how sustainable innovation in retail can be scaled and integrated across the entire value chain, from production to consumption, more exactly on how it can be shifted from isolated initiatives to general industry transformation.

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