



Driving the Circular Economy through Green Innovation: A Pathway to Sustainable Competitive Advantage in Fashion

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ABSTRACT

Contemporary organizations face intensifying demands to embed sustainability within their operational frameworks. Many have begun integrating Circular Economy (CE) strategies alongside Green Innovation Practices (GIP) as mechanisms for building enduring competitive advantages. The present study investigates the way environmentally conscious innovation enables organizations to convert circular economy principles and internal capabilities into sustained market differentiation, particularly when confronting external institutional demands. Through qualitative inquiry, the researchers conducted thematic analysis using data drawn from expert interviews and corporate sustainability disclosures. Findings reveal that practices such as eco-design, reverse logistics, renewable energy integration, and closed-loop supply chains contribute to enhanced resource productivity, operational adaptability, and regulatory adherence. Leadership commitment, cross-functional collaboration, and strategic investment in green technologies emerge as critical enablers that amplify CE and GIP outcomes. Institutional forces—including regulatory mandates, ESG-driven investor scrutiny, and consumer expectations for sustainable offerings—shape organizational priorities and innovation trajectories. The study advances sustainability scholarship by proposing a conceptual framework that synthesizes CE, GIP, and institutional theory, thereby furnishing practical guidance for executives seeking to reconcile environmental stewardship with competitive imperatives.

KEYWORDS: Circular Economy Strategies, Green Innovation Practices, Sustainable Competitive Advantage, Organizational Capabilities, Institutional Pressures, Thematic Analysis, Eco-Design, Reverse Logistics, Sustainability, ESG.

INTRODUCTION

The global fashion industry stands among the most visible yet environmentally burdensome sectors worldwide. Its conventional operating model—characterized by accelerated production schedules, mass-scale consumption patterns, and extensive resource extraction—has generated substantial ecological damage. This linear “take-make-dispose” paradigm proves increasingly untenable given escalating concerns over climate disruption, ecosystem degradation, and mounting waste volumes. Consequently, industry stakeholders and regulatory authorities have begun advocating for systemic shifts toward Circular Economy (CE) frameworks that prioritize resource conservation, waste

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reduction, and product longevity through strategies encompassing reuse, recycling, and redesign.¹

Green Innovation Practices (GIP) serve as essential vehicles for operationalizing CE objectives. These practices span eco-design methodologies, sustainable material sourcing, renewable energy adoption, reverse logistics systems, and closed-loop supply chain configurations. When organizations strategically align GIP with CE principles, they transcend mere regulatory compliance, transforming environmental responsibility into a source of competitive differentiation. Such integration addresses rising consumer preferences for ethically produced goods while simultaneously enhancing organizational resilience against regulatory shifts, market volatility, and supply chain disruptions.²

The fashion sector offers a particularly compelling context for examining these transformations. Its high public visibility, cultural influence, and complex global supply networks make it an ideal domain for studying sustainability-driven innovation. As environmental performance becomes a key competitive differentiator, fashion companies find themselves compelled to embed green innovation throughout their value propositions to capture first-mover advantages, strengthen brand equity, and satisfy evolving regulatory standards. The present research examines relationships among Circular Economy strategies, Green Innovation Practices, Organizational Capabilities, and External Institutional Pressures in generating Sustainable Competitive Advantage within fashion industry contexts.³

The study's theoretical foundation integrates Dynamic Capabilities Theory, the Natural Resource-Based View, and Institutional Theory. Dynamic Capabilities Theory posits that organizations achieve competitive advantage by sensing opportunities, seizing resources, and reconfiguring assets to adapt to changing environments.⁴ The Natural Resource-Based View extends this perspective by emphasizing environmental stewardship as a strategic resource that can generate competitive benefits.⁵ Institutional Theory complements these frameworks by highlighting how external pressures—regulatory requirements, normative expectations, and cognitive legitimacy—shape organizational behaviors and innovation adoption patterns.⁶

Despite growing scholarly attention to sustainability in fashion, existing research exhibits notable gaps. First, limited empirical work examines how CE strategies and GIP jointly influence competitive outcomes. Second, insufficient attention has been paid to the mediating role of organizational capabilities in translating green initiatives into performance advantages. Third, the moderating effects of institutional pressures on these relationships remain underexplored. The current study addresses these gaps through qualitative investigation combining expert interviews with analysis of corporate sustainability reports.

The research poses the following questions:

1. How do CE strategies and GIP contribute to sustainable competitive advantage in fashion?
2. What organizational capabilities mediate this relationship?
3. How do institutional pressures moderate the effectiveness of CE and GIP initiatives?

By addressing these questions, the study aims to provide theoretical insights and practical recommendations for fashion industry practitioners navigating sustainability transitions.

Distinctive Contribution of this Study

This study makes three primary contributions to existing CE, GIP, and sustainable fashion literature:

First, we develop and empirically ground an integrated conceptual framework that explicitly connects Circular Economy strategies and Green Innovation Practices with sustainable competitive advantage through the mediating role of organizational capabilities (dynamic capabilities, operational capabilities, and innovation capabilities) and the moderating influence of institutional pressures (regulatory, normative, and cognitive). While prior research has examined these elements separately, our framework synthesizes them into a coherent model that reveals the specific mechanisms through which fashion firms can transform environmental initiatives into market differentiation.

Second, we extend the Natural Resource-Based View (NRBV) and Dynamic Capabilities perspective by identifying the capability configurations that enable fashion organizations to successfully implement CE and GIP. Our findings detail how leadership commitment, cross-functional collaboration, and strategic technology investments interact to amplify the competitive benefits of circular and green practices—insights that prior studies have not systematically articulated in the fashion context.

Third, we provide empirical evidence from the fashion industry that illuminates how institutional pressures shape the CE-GIP-advantage relationship. By demonstrating that regulatory mandates, ESG investor expectations, and consumer demands for sustainability not only drive adoption but also influence the effectiveness of circular and green strategies, we advance institutional theory's application to sustainable business model innovation in environmentally intensive sectors.

LITERATURE REVIEW

Circular Economy in Fashion

The fashion industry's environmental footprint has prompted urgent calls for systemic transformation. Traditional linear production models generate massive waste streams, with estimates suggesting that textile waste exceeds 92 million tons annually.⁷ Water consumption, chemical pollution, and carbon emissions further compound the sector's environmental burden. These challenges have catalyzed interest in circular economy principles as alternative organizing logics.

Circular economy thinking in fashion emphasizes designing out waste, keeping materials in use, and regenerating natural systems. Several operational models have emerged: product-as-service platforms that retain ownership while leasing garments; resale and rental marketplaces extending product lifecycles; recycling initiatives transforming textile waste into new fibers; and upcycling programs

converting discarded materials into higher-value products.⁸ Each model requires distinct capabilities and infrastructure investments.

Research by Geissdoerfer et al.⁹ identifies three core CE principles applicable to fashion: narrowing resource loops through efficiency improvements, slowing resource loops by extending product lifespans, and closing resource loops via recycling and regeneration. Implementation challenges include technological limitations in textile recycling, consumer behavioral barriers to circular consumption, and supply chain complexity spanning multiple geographies and tiers. Despite these obstacles, pioneering fashion brands have demonstrated CE viability through innovative business models and collaborative partnerships.

Green Innovation Practices

Green innovation encompasses processes, products, and organizational practices that reduce environmental impact relative to conventional alternatives. Within fashion contexts, GIP manifests across multiple dimensions. Eco-design involves selecting sustainable materials, minimizing resource inputs, and designing for disassembly and recyclability. Sustainable sourcing emphasizes organic fibers, recycled materials, and supply chain transparency. Renewable energy adoption reduces operational carbon footprints. Reverse logistics systems enable product returns, refurbishment, and material recovery. Digital technologies facilitate supply chain visibility and demand forecasting, reducing overproduction and waste.³

Empirical evidence links GIP to multiple organizational benefits. LiHong et al.¹⁰ demonstrate that green innovation enhances perceived value among environmentally conscious consumers, strengthening purchase intentions. Turan et al.² show that GIP drives operational efficiency through resource optimization and waste reduction. Additionally, green innovation can enhance brand reputation, attract sustainability-oriented investors, and improve employee engagement.¹¹

However, GIP implementation faces significant barriers. High upfront costs, technological uncertainties, and organizational inertia often impede adoption. Small and medium enterprises particularly struggle with resource constraints and knowledge gaps. Successful implementation requires leadership commitment, employee training, supplier collaboration, and supportive organizational cultures.¹² These findings underscore the importance of organizational capabilities in translating GIP investments into tangible outcomes.

Organizational Capabilities and Competitive Advantage

Organizational capabilities represent the collective skills, routines, and resources that enable firms to coordinate activities and deploy assets effectively.⁴ In sustainability contexts, relevant capabilities include environmental sensing (identifying ecological risks and opportunities), green innovation capacity (developing and implementing sustainable solutions), supply chain coordination (managing complex multi-tier networks), and stakeholder engagement (building relationships with regulators, investors, NGOs, and consumers).

Dynamic capabilities theory suggests that competitive advantage stems not from static resource positions but from organizations'

abilities to sense, seize, and reconfigure resources in response to environmental changes.⁴ Fashion companies operating in rapidly evolving sustainability landscapes must continuously adapt their capabilities. Those that successfully integrate CE and GIP into core competencies can achieve differentiation advantages, cost efficiencies, and enhanced legitimacy.

The Natural Resource-Based View (NRBV) extends traditional resource-based logic by positioning environmental stewardship as a strategic resource.⁵ Hart identifies three interconnected strategies: pollution prevention (minimizing emissions and waste), product stewardship (managing lifecycle environmental impacts), and sustainable development (envisioning and implementing regenerative business models). Organizations pursuing these strategies develop distinctive capabilities that competitors find difficult to imitate, creating sustained competitive advantages.

Empirical research supports these theoretical propositions. Studies show that environmental capabilities correlate positively with financial performance, innovation outcomes, and market valuation.³ However, capability development requires sustained investment, experimentation, and learning. Organizations must balance exploitation of existing capabilities with exploration of new competencies—a tension particularly acute in sustainability transitions requiring fundamental business model changes.

Institutional Pressures and Organizational Response

Institutional theory examines how external pressures shape organizational structures, strategies, and practices. DiMaggio and Powell⁶ identify three isomorphic mechanisms: coercive pressures from regulatory mandates and legal requirements, normative pressures from professional standards and industry norms, and mimetic pressures arising from uncertainty that drives organizations to imitate successful peers.

In fashion sustainability contexts, coercive pressures include environmental regulations, extended producer responsibility laws, and disclosure requirements. The European Union's Strategy for Sustainable and Circular Textiles exemplifies regulatory efforts to mandate circular practices. Normative pressures emerge from sustainability certifications, industry coalitions, and professional associations promoting best practices. Mimetic pressures drive fashion brands to adopt visible sustainability initiatives in response to competitors' actions.¹³

Institutional pressures influence organizational responses in complex ways. Some organizations engage in substantive adoption, genuinely integrating sustainability into strategy and operations. Others pursue symbolic compliance, implementing visible initiatives with limited operational impact—a phenomenon termed "greenwashing." Organizational characteristics, including size, resources, leadership values, and stakeholder dependencies, mediate these responses.¹³

Recent research highlights the growing importance of ESG (Environmental, Social, Governance) frameworks in shaping institutional pressures. Investors increasingly incorporate ESG criteria into capital allocation decisions, creating financial incentives

for sustainability performance. Consumer activism and social media amplification have heightened reputational risks associated with environmental controversies. These developments intensify institutional pressures while creating opportunities for organizations that authentically embrace sustainability.¹⁴

Sustainable Competitive Advantage

Competitive advantage traditionally refers to superior performance relative to industry rivals, manifested through higher profitability, market share, or growth rates. Sustainable competitive advantage extends this concept temporally, denoting advantages that persist over extended periods despite competitive imitation efforts. In sustainability contexts, the term acquires additional meaning: advantages derived from environmental and social performance that simultaneously benefit organizations and broader stakeholder communities.

Fashion companies can pursue multiple pathways to sustainability-based competitive advantage. Differentiation strategies emphasize unique environmental attributes—organic materials, carbon-neutral production, circular business models—that command price premiums or enhance brand loyalty. Cost leadership strategies focus on eco-efficiency improvements that reduce input costs, waste expenses, and regulatory compliance burdens. Hybrid strategies combine differentiation and cost advantages through innovations that simultaneously enhance environmental performance and operational efficiency.⁸

Achieving sustainable competitive advantage through CE and GIP requires alignment across multiple organizational levels. Strategic alignment ensures that sustainability objectives integrate with overall business strategy rather than existing as peripheral CSR initiatives. Operational alignment embeds green practices into daily routines, performance metrics, and employee incentives. Cultural alignment fosters shared values and collective commitment to environmental goals. External alignment builds collaborative relationships with suppliers, customers, and other stakeholders.³

The “Rainbow Economy Model” proposed by Shankar Subramanian Iyer et al.¹⁵ offers a holistic framework for understanding circular economy transitions. This model emphasizes interconnections among environmental, social, and economic dimensions, arguing that sustainable competitive advantage emerges from integrated approaches rather than isolated initiatives. The framework highlights the importance of systemic thinking, stakeholder collaboration, and long-term orientation in navigating sustainability transitions.

Research Gaps and Study Contribution

While existing literature provides valuable insights into CE, GIP, organizational capabilities, and institutional pressures, several gaps warrant attention. First, most research examines these elements in isolation rather than investigating their interactive effects. Second, limited qualitative research explores managerial perspectives and organizational processes underlying sustainability transitions. Third, insufficient attention has been paid to fashion industry contexts, despite the sector’s significance and unique characteristics.

The present study addresses these gaps by examining how

CE strategies and GIP jointly influence sustainable competitive advantage, how organizational capabilities mediate these relationships, and how institutional pressures moderate effectiveness. By employing qualitative methods combining expert interviews and document analysis, the research provides rich contextual insights complementing existing quantitative studies. The fashion industry focus offers practical relevance while contributing to sector-specific knowledge.

Conceptual Framework

Figure 1 below presents our integrated conceptual framework, which synthesizes the key constructs examined in this study. The framework positions Circular Economy (CE) strategies and Green Innovation Practices (GIP) as foundational antecedents that drive sustainable competitive advantage. This relationship is mediated by three types of organizational capabilities: dynamic capabilities (sensing and seizing opportunities, reconfiguring resources), operational capabilities (efficiency in executing circular and green practices), and innovation capabilities (developing novel sustainable solutions). Additionally, institutional pressures—comprising regulatory mandates, normative expectations, and cognitive legitimacy demands—serve as contextual factors that both drive the adoption of CE and GIP and moderate their effectiveness in generating competitive advantage.

This framework guides our empirical investigation by highlighting the pathways through which fashion firms can transform circular and green initiatives into enduring market advantages.

RESEARCH METHODOLOGY

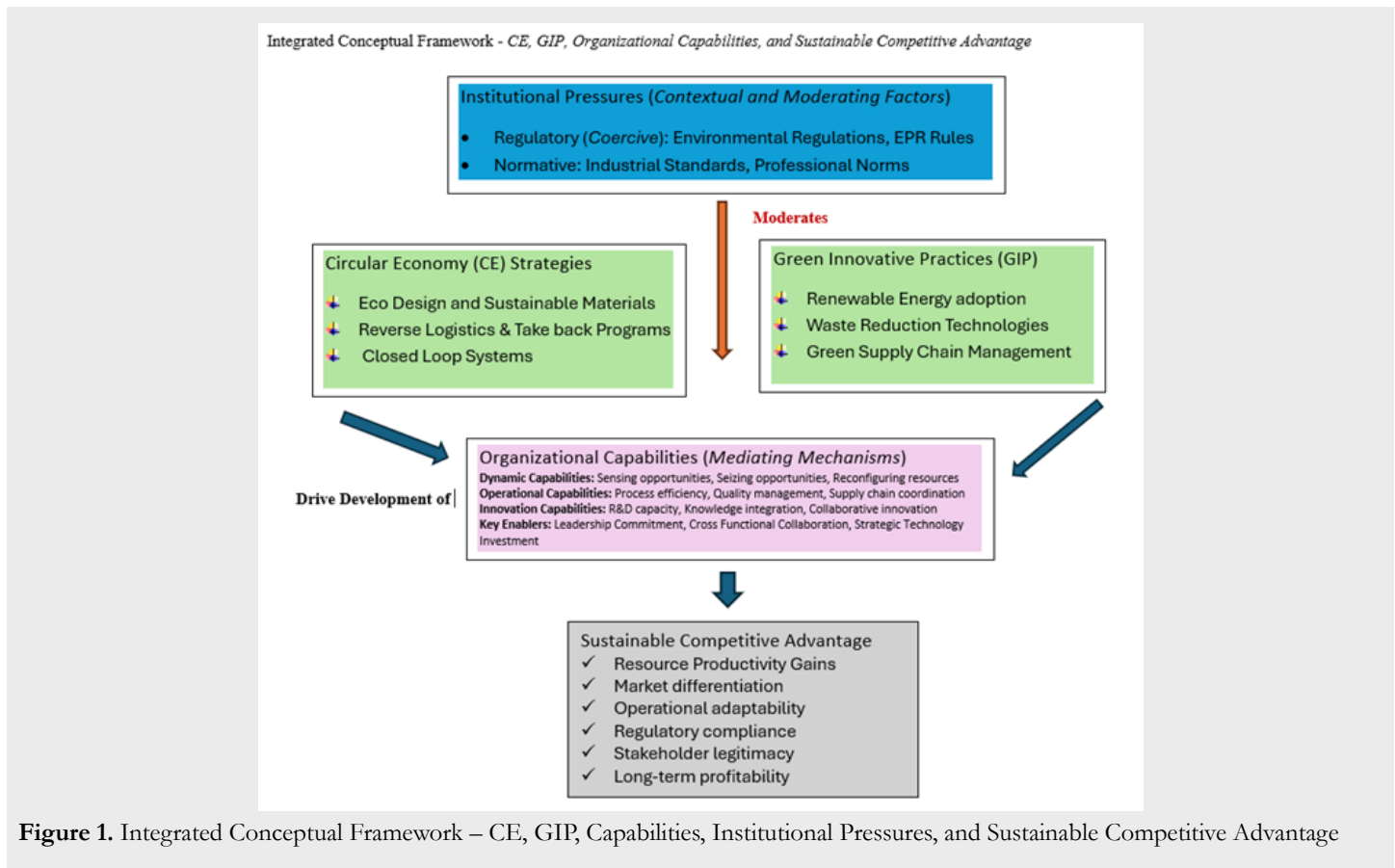
Research Design and Philosophical Orientation

The study adopts an interpretivist philosophical stance, recognizing that organizational phenomena are socially constructed and context dependent. This orientation aligns with the research objectives, which seek to understand how fashion industry practitioners interpret and respond to sustainability challenges. Qualitative methodology enables exploration of complex, multifaceted phenomena while capturing nuanced perspectives that quantitative approaches might overlook.

The research employs a multi-method qualitative design combining semi-structured expert interviews with thematic analysis of corporate sustainability reports. This triangulation approach enhances validity by cross-referencing data sources and analytical perspectives. Interview data provide depth and contextual richness, revealing managerial reasoning and organizational processes. Document analysis offers complementary insights into formal strategies, disclosed practices, and public commitments.

Sampling Strategy and Participant Selection

Purposive sampling guided participant selection to ensure inclusion of individuals with relevant expertise and experience. The researchers sought participants meeting the following criteria: (1) senior management roles in fashion companies or sustainability consulting firms; (2) direct involvement in CE or GIP initiatives; (3) minimum five years of industry experience; (4) willingness to discuss organizational practices candidly.



The final sample comprised 18 participants representing diverse organizational contexts. This included executives from established fashion brands ($n=7$), emerging sustainable fashion startups ($n=4$), sustainability consultants ($n=4$), and industry association representatives ($n=3$). Geographic diversity spanned Europe, North America, and Asia, reflecting the fashion industry's global character. Organizational sizes ranged from small enterprises (fewer than 50 employees) to multinational corporations (over 10,000 employees).

Sample size determination followed principles of theoretical saturation, wherein data collection continued until new interviews yielded diminishing incremental insights. The researchers conducted 18 interviews over four months, at which point thematic patterns had stabilized and additional data provided primarily confirmatory rather than novel information.

Data Collection Procedures

Semi-structured interviews served as the primary data collection method. The researchers developed an interview protocol organized around four thematic domains: (1) CE strategies and GIP implementation; (2) organizational capabilities supporting sustainability initiatives; (3) institutional pressures influencing sustainability adoption; (4) perceived competitive advantages derived from environmental performance.

Each interview lasted 60-90 minutes and was conducted via video conference to accommodate participants' geographic dispersion. Interviews were audio-recorded with participants' consent and

transcribed verbatim. The researchers employed active listening techniques, probing responses to elicit detailed explanations and concrete examples. Interview protocols remained flexible, allowing participants to emphasize issues they considered most salient while ensuring coverage of core research themes.

Concurrent with interviews, the researchers collected and analyzed sustainability reports from 25 fashion companies. Report selection prioritized organizations recognized for sustainability leadership, as indicated by inclusion in sustainability indices, industry awards, or third-party certifications. Reports spanned publication years 2020-2024, capturing recent developments in CE and GIP adoption.

Interview protocols were designed to elicit detailed accounts of:

- Specific CE strategies and GIP implemented
- Organizational capabilities developed to support these initiatives
- Institutional pressures encountered and organizational responses
- Perceived impacts on competitive positioning and performance

Interviews ranged from 45 to 90 minutes, were conducted via video conferencing platforms, and were audio-recorded with participant consent. All participants were assured of confidentiality and anonymity.

Table 1. Interview Participant Overview

Participant ID	Role/Position	Organization Type	Region	Approx. Size
P1	Sustainability Director	Large Multinational	Europe	>10,000 employees
P2	Operations Manager	Medium Enterprise	North America	500-1,000 employees
P3	Chief Innovation Officer	Large Multinational	Asia	>10,000 employees
P4	Supply Chain Manager	Medium Enterprise	Europe	250-500 employees
P5	Founder/CEO	Startup	North America	<50 employees
P6	Environmental Manager	Large Multinational	North America	>10,000 employees
P7	Product Development Lead	Medium Enterprise	Asia	500-1,000 employees
P8	Circular Economy Manager	Large Multinational	Europe	>10,000 employees
P9	Sustainability Consultant	Advisory Firm	Europe	N/A (consulting)
P10	CSR Director	Large Multinational	Asia	>10,000 employees
P11	Innovation Manager	Medium Enterprise	North America	250-500 employees
P12	Operations Director	Large Multinational	Europe	>10,000 employees
P13	Founder/CEO	Startup	Europe	<50 employees
P14	Sustainability Manager	Medium Enterprise	Asia	500-1,000 employees
P15	Strategic Planning Director	Large Multinational	North America	>10,000 employees
P16	Supply Chain Sustainability Lead	Large Multinational	Europe	>10,000 employees
P17	Green Innovation Specialist	Medium Enterprise	Asia	250-500 employees
P18	Founder/CEO	Startup	North America	<50 employees

Corporate Sustainability Reports

To triangulate interview data and capture formal organizational disclosures, the research team analyzed 25 publicly available sustainability reports from fashion companies recognized as industry leaders in environmental performance. These documents were selected based on criteria including:

- Recognition by sustainability rating organizations (e.g., Dow Jones Sustainability Index, CDP Fashion)
- Membership in industry sustainability coalitions
- Public commitment to science-based targets or circular economy principles

Sustainability Reports Overview Table

Reports provided insights into:

- Formally articulated CE and GIP strategies
- Quantitative performance indicators (e.g., waste diversion rates, renewable energy adoption)
- Stakeholder engagement approaches
- Responses to regulatory and market pressures

Data Analysis Approach

Thematic analysis followed Braun and Clarke’s¹⁶ six-phase framework: familiarization, initial coding, theme identification, theme review, theme definition, and report production. Analysis proceeded iteratively, with researchers moving recursively between phases as understanding deepened.

Table 2. Corporate Sustainability Reports Overview

Report ID	Company Type	Region	Sustainability Recognition	Publication Year
R1	Large Multinational	Europe	DJSI Leader, CDP A-List	2023
R2	Large Multinational	North America	B Corp Certified	2023
R3	Large Multinational	Asia	CDP Fashion Leader	2023
R4	Medium Enterprise	Europe	Sustainable Apparel Coalition	2023
R5	Large Multinational	Europe	DJSI Leader, SBTi Committed	2022
R6	Large Multinational	North America	CDP A-List, Fashion Pact	2023
R7	Medium Enterprise	Asia	B Corp Certified	2022
R8	Large Multinational	Europe	DJSI Leader, Ellen MacArthur Network	2023

Report ID	Company Type	Region	Sustainability Recognition	Publication Year
R9	Large Multinational	North America	CDP Fashion Leader, SBTi	2023
R10	Large Multinational	Asia	Sustainable Apparel Coalition	2022
R11	Medium Enterprise	Europe	B Corp Certified, Fashion Pact	2023
R12	Large Multinational	Europe	DJSI Leader, CDP A-List	2022
R13	Large Multinational	North America	Ellen MacArthur Network	2023
R14	Medium Enterprise	Asia	CDP Fashion Leader	2022
R15	Large Multinational	Europe	SBTi Committed, Fashion Pact	2023
R16	Large Multinational	North America	DJSI Leader	2023
R17	Large Multinational	Asia	B Corp Certified, CDP A-List	2022
R18	Medium Enterprise	Europe	Sustainable Apparel Coalition	2023
R19	Large Multinational	Europe	Ellen MacArthur Network, SBTi	2023
R20	Large Multinational	North America	CDP Fashion Leader, Fashion Pact	2022
R21	Medium Enterprise	Asia	B Corp Certified	2023
R22	Large Multinational	Europe	DJSI Leader, CDP A-List	2023
R23	Large Multinational	North America	Sustainable Apparel Coalition, SBTi	2022
R24	Large Multinational	Asia	Fashion Pact, Ellen MacArthur Network	2023
R25	Medium Enterprise	Europe	CDP Fashion Leader	2023

Note: DJSI = Dow Jones Sustainability Index; CDP = Carbon Disclosure Project; SBTi = Science Based Targets initiative

Familiarization involved repeated reading of interview transcripts and sustainability reports to develop holistic understanding. Initial coding employed both deductive and inductive approaches. Deductive codes derived from theoretical frameworks (e.g., dynamic capabilities, institutional pressures) while inductive codes emerged from data patterns. The researchers used NVivo software to organize codes and facilitate pattern identification.

Theme identification involved grouping related codes into broader thematic categories. The researchers examined relationships among themes, distinguishing between overarching themes, sub-themes, and illustrative examples. Theme review assessed internal coherence (whether coded data within themes cohered meaningfully) and external distinctiveness (whether themes exhibited clear boundaries).

Theme definition involved refining thematic labels and articulating each theme's essence. The researchers developed detailed descriptions of themes, identifying typical characteristics and boundary conditions. Report production synthesized findings into coherent narrative, integrating illustrative quotations and document excerpts to support analytical claims.

Validity and Reliability Considerations

Several strategies enhanced research validity and reliability. Triangulation across data sources (interviews and documents) and analytical perspectives (multiple researchers) strengthened credibility. Member checking involved sharing preliminary findings with selected participants to verify interpretations' accuracy. Peer debriefing sessions with academic colleagues provided external scrutiny of analytical decisions.

The researchers maintained reflexive journals documenting analytical choices, emerging insights, and potential biases. This reflexivity supported transparency regarding how researchers' backgrounds and perspectives influenced interpretation. Detailed documentation of sampling, data collection, and analysis procedures enhances dependability, enabling other researchers to assess methodological rigor.

Transferability was addressed through thick description, providing sufficient contextual detail to enable readers to assess findings' applicability to other settings. While qualitative research does not aim for statistical generalization, the study's conceptual insights may transfer to similar organizational contexts facing sustainability transitions.

Enhanced Methodological Transparency

Data analysis followed the six-phase thematic analysis framework proposed by Braun and Clarke (2006),¹⁶ which is well-established in qualitative research for identifying, analyzing, and reporting patterns within data.

Phase 1: Familiarization All interview recordings were transcribed verbatim by a professional transcription service, then verified for accuracy by the research team. Researchers immersed themselves in the data through repeated reading of transcripts and sustainability reports, noting initial observations and potential patterns.

Phase 2: Initial Coding Two researchers independently conducted line-by-line coding of the entire dataset using NVivo 12 qualitative data analysis software. This initial coding was inductive, allowing codes to emerge from the data rather than imposing predetermined

categories. Examples of initial codes included “leadership commitment to sustainability,” “reverse logistics implementation challenges,” “regulatory compliance drivers,” and “cross-functional collaboration mechanisms.”

Inter-coder Reliability: To ensure coding consistency and rigor, the two researchers independently coded a subset of five interview transcripts (approximately 28% of the interview dataset). They then met to compare their coding, discuss discrepancies, and refine code definitions. Cohen’s Kappa was calculated at 0.82, indicating substantial inter-coder agreement. Following this reliability check, the researchers jointly developed a preliminary codebook with clear definitions and inclusion/exclusion criteria for each code.

Phase 3: Theme Identification The research team collaboratively reviewed all codes to identify patterns and group related codes into potential themes. This process involved creating visual maps (using NVivo’s visualization tools and manual concept mapping) to explore relationships between codes and consider how they might combine to form overarching themes. For example, codes related to “eco-design adoption,” “sustainable material sourcing,” and “product lifecycle extension” were grouped under the broader theme of “Circular Economy Strategies.”

Phase 4: Theme Review and Refinement Candidate themes were systematically reviewed against the coded data extracts and the entire dataset to ensure internal homogeneity (coherence within themes) and external heterogeneity (clear distinctions between themes). Some themes were merged (e.g., “operational efficiency” and “process optimization” were combined), while others were

split into sub-themes to capture nuanced distinctions. This iterative process continued until the research team reached consensus that the thematic structure accurately represented the data.

Phase 5: Theme Definition and Naming Each final theme was clearly defined, and its scope was delineated. The research team developed detailed descriptions of what each theme captured and how it related to the research questions. Theme names were refined to be concise yet descriptive (e.g., “Institutional Pressures as Catalysts and Constraints,” “Capability Development as a Mediating Mechanism”).

Phase 6: Report Production The final phase involved selecting compelling data extracts (quotations from interviews and excerpts from sustainability reports) that vividly illustrated each theme. These extracts were woven into a coherent analytical narrative that addressed the research questions and connected findings to existing literature.

Triangulation: To enhance credibility, the study employed methodological triangulation by comparing insights from interviews with information from sustainability reports. Convergence between these data sources strengthened confidence in findings, while divergences prompted deeper investigation into potential explanations (e.g., differences between espoused strategies in reports versus implemented practices described in interviews).

Reflexivity: Throughout the analysis, researchers maintained reflexive memos documenting their interpretive decisions, assumptions, and potential biases. Regular team debriefing sessions provided opportunities to challenge interpretations and consider alternative explanations.

Thematic Map/Coding Structure

Table 3. Thematic Structure – From Initial Codes to Final Themes

Final Theme	Sub-themes	Representative Initial Codes	Data Sources
Circular Economy Strategies in Fashion	• Eco-design and sustainable materials	• Sustainable material sourcing	Interviews (P1, P3, P5, P8, P13, P16)
	• Reverse logistics and take-back programs	• Design for disassembly	
	• Closed-loop systems	• Textile recycling infrastructure	
	• Product longevity and repairability	• Take-back program implementation	
Green Innovation Practices		• Garment rental models	Reports (R1, R5, R8, R12, R19, R22)
		• Durability testing	
	• Renewable energy adoption	• Solar/wind energy installation	
	• Waste reduction technologies	• Waterless dyeing technology	Interviews (P2, P6, P7, P11, P14, P17)
	• Green supply chain management	• Waste-to-energy systems	
	• Digital innovation for sustainability	• Blockchain for traceability	
		• Supplier sustainability audits	
		• Carbon footprint tracking	Reports (R2, R6, R9, R13, R20, R23)

Final Theme	Sub-themes	Representative Initial Codes	Data Sources
Organizational Capabilities as Enablers	<ul style="list-style-type: none">• Dynamic capabilities• Operational capabilities• Innovation capabilities• Collaboration capabilities	<ul style="list-style-type: none">• Leadership commitment• Cross-functional teams• R&D investment in green tech• Supply chain partnerships• Knowledge management systems• Continuous improvement culture	Interviews (P1, P4, P6, P10, P12, P15)
	<ul style="list-style-type: none">• Regulatory (coercive) pressures• Normative pressures• Cognitive (mimetic) pressures	<ul style="list-style-type: none">• EPR legislation compliance• ESG investor expectations• Consumer demand for sustainability	Reports (R3, R7, R11, R15, R18, R24)
Institutional Pressures		<ul style="list-style-type: none">• Industry coalition participation• Competitor benchmarking• NGO advocacy influence	Reports (R4, R8, R10, R14, R17, R21, R25)
	<ul style="list-style-type: none">• Resource productivity gains• Market differentiation• Operational resilience• Stakeholder legitimacy	<ul style="list-style-type: none">• Cost savings from efficiency• Brand reputation enhancement• Premium pricing for eco-products• Regulatory compliance benefits• Risk mitigation• Long-term profitability	Interviews (P2, P4, P7, P8, P11, P12, P15, P18)
Pathways to Sustainable Competitive Advantage			Reports (R1, R5, R6, R9, R12, R16, R19, R22, R23)

This thematic structure emerged through iterative coding and theme refinement, ensuring that final themes were grounded in the data while addressing the study’s research questions.

Ethical Considerations

The research adhered to established ethical principles. Participants provided informed consent after receiving detailed information about study purposes, procedures, and data usage. Confidentiality was ensured through anonymization of identifying information in transcripts and publications. Participants retained the right to withdraw consent and request data deletion at any point.

The researchers obtained institutional ethics approval prior to data collection. Data storage followed security protocols, with encrypted files accessible only to research team members. Upon study completion, data will be retained for the minimum period required by institutional policies before secure deletion.

FINDINGS

The thematic analysis yielded four overarching themes, each comprising multiple sub-themes. These themes illuminate how fashion organizations integrate CE and GIP, the capabilities enabling these initiatives, institutional pressures shaping adoption, and resulting competitive advantages.

Theme 1: Circular Economy Strategies in Fashion

Participants described diverse CE strategies adapted to organizational contexts and market positions. Four distinct approaches emerged from the data.

Product Life Extension Initiatives

Multiple participants emphasized strategies extending garment lifespans as foundational CE practices. One brand executive explained: “Rather than encouraging constant newness, our model centers on durability and timelessness. Higher quality materials and construction mean garments last years rather than seasons.” This approach challenges fast fashion’s planned obsolescence, positioning longevity as a value proposition.

Repair services emerged as important life extension mechanisms. Several brands offer free or subsidized repairs, with one participant noting: “When customers can easily repair rather than discard, emotional attachment strengthens. They become invested in the garment’s story.” Take-back programs complement repair services, enabling brands to refurbish and resell used items or repurpose materials.

Rental and Resale Business Models

Rental platforms represent significant CE innovation in fashion. A startup founder described their model: “Customers access designer pieces for specific occasions without ownership burdens. After use, garments return for cleaning and recirculation.” This approach maximizes utilization rates while reducing per-garment environmental impact.

Resale platforms similarly extend product lifecycles. An established brand’s sustainability director explained their resale initiative: “Rather than competing with secondhand markets, we’ve integrated them. Customers can return used items for store credit,

which we resell through dedicated channels.” Such programs capture value from used goods while building customer loyalty.

Material Innovation and Recycling

Technological advances in textile recycling featured prominently in participant accounts. One consultant described emerging capabilities: “Chemical recycling can now break down blended fabrics—previously unrecyclable—into constituent fibers for new production.” However, participants acknowledged scalability challenges and cost barriers limiting widespread adoption.

Bio-based materials represent another innovation avenue. Multiple participants discussed experimenting with materials derived from agricultural waste, algae, or mycelium. A designer noted: “These materials offer comparable performance to conventional textiles while dramatically reducing environmental footprints.” Yet concerns about supply reliability and performance consistency temper enthusiasm.

Closed-Loop Supply Chain Development

Several participants described efforts to create closed-loop systems where production waste and end-of-life products become inputs for new manufacturing. One operations manager explained: “We’ve partnered with recyclers to ensure cutting room scraps and customer returns feed back into our supply chain.” Such systems require coordination across supply chain tiers and investment in reverse logistics infrastructure.

Document analysis confirmed these strategies’ prevalence. Sustainability reports frequently highlighted life extension programs, rental/resale initiatives, material innovations, and closed-loop ambitions. However, reports often provided limited detail on implementation challenges or quantitative impact assessments.

Theme 2: Green Innovation Practices

Participants described GIP spanning design, production, distribution, and end-of-life phases. Four sub-themes captured the breadth of green innovation efforts.

Eco-Design Principles

Eco-design emerged as a foundational GIP. Participants described designing for durability, reparability, recyclability, and minimal environmental impact. One designer explained their approach: “Every material choice, every construction technique considers environmental consequences. Can this be easily disassembled? Will components remain valuable at end-of-life?”

Design for disassembly received particular emphasis. A product development manager described: “We’ve eliminated mixed-material components that complicate recycling. Buttons, zippers, and labels are now designed for easy removal.” Such practices facilitate material recovery while potentially increasing production costs.

Sustainable Material Sourcing

Material selection represents a critical GIP leverage point. Participants discussed transitioning to organic cotton, recycled polyester, regenerative fibers, and innovative bio-materials. A sourcing

director noted: “Material decisions cascade through the entire value chain, affecting water use, chemical inputs, carbon emissions, and end-of-life options.”

However, sustainable material sourcing faces challenges. Supply constraints, price premiums, and performance trade-offs complicate adoption. One participant observed: “Sustainable materials often cost 20-50% more than conventional alternatives. Brands must either absorb costs or pass them to consumers—neither option is straightforward.”

Renewable Energy and Clean Production

Production phase innovations focus on energy efficiency and renewable energy adoption. Multiple participants described transitioning manufacturing facilities to renewable energy sources. A supply chain manager explained: “We’ve partnered with suppliers to install solar panels at production sites. Some facilities now operate carbon-neutral.”

Water conservation and chemical management also featured prominently. Participants discussed waterless dyeing technologies, closed-loop water systems, and elimination of hazardous chemicals. A technical consultant noted: “Production innovations often deliver both environmental and cost benefits through resource efficiency.”

Reverse Logistics and Product Recovery

Reverse logistics systems enable product returns, refurbishment, and material recovery. Participants described infrastructure investments supporting these capabilities. One logistics director explained: “We’ve established collection points in stores and partnerships with shipping providers for customer returns. Processing centers sort items for resale, donation, or recycling.”

Digital technologies facilitate reverse logistics. RFID tags, blockchain systems, and digital product passports enable tracking and authentication. A technology manager described: “Digital systems provide visibility into product locations and conditions, optimizing recovery decisions.”

Theme 3: Organizational Capabilities Enabling Sustainability

Participants identified multiple organizational capabilities essential for successful CE and GIP implementation. Four capability clusters emerged from the analysis.

Leadership Commitment and Strategic Vision

Leadership emerged as the most frequently cited success factor. Participants emphasized that sustainability initiatives require top management support to secure resources and overcome resistance. One executive stated: “Without CEO-level commitment, sustainability remains peripheral. True integration demands leadership making it a strategic priority.”

Visionary leadership involves articulating compelling sustainability narratives that inspire organizational commitment. A brand director explained: “Our founder’s passion for environmental stewardship permeates company culture. Employees understand sustainability isn’t just policy—it’s core identity.”

Cross-Functional Collaboration

Sustainability initiatives require coordination across traditionally siloed functions. Participants described breaking down barriers between design, sourcing, production, marketing, and logistics. A sustainability manager noted: “CE implementation touches every department. Success requires designers understanding supply chain constraints and operations teams appreciating design intentions.”

Several organizations established dedicated sustainability teams to facilitate collaboration. These teams serve as internal consultants, providing expertise and coordinating cross-functional initiatives. However, participants cautioned against isolating sustainability in separate departments: “Sustainability must be everyone’s responsibility, not just the sustainability team’s.”

Supply Chain Coordination Capabilities

Fashion supply chains’ complexity—often spanning multiple countries and hundreds of suppliers—complicates sustainability implementation. Participants emphasized relationship management capabilities. One sourcing executive explained: “Sustainable transformation requires supplier partnerships, not transactional relationships. We invest in supplier capacity building and long-term commitments.”

Transparency and traceability emerged as critical capabilities. Participants discussed implementing systems to track materials from raw inputs through finished products. A supply chain director noted: “Without visibility into tier-two and tier-three suppliers, verifying sustainability claims becomes impossible.”

Innovation and Learning Capabilities

Sustainability transitions require continuous experimentation and learning. Participants described cultivating cultures that encourage innovation and tolerate failures. A product development manager explained: “Not every sustainable material experiment succeeds. We’ve learned to prototype rapidly, test rigorously, and iterate based on results.”

External partnerships support innovation capabilities. Participants discussed collaborations with technology providers, research institutions, and industry consortia. One consultant observed: “No single organization possesses all necessary expertise. Collaborative innovation accelerates progress while distributing risks.”

Theme 4: Institutional Pressures Shaping Sustainability Adoption

Participants described multiple external pressures influencing sustainability initiatives. Three institutional pressure categories emerged from the data.

Regulatory and Legal Pressures

Regulatory developments increasingly mandate sustainability practices. Participants discussed responding to extended producer responsibility laws, disclosure requirements, and material restrictions. A compliance manager stated: “Regulations are tightening globally. We must anticipate requirements and adapt proactively rather than reactively.”

The European Union’s sustainability initiatives received particular attention. Participants described preparing for upcoming requirements regarding circularity, transparency, and environmental impact disclosure. One executive noted: “EU regulations often set global standards. Even brands not primarily serving European markets monitor these developments.”

Market and Competitive Pressures

Consumer expectations for sustainable products create market pressures. Participants described growing consumer segments prioritizing environmental considerations in purchase decisions. A marketing director observed: “Younger consumers especially expect brands to demonstrate authentic sustainability commitments. Greenwashing risks severe backlash.”

Competitive dynamics also drive adoption. Participants described monitoring competitors’ sustainability initiatives and feeling pressure to match or exceed industry standards. One brand manager explained: “When major competitors announce ambitious sustainability targets, remaining silent becomes untenable. Market expectations shift.”

Investor and Financial Pressures

ESG investing trends create financial incentives for sustainability performance. Participants discussed investor scrutiny of environmental practices and expectations for disclosure. A CFO noted: “Institutional investors now routinely inquire about sustainability strategies, climate risks, and circular economy progress. Performance affects capital access and valuation.”

Some participants described sustainability-linked financing instruments where interest rates or terms depend on achieving sustainability targets. One finance director explained: “Our credit facility includes sustainability performance indicators. Meeting targets reduces borrowing costs, creating direct financial incentives.”

Theme 5: Sustainable Competitive Advantages

Participants identified multiple competitive advantages derived from CE and GIP initiatives. Four advantage types emerged from the analysis.

Differentiation and Brand Enhancement

Sustainability initiatives strengthen brand positioning and customer loyalty. Participants described sustainability as a differentiator in crowded markets. A brand strategist explained: “Authentic sustainability commitments resonate with target consumers, creating emotional connections beyond product attributes.”

Premium positioning often accompanies sustainability differentiation. Several participants noted that sustainable products command price premiums when value propositions are clearly communicated. However, others cautioned that premium pricing risks limiting market reach.

Operational Efficiency and Cost Reduction

Contrary to assumptions that sustainability increases costs, participants described efficiency gains. Resource optimization, waste reduction, and energy efficiency generate cost savings. An operations manager stated: “Our renewable energy investments paid back within

three years through reduced utility costs. Waste reduction similarly improved margins.”

Circular business models can create new revenue streams. Rental, resale, and refurbishment services generate income from assets that would otherwise be discarded. A business development executive noted: “Circular models transform end-of-life products from disposal costs into revenue opportunities.”

Risk Mitigation and Resilience

Sustainability initiatives enhance resilience to regulatory, supply chain, and reputational risks. Participants described proactive compliance reducing regulatory uncertainties. A risk manager explained: “By exceeding current requirements, we’re better positioned for future regulations. This reduces compliance scrambles and potential penalties.”

Supply chain diversification and local sourcing reduce vulnerability to disruptions. One sourcing director noted: “Our shift toward regional suppliers and renewable materials decreased dependence on volatile global commodity markets.”

Innovation Capabilities and Future Readiness

Sustainability initiatives drive innovation capabilities with broader applications. Participants described how sustainability challenges sparked creativity and problem-solving. A product developer observed: “Designing within environmental constraints forces innovation. Solutions developed for sustainability often yield unexpected benefits.”

Organizations building sustainability capabilities position themselves for future market conditions. One executive reflected: “Sustainability isn’t just responding to current pressures—it’s preparing for a future where environmental performance determines market access and competitive viability.”

Potential Biases Discussion

Acknowledging Potential Biases in Institutional Pressure Findings:

It is important to note that our sample predominantly includes sustainability leaders and frontrunner organizations—firms that have already demonstrated commitment to CE and GIP through their participation in industry coalitions, sustainability certifications, and public reporting. This sampling approach, while providing rich insights into best practices, introduces potential biases:

Positive Bias: Sustainability leaders may overemphasize the benefits and understate the challenges of CE and GIP implementation. Their experiences may not fully represent the barriers faced by laggard firms or organizations resistant to sustainable transformation.

Social Desirability Bias: Interview participants, particularly those in sustainability-focused roles, may present their organizations’ initiatives in favorable terms, potentially overstating progress and commitment while downplaying setbacks or greenwashing concerns.

Reporting Bias in Corporate Documents: Sustainability reports, while valuable data sources, represent strategic communications designed to enhance organizational legitimacy. They may reflect

aspirational goals rather than achieved outcomes and may strategically frame sustainability initiatives to manage stakeholder perceptions. The potential for greenwashing—where organizations exaggerate environmental performance or make misleading claims—cannot be entirely discounted.

Limited Representation of Resistant Organizations: Our sample does not adequately capture the perspectives of fashion firms that have been slower to adopt CE and GIP, or those that face greater resource constraints or institutional barriers. The experiences and strategic considerations of these organizations remain underexplored in our data.

The authors attempted to mitigate these biases through triangulation (comparing interview accounts with sustainability report data and seeking convergence), probing follow-up questions during interviews that encouraged participants to discuss challenges and failures, and maintaining reflexive awareness throughout analysis. Nevertheless, readers should interpret our findings as representing the experiences and perspectives of sustainability-oriented organizations rather than the fashion industry. Future research examining a more diverse sample—including laggard firms, small enterprises with limited resources, and organizations in regions with weaker institutional pressures—would provide valuable complementary insights.

Theme 6: Pathways to Sustainable Competitive Advantage

Participants and sustainability reports identified multiple mechanisms through which CE and GIP generate competitive advantage:

Resource Productivity Gains: Organizations reported efficiency improvements and cost savings. An operations manager (P2) stated: “Circular practices have reduced our raw material costs by recovering and reusing materials. Waste reduction initiatives have cut disposal expenses. These aren’t trivial savings—they materially impact our bottom line.”

Market Differentiation: Sustainability-oriented positioning enabled premium pricing and brand loyalty. A marketing executive mentioned in a sustainability report (R6): “Our sustainability commitments resonate with consumers who increasingly align purchasing decisions with values. This allows us to command price premiums and build deeper customer relationships.”

Operational Resilience: Several participants noted that CE and GIP enhanced supply chain resilience. A supply chain manager (P4) explained: “Diversifying material sources to include recycled inputs and developing reverse logistics capabilities has made our supply chain more resilient to disruptions. We’re less dependent on virgin material availability and price volatility.”

Regulatory Compliance and Risk Mitigation: Proactive sustainability strategies positioned organizations favorably relative to evolving regulations. A sustainability director (P8) observed: “By getting ahead of regulations rather than reacting to them, we avoid compliance costs and potential penalties. We also reduce reputational risks associated with environmental controversies.”

Stakeholder Legitimacy: Organizations emphasized enhanced relationships with diverse stakeholders. A CEO (P5) noted: “Our circular business model has opened doors with investors, attracted talent who want to work for purpose-driven companies, and strengthened partnerships with suppliers and NGOs. This social capital is a competitive asset.”

DISCUSSION

Streamlined Discussion to Reduce Repetition and Emphasize Theoretical Implications

The Study findings advance understanding of how fashion organizations leverage Circular Economy strategies and Green Innovation Practices to achieve sustainable competitive advantage. The integrated conceptual framework (Figure 1) synthesizes these relationships, revealing that CE and GIP serve as complementary mechanisms that, when effectively implemented through organizational capabilities and aligned with institutional pressures, generate multiple sources of competitive differentiation. The findings illuminate complex relationships among CE strategies, GIP, organizational capabilities, institutional pressures, and sustainable competitive advantage. This section synthesizes results with theoretical frameworks and existing literature.

Integration of CE and GIP

Results demonstrate that CE and GIP function synergistically rather than independently. Organizations achieving greatest impact integrate circular strategies with green innovation across value chains. This integration aligns with systems thinking perspectives emphasizing holistic approaches to sustainability.¹⁷ Isolated initiatives—such as using recycled materials without addressing product longevity or end-of-life management—yield limited benefits compared to integrated approaches.

The findings extend existing CE literature by revealing implementation nuances. While conceptual frameworks present CE as coherent strategy, practice involves navigating trade-offs, resource constraints, and capability gaps. Organizations adopt diverse CE approaches reflecting market positions, resource endowments, and strategic priorities. This heterogeneity suggests that effective CE implementation requires contextual adaptation rather than standardized blueprints.

Mediating Role of Organizational Capabilities

Organizational capabilities emerge as critical mediators between CE/GIP initiatives and competitive outcomes. This finding supports dynamic capabilities theory’s proposition that competitive advantage stems from organizations’ abilities to deploy and reconfigure resources.⁴ Merely adopting CE strategies or implementing GIP proves insufficient; organizations must develop capabilities to execute effectively.

Four capability clusters—leadership commitment, cross-functional collaboration, supply chain coordination, and innovation capacity—proved particularly salient. These capabilities align with prior research identifying leadership, collaboration, and learning as sustainability enablers.¹² The findings contribute by demonstrating how these capabilities specifically support CE and

GIP implementation in fashion contexts.

The supply chain coordination capability deserves particular emphasis given fashion supply chains’ complexity. Participants’ accounts reveal that achieving transparency and collaboration across multi-tier networks requires substantial relationship management and technological investments. This finding extends supply chain sustainability literature by highlighting coordination challenges specific to fashion industries.

Institutional Pressures as Moderators

Institutional pressures significantly influence CE and GIP effectiveness. Regulatory pressures establish baseline requirements, ensuring minimum standards while potentially leveling competitive playing fields. Market pressures—consumer expectations and competitive dynamics—drive differentiation strategies where organizations exceed regulatory minimums to achieve competitive advantages. Investor pressures create financial incentives aligning sustainability performance with shareholder value.

These findings support institutional theory’s predictions regarding isomorphic pressures⁶ while revealing nuanced organizational responses. Rather than uniform adoption, organizations strategically respond to institutional pressures based on resource availability, stakeholder dependencies, and strategic priorities. Some pursue substantive integration while others engage in symbolic compliance—a distinction with significant implications for competitive outcomes.

The growing prominence of ESG investing represents a notable institutional development. Participants’ accounts reveal how financial market pressures increasingly shape sustainability strategies. This finding extends institutional theory by highlighting capital markets’ role in diffusing sustainability practices—a mechanism receiving limited attention in traditional institutional frameworks.

Pathways to Sustainable Competitive Advantage

The study identifies multiple pathways through which CE and GIP generate sustainable competitive advantage. Differentiation pathways emphasize unique environmental attributes that enhance brand equity and customer loyalty. Cost leadership pathways focus on efficiency gains from resource optimization and waste reduction. Risk mitigation pathways highlight resilience benefits from regulatory compliance and supply chain diversification. Innovation pathways emphasize capabilities developed through sustainability challenges.

These findings align with the Natural Resource-Based View’s proposition that environmental stewardship can generate competitive advantages.⁵ The results extend NRBV by specifying mechanisms linking environmental practices to competitive outcomes in fashion contexts. Importantly, competitive advantages appear most sustainable when organizations integrate multiple pathways rather than pursuing single approaches.

The “sustainable” dimension of competitive advantage acquires dual meaning in these findings. Temporally, advantages prove durable because underlying capabilities—leadership commitment, collaborative networks, innovation capacity—resist imitation. Substantively, advantages derive from environmental and social

performance, aligning organizational success with broader societal interests. This dual sustainability represents a distinctive characteristic of CE/GIP-derived competitive advantages.¹⁸⁻²⁰

Theoretical Contributions

The study makes several theoretical contributions. First, it synthesizes previously disconnected literatures on CE, GIP, dynamic capabilities, and institutional theory into an integrated framework. This synthesis reveals complementarities among theoretical perspectives, demonstrating how each illuminates different aspects of sustainability transitions.

Second, the research advances understanding of capability development in sustainability contexts. While prior work identifies relevant capabilities, this study reveals how capabilities emerge through practice, experimentation, and learning. The findings suggest that capability development follows non-linear trajectories involving setbacks, adaptations, and breakthroughs.

Third, the study contributes to institutional theory by examining how multiple institutional pressures interact. Rather than treating regulatory, normative, and mimetic pressures independently, the findings reveal complex interactions where pressures reinforce, conflict, or create implementation dilemmas. Organizations navigate these pressures strategically, sometimes leveraging certain pressures to justify initiatives while managing others.

Fourth, the research extends sustainable competitive advantage theory by specifying conditions under which environmental initiatives generate competitive benefits. The findings suggest that competitive advantages emerge when organizations develop difficult-to-imitate capabilities, achieve genuine differentiation, realize operational efficiencies, and align with institutional expectations.

Practical Implications

The findings offer several practical implications for fashion industry practitioners. First, successful CE and GIP implementation requires senior leadership commitment and strategic integration rather than peripheral CSR initiatives. Organizations should embed sustainability within core strategy, resource allocation, and performance management systems.

Second, cross-functional collaboration proves essential. Organizations should break down silos between design, sourcing, production, marketing, and logistics functions. Dedicated sustainability teams can facilitate coordination while ensuring sustainability remains everyone's responsibility.

Third, supply chain partnerships require investment. Organizations should transition from transactional supplier relationships to collaborative partnerships involving capacity building, knowledge sharing, and long-term commitments. Transparency and traceability systems enable verification of sustainability claims while identifying improvement opportunities.

Fourth, organizations should view sustainability as innovation opportunity rather than compliance burden. Sustainability challenges can spark creativity, drive process improvements, and open new market opportunities. Cultivating cultures that encourage

experimentation and tolerate failures supports innovation.

Fifth, organizations should strategically respond to institutional pressures. Rather than reactive compliance, proactive engagement with regulators, investors, and stakeholders can shape expectations while building legitimacy. Authentic commitment proves more effective than symbolic gestures, particularly given stakeholder sophistication in detecting greenwashing.

LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

This study has several limitations that suggest directions for future research:

Sample Composition and Potential Biases: As noted in the Findings section, our sample predominantly comprises sustainability leaders and frontrunner organizations. This introduces several potential biases:

Positive Selection Bias: Firms that have successfully implemented CE and GIP are more likely to participate in research and publish sustainability reports, potentially leading to an overly optimistic portrayal of sustainability's competitive benefits. Organizations that have struggled with or abandoned sustainability initiatives are underrepresented.

Greenwashing and Strategic Framing: Corporate sustainability reports, while valuable data sources, may reflect strategic communications designed to enhance organizational legitimacy rather than objective accounts of environmental performance. Despite our triangulation efforts, we cannot entirely rule out that some reported initiatives represent aspirational goals or greenwashing rather than substantive practices.

Limited Generalizability: The experiences of sustainability leaders may not generalize to laggard firms, resource-constrained SMEs, or organizations operating in institutional contexts with weaker environmental pressures. Future research should explicitly examine barriers and challenges faced by non-leader firms, exploring why some organizations resist or struggle with CE and GIP adoption despite competitive pressures.

Several limitations warrant acknowledgment. First, the study's qualitative design prioritizes depth over breadth, limiting statistical generalization. Future research could employ quantitative methods to test relationships across larger samples. Second, the research focuses on fashion industry contexts, potentially limiting transferability to other sectors. Comparative studies across industries could reveal sector-specific versus universal patterns. Third, the study captures perspectives of sustainability leaders—organizations and individuals at the forefront of CE and GIP adoption. This sampling approach provides insights into best practices but may not represent typical industry experiences. Future research should examine barriers and challenges among laggard organizations. Fourth, the cross-sectional design captures practices at a specific point in time. Longitudinal research tracking organizations' sustainability journeys over extended periods could reveal evolutionary patterns, capability development trajectories, and long-term competitive outcomes.

Several promising research directions emerge from these limitations. First, examining CE and GIP effectiveness across organizational sizes, market positions, and geographic contexts would enhance understanding of contextual contingencies. Second, investigating consumer responses to circular business models could clarify market viability and scaling potential. Third, exploring financial performance implications of CE and GIP investments would address persistent questions about business cases for sustainability.

Fourth, examining failed sustainability initiatives could provide valuable insights. Most research focuses on successes, creating potential selection bias. Understanding why initiatives fail—whether due to capability gaps, resource constraints, stakeholder resistance, or implementation challenges—would inform more realistic implementation guidance.

Fifth, investigating emerging technologies' roles in enabling CE and GIP warrants attention. Digital technologies, artificial intelligence, blockchain, and advanced materials offer potential to overcome current limitations. Research examining technology adoption patterns, effectiveness, and barriers would provide timely insights.

CONCLUSION

The present study investigates how Circular Economy strategies and Green Innovation Practices contribute to sustainable competitive advantage in the fashion industry. Through qualitative analysis combining expert interviews and sustainability report examination, the research reveals complex relationships among CE strategies, GIP, organizational capabilities, institutional pressures, and competitive outcomes.

Findings demonstrate that CE and GIP function synergistically, with greatest impact achieved through integrated approaches spanning product design, material selection, production processes, distribution systems, and end-of-life management. Organizations successfully implementing these initiatives develop distinctive capabilities in leadership commitment, cross-functional collaboration, supply chain coordination, and innovation capacity. These capabilities mediate relationships between CE/GIP initiatives and competitive advantages.

Institutional pressures—regulatory mandates, market expectations, and investor scrutiny—significantly influence sustainability adoption patterns and effectiveness. Organizations navigate these pressures strategically, sometimes exceeding requirements to achieve differentiation while managing compliance costs and implementation challenges. The growing prominence of ESG investing represents a particularly influential institutional development, creating financial incentives for sustainability performance.

Sustainable competitive advantages emerge through multiple pathways: differentiation based on environmental attributes, cost leadership through operational efficiency, risk mitigation via regulatory compliance and supply chain resilience, and innovation capabilities developed through sustainability challenges. These advantages prove most durable when organizations integrate multiple pathways while

developing difficult-to-imitate capabilities.

The research contributes theoretically by synthesizing CE, GIP, dynamic capabilities, and institutional theory into an integrated framework. It advances understanding of capability development processes, institutional pressure interactions, and conditions under which environmental initiatives generate competitive benefits. Practically, the study offers guidance for fashion industry executives navigating sustainability transitions, emphasizing strategic integration, cross-functional collaboration, supply chain partnerships, innovation orientation, and proactive institutional engagement.

As environmental pressures intensify and stakeholder expectations evolve, fashion organizations face imperative to transform business models fundamentally. Those successfully integrating CE and GIP into core strategies and capabilities will be positioned to thrive in increasingly sustainability-conscious markets. The transition from linear to circular fashion systems represents not merely environmental necessity but strategic opportunity for organizations willing to invest in capabilities, embrace innovation, and authentically commit to environmental stewardship.

The journey toward sustainable fashion remains incomplete, with substantial challenges persisting. Technological limitations, economic barriers, behavioral inertia, and coordination complexities impede progress. Yet the organizations profiled in this research demonstrate that meaningful transformation is achievable. Their experiences offer inspiration and practical insights for others embarking on similar journeys. As the fashion industry continues evolving, the integration of environmental responsibility with competitive strategy will increasingly define market leaders and shape industry trajectories.

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REFERENCES

1. Skawińska E, Zalewski RI. Contemporary Challenges for Sustainable Development: Linear versus Circular Economy. *Zielona Góra, Poland: Polish Economic Society*. 2021.
2. Turan F, Can S. "Innovation as a Driver of Growth in the Context of Circular Economy and Green Management." *Journal of Policy Options*. 2024;7(4):1–13.
3. Chavez R, Yu W, Gimenez M, et al. Customer Integration and Operational Performance: The Mediating Role of Information Quality. *International Journal of Production Economics*. 2022; 250: 108654.
4. Teece DJ, Pisano G, Shuen A. Dynamic Capabilities and Strategic Management. *Strategic Management Journal*. 1997;18(7):509–533.
5. Hart SL. A Natural-Resource-Based View of the Firm. *Academy of Management Review*. 1995;20(4):986–1014.

6. DiMaggio PJ, Powell WW. The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. *American Sociological Review*. 1983;48(2):147-160.
7. Leal Filho W, Dinis MAP, Liakh O, et al. Reducing the Carbon Footprint of the Textile Sector: An Overview of Impacts and Solutions. *Textile Research Journal*. 2024;94(15-16):1798-1814.
8. Todeschini BV, Cortimiglia MN, de Medeiros JF. Business Models for Circular Economy and Sustainable Fashion: Typologies and Analysis. *Journal of Fashion Marketing and Management*. 2020;24(1):60-85.
9. Geissdoerfer M, Savaget P, Bocken NMP, et al. The Circular Economy – A New Sustainability Paradigm? *Journal of Cleaner Production*. 2017;143:757-768.
10. Li Hong C, Qie K, Memon H. Green Innovation and Consumer Behavior: Empirical Insights into the Role of Perceived Value and Intention. *Sustainability*. 2021;13(5):1457.
11. Wong AKF, Kim S, Gamor E, et al. Advancing Employees' Mental Health and Psychological Well-Being Research in Hospitality and Tourism: Systematic Review, Critical Reflections, and Future Prospects. *Journal of Hospitality & Tourism Research*. 2024;49(5):1014-1031.
12. Nigatu TA, Mekonnen A, Kefyalew T. Organizational Readiness for Green Transformation: A Qualitative Investigation. *Journal of Organizational Change Management*. 2024;37(2):248-269.
13. Sarkar A, Bartok O. Institutional Pressures and Green Innovation in Emerging Markets: A Policy and Corporate Review. *Journal of Environmental Management*. 2024;335: 116645.
14. Işık N. Journey to Discover the Footprint of Tourism from the Perspective of Ecological Modernization. *Sosyoekonomi*. 2024;32(60):111-131.
15. Shankar Subramanian Iyer, Divakar GM, Krishnan AS, et al. The Rainbow Economy Model Leads to Holistic Circular Model. *Migration Letters*. 2024;21(6):1-26.
16. Braun V, Clarke V. Using Thematic Analysis in Psychology. *Qualitative Research in Psychology*. 2006;3(2):77-101.
17. Iyer SS, Malhotra S. *Managing Diversity and Inclusion in UAE Family Organizations: Cultural Diversity*. In Strategic Insights and Case Studies on Navigating an Entrepreneurial Landscape. Hershey, PA: IGI Global Scientific Publishing. 2025;297-322.
18. Phasha T, Iyer SS. Project Agility for Construction Project Success in UAE. *ISIR Journal of Business and Management Studies*. 2025;2(1):61.
19. Wang Y, Yang M. Reverse Logistics and Digital Innovation in Circular Supply Chains. *Resources, Conservation and Recycling*. 2020;162:105041.
20. Yang M, Wang Y. Exploring Closed-Loop Systems in Sustainable Production: A Case Study Approach. *International Journal of Production Research*. 2020;58(21):6397-6413.