



Towards Sustainable Fashion

How sustainability-driven business models reshape
organizational boundaries

Pórey S Þórisdóttir

Thesis for the degree of PhD
in business administration

March 2025

School of Social Sciences

FACULTY OF BUSINESS ADMINISTRATION

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Í átt að sjálfbærari tísku

Hvernig sjálfbærni miðuð viðskiptalíkön endurmóta skipulagsmörk

Pórey S Þórisdóttir

Ritgerð til doktorsgráðu í viðskiptafræði

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Mars 2025

Félagsvísindasvið

VIÐSKIPTAFRÆÐIDEILD

HÁSKÓLI ÍSLANDS

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ISBN: 978-9935-9773-2-8

ORCID: orcid.org/0000-0002-9362-9291

Reykjavik, Iceland 2025

Abstract

The impact of climate change and the shift towards sustainability are becoming increasingly apparent, raising awareness and driving businesses to enhance their value through sustainable practices. The fashion industry, often criticized for its reliance on unsustainable practices, is now urged by various stakeholders to prioritize sustainability efforts. This doctoral thesis addresses a gap in the existing literature and responds to the need for research regarding sustainable business models in the fashion industry. Through four papers, the thesis aimed to identify the key drivers, challenges, and outcomes associated with adopting sustainable practices in the fashion industry, thereby contributing to developing more socially and environmentally responsible business models. The overall research aim is to explore how the fashion industry incorporates social, environmental, and economic value into its business models and redefine organizational boundaries to establish and sustain social and environmental responsibility, by focusing on the Nordic fashion industry, which is recognized for its sustainability leadership and homogeneity.

This study adopts an inductive approach to reasoning, presented in a systematic literature review in papers one and two, further demonstrated in an industry-focused case study in papers three and four. The first paper identified and explained the drivers of sustainability in business models and explored whether the fashion industry effectively measures and reports its activities to ensure transparency and improvement. One database was searched for academic publications in English, covering the period 2000 to 2018, yielding 422 papers wherein 19 articles related to the research topic were located, categorized, and analyzed further. The second paper also conducts a systematic literature review to examine how corporate social responsibility influences sustainability within the fashion industry. Two databases were searched for academic publications in English, covering the period from 2003 to 2019. A total of 892 papers were identified, of which 209 were analyzed.

The industry-focused case studies utilized primary and secondary data. Eleven in-depth semi-structured interviews with specialists, corporate actors and data from published sources from thirty-two Nordic fashion companies were incorporated, providing profound insights into the nature of sustainable business models within the Nordic fashion industry. The case study identified and described the in-depth in business models and how these models expand the scope concerning boundaries of efficiency, power, competence, and identity building on the organizational theory.

The result of this thesis demonstrates how organizational values, entrepreneurship, innovation, and internationalization processes contribute to integrating sustainability

into fashion business models. The interplay between corporate social responsibility and sustainability links to commitments to create positive social, environmental, and economic impacts and industry efforts by reaching different stakeholders and the broader community to enhance business performance. The motivation driving corporate social responsibility and sustainability is revealed in internal and external drivers. The corporate social responsibility internal drivers link to authenticity, equity, exclusivity, financial management, and sustainability practices, and external drivers relate to cultural differences, ethical fashion, institutional pressure, government, and regulatory pressure. The internal drivers for sustainability relate to commitments, innovations, value creation, environmental practices, management, knowledge, waste management, functionality, and localism. External drivers are linked to slow fashion, regulatory pressure, regulations, market pressure, circularity pressure, and consumption.

The thesis results describe sustainability elements in fashion business models, whereas five are relevant for value propositions, two for value capture, and seven for value creation and delivery. Although durable and timeless designs are promoted, full sustainability has not been achieved. The current business models do not include key aspects such as reducing consumption, educating customers, managing waste, and implementing take-back systems, and cooperation between the fashion industry and governments concerning sustainability remains limited. Furthermore, three sustainability activities, relevant to internal drivers influencing actions, reshape organizational boundaries of efficiency, power, and competencies. However, no internal drivers or activities related to identity were identified. Twelve elements related to sustainability activities were identified as external drivers that shape fashion business models.

The academic contribution of this doctoral thesis is to outline the most relevant research regarding sustainability topics in the field of fashion. Using empirical evidence, it adds to the existing literature by uncovering broader trends in the value system of the Nordic fashion industry by exploring value creation, delivery, and capture. The thesis deepens the understanding of sustainability initiatives and key elements in fashion business models by exploring the barriers and challenges of redesigning such models when integrating sustainability practices. The research presented in the thesis demonstrates originality by combining business models with organizational boundaries in the context of sustainability, addressing a significant gap in current knowledge.

Furthermore, the doctoral thesis offers a novel perspective by combining elements of institutional theory with organizational boundaries. This is done by developing and presenting a new framework for the sustainable business model boundary framework (SBMBF) to understand how external forces and internal activities influence sustainable business practices, particularly regarding efficiency, power, competence, and identity. Additionally, the framework highlights how internal and external dynamics shape and guide organizational behavior. From a practical point of view, the model offers actionable strategies for businesses, such as (a) adopting circular business models, (b)

enhancing transparency, (c) focusing on recyclable and low-impact materials, and (d) promoting cost-per-wear awareness while also acknowledging the challenges they face in implementing sustainable practices, such as financial constraints, stakeholder conflicts, or regulatory limitations. These insights could also be practical for fashion industry practitioners and policymakers to improve efficiency, empower positive transformation, foster new skill development, and strengthen brand identity.

This thesis concludes that sustainability in the fashion industry requires improving efficiency, addressing operational costs, and enhancing fair labor practices. Furthermore, to fulfill sustainability across all dimensions of the operation, it is necessary to engage with stakeholders at all levels, ensure traceability, and encourage responsible consumption as improvements for sustainable business models. The fashion industry must redefine its identity to avoid greenwashing and unsustainable practices.

Keywords: Corporate social responsibility, boundary, business model, circularity, fashion, value system, sustainability.

Ágrip

Áhrif loftslagsbreytinga og áherslur á þróun í átt til sjálfbærni verða sífellt meira áberandi í umræðunni vegna aukinnar vitundar sem knýr atvinnugreinar til að endurskoða starfshætti hvað verðmætasköpun varðar. Tískuiðnaður sem er iðulega gagnrýndur fyrir ósjálfbæra starfshætti er undir þrýstingi hvað varðar að efla siðferði fyrirtækja sem iðngreininni tilheyra þannig að þau forgangsraði sjálfbærniáherslum frammar. Doktorsrannsókn þessi bætir úr skorti á rannsóknum á þessu sviði með því að fjalla um sjálfbær viðskiptalíkön í tískuiðnaðinum. Ritgerðin samanstendur af fjórum birtum greinum þar sem skoðað var hvernig norræni tískuiðnaðurinn samþættir félagslegar, umhverfislegar og efnahagslegar áherslur viðskiptalíkönunum sínum, en Norðurlöndin eru þekkt fyrir einsleitni og forystu þegar kemur að sjálfbærni.

Ritgerðin byggir á aðleiðsluaðferð (e. inductive approach), þar sem framkvæmdar voru kerfisbundnar fræðilegar samantektir (e. systematic literature review) sem birtast í greinum eitt og tvö, auk atvinnugreinaföðruð tilviksrannsóknar (e. industry focused case study) þar sem niðurstöður tengdar tískuiðnaði á Norðurlöndunum eru birtar í greinum þrjú og fjögur. Í fyrstu grein ritgerðarinnar er fjallað um helstu hvata sem stuðla að því að atvinnugreinin samþætti sjálfbærniáherslur viðskiptalíkönunum sínum, skýri frá og mæli niðurstöður til að auka gagnsæi og þrýsta á um umbætur. Í því skyni var stuðst við vísindalegan gagnagrunn sem innihélt fræðigreinar sem birtar voru á árunum 2000 til 2018 og skrifaðar voru á ensku. Leitin skilaði 422 greinum þar sem 19 greinar tengdust viðfangsefni rannsóknarinnar, en inntak þeirra var síðan flokkað og greint samkvæmt tiltekinni rannsóknaraðferð. Önnur greinin sótti efni í tvo vísindalega gagnagrunna sem hafa að geyma fræðigreinar sem tengjast viðfangsefninu. Valdar voru greinar skrifaðar á ensku og birtust á árunum 2003 til 2019. Í þeirri grein var skoðað hvernig hugtakið samfélagsleg ábyrgð fyrirtækja (e. CSR) hefur áhrif á sjálfbærni innan tískuiðnaðarins. Í heildina fundust 892 greinar en inntak 209 þeirra var greint þar sem þær höfðu þýðingu fyrir rannsóknina.

Rannsóknin er einnig flokkuð sem atvinnugreinaföðruð tilviksrannsókn með áherslu á tískuiðnað. Í þeim hluta rannsóknarinnar var byggt á frumgögnum (e. primary data) og fyrirliggjandi gögnum (e. secondary data). Sá hluti rannsóknarinnar byggir á ellefu hálfstöðluðum (e. semi-structured) viðtölum við sérfræðinga og stjórnendur á sviði sjálfbærni, ásamt eigendum tiskufyrirtækja, auk þess sem byggt er á opinberum heimildum frá þrjátíu og tveimur tiskufyrirtækjum til þess að dýpka skilning á eðli sjálfbærra viðskiptamódelna hjá norræna tiskuiðnaðinum. Í þessari tilviksrannsókn eru borin kennsl á og skilgreind virðiskerfi í viðskiptalíkönunum atvinnugreinarinnar og hvernig líkönin víkka út hagkvæmnimörk (e. boundaries of efficiency), valdmörk (e. boundaries of power), hæfnismörk (e. boundaries of competence) og mörkun

auðkennis (e. boundaries of identity) sem öll byggja á kenningum um skipulagsheildir (e. organizational theory).

Niðurstöður rannsóknarinnar sýna hvernig virðismat skipulagsheilda, frumkvöðlastarf, nýsköpun og alþjóðavæðing þrýstir á um að samþætta sjálfbærniáherslur viðskiptamódelum tískufyrirtækja. Samspil samfélagslegrar ábyrgðar fyrirtækja og sjálfbærni tengist í gegnum skuldbindingu um að skapa jákvæð samfélagsleg, umhverfisleg og efnahagsleg áhrif og viðleitni tískuiðnaðarins til að ná til mismunandi hagaðila með það að markmiði að auka árangur fyrirtækja. Hvatinn að samfélagslegri ábyrgð fyrirtækja og sjálfbærni er í formi innri og ytri hvata. Hvað varðar samfélagslega ábyrgð fyrirtækja þá eru innri hvatar skilgreindir sem áreiðanleiki, jafnrétti, sérstaða, fjármálastjórnun og árangur af sjálfbærnitengdri starfsemi, en helstu ytri hvatarnir eru menningarmunur, siðræn tísku, reglugerðir, stjórnvöld, stofnanaprýstingur og lagalegur þrýstingur. Innri hvatar að sjálfbærniáherslum eru skuldbinding, innleiðing, virðisauki, umhverfislegar aðgerðir, stjórnendur, þekking, úrgangsstjórnun, notagildi og staðbundin stefna (e. localism). Ytri hvatar fyrir að innleiða sjálfbærniáherslur eru hæg tíska (e. slow fashion), lagalegur þrýstingur og reglugerðir, markaðsþrýstingur, þrýstingur í tengslum við hringrásarframleiðslu og leiðir til að draga úr neyslu.

Niðurstöður rannsóknarinnar draga einnig fram sjálfbærniþætti í viðskiptalíkönum tískuiðnaðarins. Samtals eru þeir fjórtán, þar af snúa fimm að virðisloforði (e. value proposition), tveir tengjast virðissköpun (e. value capture) og sjö lýsa virðisauka (e. value creation and delivery). Þrátt fyrir að líkönin dragi fram þætti eins og tímalausa og varanlega hönnun þá hefur sjálfbærni markmiðum atvinnugreinarinnar enn ekki verið náð. Þá vantar einnig þætti sem sýna hvernig tískuiðnaðurinn hyggst draga úr neyslu, auka þekkingu viðskiptavina, meðhöndla fata- eða textíluúrgang, innleiða kerfi til að taka við notuðum fatnaði og tryggja samvinnu á milli atvinnugreinarinnar og stjórnvalda hvað sjálfbærniáherslur varðar. Hvað varðar skipulagsmörk þá eru þrjár aðgerðir tengdar sjálfbærni sem skapa innri hvata sem endurmótar hagkvæmnismörk, valdmörk og hæfnismörk, á meðan engir innri hvatar eru á mörkun auðkennis. Hvað ytri mörkin varðar komu fram tólf atriði sem hafa áhrif á skipulagsmörk, en ytri hvatar fela í sér áskoranir fyrir sjálfbær viðskiptalíkön og hvernig tekið er á þeim sem í þeim felst.

Doktorsritgerð þessi felur í sér bæði fræðilegt gildi og hagnýtt, þar sem mikilvægar rannsóknir á sviði tísku og sjálfbærni eru dregnar fram í dagsljósið í gegnum samantektarrannsóknir. Einnig er byggt á þekkingu og reynslu stjórnenda í atvinnugreininni varðandi sjálfbærni, en rannsóknin varpar ljósi á virðiskerfi tískufyrirtækja sem á Norðurlöndunum, sérstaklega í tengslum við virðissköpun, verðmætaafurðir og virðisauka. Í rannsókninni eru helstu lykilþætti í viðskiptalíkönum fyrir tísku greindir, ásamt því að helstu áskoranir og hindranir sem fylgja endurhönnun slíkra líkana við innleiðingu stefnu og áherslna fyrir sjálfbærni eru kortlagðir. Frumleiki rannsóknarinnar felst í því að tengja saman kenningar um viðskiptalíkön og skipulagsmörk í samhengi sjálfbærni og ávarpa þekkingargap á þessu sviði. Rannsóknin

eflir fræðilega þekkingu með því að kynna áherslur stofnanakenningar og skipulagsmarka í nýju líkani.

Þetta líkan skilgreinir hvernig innri ferlar og ytri öfl hafa áhrif á viðskiptahætti sem tengjast sjálfbærni, einkum hvað varðar skilvirkni, vald, hæfni og ímynd skipulagsheilda. Að auki sýnir það hvernig samspil innri og ytri þátta mótar og beinir hegðun fyrirtækja í átt að sjálfbærni. Hagnýtt gildi rannsóknarinnar felst í því að varpa ljósi á þær áskoranir sem fyrirtæki í tísku standa frammi fyrir, svo sem fjárhagslegar skorður, árekstra við eða á milli hagsmunaaðila og takmarkanir vegna reglugerða.

Ályktað er sem svo að til að auka hagkvæmni við innleiðingu á sjálfbærniáherslum þurfi tískuiðnaðurinn að bæta skilvirkni, endurmeta rekstrarkostnað og tryggja sanngirni gagnvart eign starfsfólki og annarra sem starfa innan virðiskeðjanna. Til þess að sjálfbærniáherslur samvinnist öllum sviðum atvinnugreinarinnar er nauðsynlegt að koma á samstarfi við hagaðila á öllum sviðum, tryggja rekjanleika hráefnis og framleiðslu og hvetja til ábyrgrar neyslu svo að úrbótatækifæri varðandi sjálfbær viðskiptalíkön séu nefnd. Tískuiðnaðurinn þarf að bæta ímynd sína og orðspor með raunverulegum aðgerðum og með því að forðast ósjálfbær vinnubrögð og grænþvott.

Lykilorð:

Samfélagsleg ábyrgð fyrirtækja, mörk; viðskiptalíkan, hringrás, tíska, virðiskerfi, sjálfbærni

Acknowledgements

Now, as the completion of my PhD is near and my journey through my doctoral studies concludes, I feel a sense of satisfaction and pride. This journey has been an enormous challenge, filled with hindrances that tested my determination and devotion. Nevertheless, it has also been incredibly rewarding and intellectually stimulating, offering me opportunities to explore, learn, and grow in ways I had never imagined. For that, I am grateful, humbled and honored.

The motivation for this dissertation is deeply rooted in a career that spans three decades within the fashion industry. Over this time, I have witnessed its evolution and recognized the urgent need for responsible practices. My processes of learning and growth within the sustainability and corporate social responsibility field, focusing on the fashion industry have been a continuous and enriching process fueled by a passion to contribute positively to the field.

With a background in business administration and international marketing, I had little experience or knowledge of corporate sustainability and corporate social responsibility. This could be an advantage, allowing me to bring fresh perspectives to the topic, or a disadvantage, as I was initially unfamiliar with such research. However, this has given me a new perspective and insights that are useful professionally and personally.

My curiosity about responsible fashion began when I was a manager at the British company Monsoon Accessorize (1994-2001). The company's commitment to ethical practices, such as using handcrafted clothing and natural materials, showed me the fashion world's potential to be both beautiful and responsible. In 2001, such ethics was less in evidence when I joined Topshop (2001-2003), a "high-street fashion" company, where the trend of mass production, a marketing structure centered around the concept of "must buy," and persistent efforts to encourage consumers to purchase more products. Mass production, weekly new collections, and aggressive consumerism characterized the rise of fast fashion. This experience highlighted the industry's shift towards unsustainable practices, which sparked my interest in conducting research in the field of fashion.

Looking back, I realize how much this process has shaped my academic understanding and character. The challenges I faced have strengthened my resilience, while the successes have reinforced my passion for knowledge and research. This experience has been a remarkable chapter in my life, and I am grateful for every challenging and enlightening moment that has brought me to this point.

I want to begin by expressing my sincere gratitude to my supervisor, Professor Lára Jóhannsdóttir, for her academic guidance, constructive feedback, invaluable support, and friendship. Her friendly advice kept me on the right track when I was losing focus on the project. I am also deeply grateful to my committee Professor Esben Rahbek Gjerdum Pedersen and Professor Kirsi Niinimäki for their knowledge, incredible support, practical advice, and expertise through suggestions and comments throughout this process. I also want to thank everyone who provided access to their companies and shared their knowledge about sustainability approaches within their organizations, significantly contributing to the outcome of this thesis.

I especially extend my gratitude to Professor Runólfur Smári Steinþórsson for his trust in me and the opportunity to teach one of his courses, Service Management and Marketing. I also thank all my colleagues in the Faculty of Business Administration at the University of Iceland for encouraging me, sharing their knowledge, supporting my work, and helping me grow academically. Special thanks go to Key Cook for proofreading my work, and my friends and colleagues in the XL at Gimli, with particular gratitude to Bryndís Ólafsdóttir, and Hulda Guðmunda Óskarsdóttir for all the lovely dinners, coffee breaks, and "field trips" to Copenhagen to attend doctoral defenses at Copenhagen Business School (CBS). I also extend my thanks to Nina María Saviolidis, Ana Orelj, Mauricio Latapí, Ágústa Jónsdóttir, and everyone else within the Faculty of Business Administration.

This process would not have been possible without the support of my family, their patience, encouragement, and inspiration, especially my husband, Guðmundur Hrafn, and my lovely children, Klara Rut, Snævar Örn, Bergsteinn Ingi, and Eyþór Hrafn, who have been willing to proofread and discuss my research topic along the way. Research of this length would not have been possible without their support.

Finally, I want to thank the University of Iceland for the three-year scholarship that supported my Ph.D. studies and the institutions that provided support and funds for this research, such as the Erasmus+ Programme for Higher Education and traineeships. I also thank the Department of Management, Society, and Communication (MSC) at CBS for accepting me as a visiting researcher from March to April 2023.

Þórey S Þórisdóttir

Hafnarfjörður, Ísland

March 14th 2025

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List of Abbreviations

AFSS	Apparel and Footwear Sector Supplement
BM	Business Model
CSR	Corporate Social Responsibility
CE	Circular Economy
CS	Corporate Sustainability
EMS	Environmental Management System
EPR	Extended Producer Responsibility
EU	European Union
FBM	Fashion Business Model
GPNs	Global Production Networks
GRI	Global Reporting Initiative
IRR	Internal Rate of Return
KPIs	Key performance indicators
LCA	Life Cycle Assessment
NGOs	Non-governmental Organizations
NFAs	Nordic Fashion Associations
NFCs	Nordic fashion Companies
ROI	Return on Investment
SBMs	Sustainable Business Model
SFBMs	Sustainable Fashion Business Model
SBMBF	Sustainable business model boundary framework
SD	Sustainable development
SDGs	Sustainable development goals
SLR	Systematic Literature Review
TBL	Triple Bottom Line
UNECE	United Nations Economic Commission for Europe
US	United States
QA	Qualitative Content Analysis

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List of Original Papers

This thesis is based on four papers, three published and one paper under review, which will be referred to in the text as follows:

- I. Thorisdottir, T.S. & Johannsdottir, L. (2019). Sustainability within the Fashion Business Models: A Systematic Literature Review. Accepted for publication in *Sustainability* 11, 2233; doi:10.3390/su11082233.

Author Contribution: Investigation, methodology, analysis, writing original draft.
- II. Thorisdottir, T.S. & Johannsdottir, L. (2020). Corporate Social Responsibility Influencing Sustainability within the Fashion Industry: A Systematic Review. Accepted for publication in *Sustainability* 12, 9167; doi:10.3390/su12219167.

Author Contribution: Investigation, methodology, analysis, writing original draft.
- III. Thorisdottir, T.S., Johannsdottir, L., Pedersen, E.R.G. & Niinimäki, K. (2024) Social, environmental, and economic value in sustainable fashion business models. Accepted for publication in *Journal of Cleaner Production*, 442, 141091. <https://doi.org/10.1016/j.jclepro.2024.141091>.

Author contribution: Conceptualization, Investigation, Method, Writing - Original draft, Writing - review, and editing.
- IV. Thorisdottir, T.S., Johannsdottir, L., Pedersen, E.R.G. & Niinimäki, K. (2025) A boundary perspective on sustainable business models: insights from the Nordic fashion industry. Accepted for publication in *Journal of Fashion Marketing and Management*, 1-24. <https://doi.org/10.1108/jfmm-05-2024-0190>

Author contribution: Conceptualization, investigation, method, writing - original draft, review, and editing.

Declaration of Contribution

Paper I. Sustainability within Fashion Business Models: A Systematic Literature Review

Author Contributions: Conceptualization, T.S.T.; methodology, T.S.T.; formal analysis, T.S.T.; investigation, T.S.T.; writing—original draft preparation, T.S.T.; writing—review and editing, T.S.T. and L.J.; supervision, L.J.

Paper II. Corporate Social Responsibility Influencing Sustainability within the Fashion Industry. A Systematic Review

Author Contributions: Conceptualization, T.S.T. and L.J.; methodology, T.S.T.; formal analysis, T.S.T.; investigation, T.S.T.; writing—original draft preparation, T.S.T. and L.J.; writing, review, and editing, T.S.T. and L.J.; supervision, L.J. All authors have read and agreed to the published version of the manuscript.

Paper III. Social, environmental, and economic value in sustainable fashion business models

Credit authorship contribution statement. Thorey S. Thorisdottir: Conceptualization, Investigation, Methodology, Writing – original draft, Writing – review & editing.

Lara Johannsdottir: Conceptualization, Supervision, Writing – review & editing.

Esben Rahbek Gjerdrum Pedersen: Conceptualization, Writing – review & editing.

Kirsi Niinimäki: Conceptualization, Writing – review & editing.

Paper IV. A boundary perspective on sustainable business models: insights from the Nordic fashion industry.

Credit authorship contribution statement.

Thorey S Thorisdottir: Conceptualization, data curation, investigation, formal analysis, method, writing - original draft, review, and editing.

Lara Johannsdottir: Conceptualization, project administration, method, validation, review, and editing.

Esben Rahbek Gjerdrum Pedersen: Conceptualization, method, validation, review, and editing.

Kirsi Niinimäki: Conceptualization, method, validation, review, and editing.

1 Introduction

This chapter explains the importance of exploring the perspectives of sustainability of fashion business models. Next, the chapter outlines the research problem with an introduction to CSR, sustainability, and corporate sustainability, followed by a discussion of the fashion industry, business models, and sustainable business model frameworks. The chapter concludes with the research gap, the overall aim, and the research question to fulfill the thesis aim.

1.1 Research focus and structure

This doctoral thesis explores the fashion industry's contribution to social, environmental, and economic issues, particularly in the Nordic countries. The research is based on two systematic literature reviews and two empirical studies that are interconnected and introduced in four academic papers:

1. Sustainability within the Fashion Business Models: A Systematic Literature Review
2. Corporate Social Responsibility Influencing Sustainability within the Fashion Industry: A Systematic Review
3. Social, environmental, and economic value in sustainable fashion business models.
4. Boundaries Perspective on Sustainable Business Models in the Fashion Industry.

Today, the fashion industry remains one of the most polluting industries globally, and it continues to cause irreversible damage to natural resources worldwide, as documented by sources such as the Nordic Fashion Association (2016) and EcoWatch (2015). The consequences of inaction over each decade are evident (European Parliament, 2020; EEA, 2012; Lash & Wellington, 2007). The literature reveals how the fashion industry is urged to become more transparent about its responsibilities, especially where the industry gives a low priority to economic, environmental, and social factors, as indicated by De Brito et al. (2008), Nayak et al. (2021), Macchion et al. (2021), and Rani and Saha (2021). Therefore, exploring sustainability in the fashion industry and sustainable business models was interesting.

This line of study is a pressing imperative and an intellectually stimulating endeavor, as it offers profound insights into the dynamic interplay between economic, environmental, and social factors that shape the world's future. Table 1 presents the thesis compilation, explaining the key concept used in each paper, research questions, theoretical approach, conceptual frameworks, and research methods.

Table 1. The compilation of the thesis.

Overarching Research Question: How are sustainable business models and organizational boundaries of the Nordic fashion industry redefined in order to create social, environmental and economic value?				
	Paper I	Paper II	Paper III	Paper IV
Key concepts	Business model Driver Fashion Measure Report Sustainability	Corporate Social Responsibility Fashion Industry Sustainability Sustainable fashion	Business model Barrier, Fashion Nordic Sustainability Value	Circularity Boundary Business model Fashion, Fast Fashion Sustainability
Research question(s)/ Research purpose	How is sustainability measured and/or reported in the fashion business models?	This study aims to explore CSR and how it influences sustainability within the fashion industry	How do Nordic fashion companies combine social, environmental, and economic values to form sustainable business models?	How do sustainable fashion business models reshape the boundaries of efficiency, power, competence, and identity?
	What drivers influence sustainability within the fashion business models?		What are the main challenges Nordic fashion companies face in developing sustainable business models?	What main challenges to fashion business models are brought about by the organizational boundaries of efficiency, power, competence, and identity?
Theoretical approach				Organizational theory
Conceptual frameworks		Micro – meso-macro	Value mapping tool	Boundaries of efficiency, power, competence, and identity
Methods	A Systematic Literature Review	A Systematic Literature Review	Industry focused - Case study	Industry focused - Case study

The thesis begins with Paper I, *Sustainability within the Fashion Business Models: A Systematic Literature Review*, to provide an overview of key sustainability elements related to fashion business models being recognized and analyzed to enhance knowledge of sustainable fashion. Furthermore, the driving forces behind sustainability were identified and the measurement and reporting practices for the outcomes explored.

The search yielded 422 papers written in English within the timeframe consisting of the years 2000 to 2018. Of those papers, no paper was published before 2011. The search string was “business model” and “fashion,” which were then narrowed down by adding “sustainability” and “measuring” to the search string, which gave 19 full-text papers. The existing literature discussed the necessity of a deeper exploration of the implications of industry practices and called for broader discourse surrounding sustainability and, for example, raised concerns regarding the lack of accountability in addressing sustainability-related challenges, including climate change (Claudio, 2007; De Brito et al., 2008) in the business models. One particularly notable aspect pertains to the industry’s reliance on production in low-cost countries, where environmental and safety regulations are less stringent (De Brito et al., 2008; EcoWatch, 2016), and how production and marketing strategies have been scrutinized for their potential contribution to the excessive consumption of natural resources (Claudio, 2007).

In particular, this article paved the way for empirical research where various aspects of sustainability strategies within the fashion industry were explored, for example, by examining elements of fashion business models, identifying driving forces behind actions, evaluating measurements and key performance indicators, and exploring transparency and disclosure practices. This study’s main aim was to better understand the literature on how the fashion industry integrates sustainability within its business models, investigate if sustainability-related practices are measured to ensure transparency and improvement, and recognize what drives sustainability in fashion business models.

This study brings together different streams of literature by identifying the key components of incorporating sustainability into business models, encompassing organizational values, entrepreneurship, innovation, and internationalization processes. In assessing impacts and reporting, it becomes apparent that the fashion industry finds significance in theoretical foundations such as CSR or standards, including the Global Reporting Initiative reporting standards. Various drivers, including government regulations, market dynamics, closed-loop systems, value creation, innovation, fairness, authenticity, functionality, localization, and exclusivity, influence sustainability practices within the industry.

Paper II, *Corporate Social Responsibility Influencing Sustainability within the Fashion Industry. A Systematic Review* provides a comprehensive review of how CSR influences sustainability in the fashion industry. The growing interest in the literature regarding the fashion industry, particularly in sustainable fashion supply chains, is partly due to the

industry's CSR and sustainability practices (Black, 2012; Thorisdottir & Johannsdottir, 2019). CSR is often used as a comprehensive term for sustainability concerns (Haski-Leventhal, 2018), especially within the fashion industry (Diddi & Niehm, 2017; Haski-Leventhal, 2018). This trend underscores the need to investigate the integration of sustainability practices in the fashion industry.

Paper II aimed to investigate the role of CSR in enhancing sustainability in the fashion industry, focusing on mapping existing knowledge in this area. A systematic review was carried out to explore this topic, indicating that fashion industry managers adopt CSR strategies which centered around sustainability, innovative business models, and supply chain advancements.

The study builds on findings from Paper I to understand how CSR influences sustainability and identifies how managers in the fashion industry prioritize sustainability, business models, and supply chain innovation when adopting CSR practices. Their commitments are directed towards economic, environmental, and societal aspects, mainly focusing on producing eco-friendly goods and ensuring worker safety. The link between CSR and sustainability in corporate practices is framed within a micro-meso-macro model (see Figure 11), highlighting elements like brand equity, organizational culture, supply chain management, activism, and adherence to human rights.

Given a growing extensive body of research on CSR and sustainability, the focus on the topic related to the fashion industry and growth in publications was most evident between 2015 and 2019, with 146 academic papers published in English. The findings indicate that most studies have focused on the global, European, Asian, and US contexts, suggesting a lack of attention to other regions. Even though researchers have concentrated on a single market, only five papers have focused on countries in Scandinavia or the Nordic region, which, despite that, are considered leaders in sustainability actions (Strand, 2014; Strand et al., 2014). For example, countries like Finland, Sweden, Denmark, and Norway frequently rank among the top five of the thirty-one European nations in terms of sustainability performance in alignment with the Sustainable Development Goals (SDGs) (Lafortune et al., 2022; SDSN & IEEP, 2020).

The micro-meso-macro framework (Steurer et al., 2005) was used to synthesize the findings and to understand the interplay between CSR and sustainability in the fashion industry literature. Micro-level (individual behavior and organizations) (Dopfer et al., 2004) use specific management systems to address economic, social, and environmental issues. The CSR management approach utilizes systems such as ISO standards to address specific issues (Ballantine et al., 2020; Baumgartner & Ebner, 2010). Meso-level (intermediate organizations and institutions) (Dopfer et al., 2004) establishes corporate sustainability (CS), while macro-level (global perspective and trends) (Ballantine et al., 2020) includes economic aspects such as technology, market demand, and legal aspects (laws and regulations). Social dimensions encompass

societal norms and cultural aspects, while environmental dimensions cover access to natural resources and other environmental factors (Ebner & Baumgartner, 2006).

To delve deeper into the research topic, Paper III, Social, environmental, and economic value in Sustainable Fashion Business Models, examines the combinations of social, environmental, and economic values that form the basis of sustainable business models in the Nordic fashion industry and identifies the main challenges fashion companies face in developing such models. Paper III employs an industry-focused case study approach, drawing on data gathered through in-depth semi-structured interviews with specialists from four Nordic fashion associations, seven interviews with managers or owners of Nordic fashion companies, and published information from thirty-two fashion companies. Paper III builds upon the work presented in Paper II, aiming to enhance the understanding of how fashion companies integrate sustainability emphasis into their business models. This was achieved by utilizing the conceptual framework, the value mapping tool, developed by Bocken et al. (2013), Bocken et al. (2018), Bocken (2015), and Bocken and Short (2021).

Paper III draws attention to differences between the aspirational discussion about future sustainable fashion business model elements and examples of current fashion business models, which, as concluded in Paper II, display dualistic behavior that simultaneously negatively impacts both the environment and society. This highlights the need for a holistic sustainability approach to help companies transition from unsustainable to sustainable business models (Bocken & Short, 2021).

Paper IV, Boundaries Perspective on Sustainable Business Models: A Case Study of the Nordic Fashion Industry, extends the work detailed in Paper III by exploring the interactions between sustainable business models and organizational boundaries within the fashion industry, focusing on how these relationships influence and are influenced by efficiency, power, competence, and identity. The research method employed in Paper IV is based on an industry-focused case study, collecting primary data from managers and sustainability experts, and secondary data specific to the Nordic fashion industry. The study builds on Santos and Eisenhardt's (2005) conceptual framework concerning efficiency, power, competence, and identity, each characterized by distinct attributes and grounded in specific theoretical underpinning. The authors advocate for more comprehensive research on organizational boundaries, highlighting the impact of the external environment on organizations through a focus on outcomes, efficiency, and performance.

1.2 Sustainable development

Sustainable development (SD) emphasizes long-term social, economic, and environmental considerations. The Brundtland Report provides a foundational definition of SD as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987, p. 131). The report was a milestone in raising awareness of global environmental issues

(Hopkins,2016), describing sustainability in practice and emphasizing the need for new technologies and knowledge to reduce resource consumption in developed nations (WCED, 1987).

In 2015, all United Nations Member States adopted the 2030 Agenda for Sustainable Development, establishing a framework to promote peace and prosperity for people and the planet. The aim was to eliminate poverty and other inequities by enhancing health, education, and economic growth through the Sustainable Development Goals (SDGs) (United Nations, n.d.) Steurer et al. (2005) speculated whether the vision of sustainable development would benefit future generations, given that ecosystems were already approaching their limits. Such concern highlights the debate surrounding weak sustainability, which declares that future generations will have better technology and resources to address environmental issues or that natural resources can be substituted with human-made capital, allowing for continuous economic growth despite environmental degradation (Torres, 2022).

In contrast, strong sustainability emphasizes the preservation of natural resources. It requires businesses to mitigate the environmental harm they cause, such as waste and pollution, while ensuring equity and protecting employees' well-being and livelihoods (Lozano, 2008; Kuhlman & Farrington, 2010; Evans et al., 2017). Moreover, strong sustainability involves a long-term vision of resource conservation, mainly by reducing consumption in developed countries (WCED, 1987; Steurer et al., 2005). It also seeks to overcome the structural barriers posed by adverse environmental impacts and unsustainable resource consumption trends, asserting how actions of the current generation will have lasting effects on future generations. Potentially limiting their ability to solve environmental problems, even if the specific future implications remain uncertain (Torres, 2022).

1.3 Sustainability

Sustainability, while closely related to CSR (Hopkins, 2016) imposes three pillars: economy, society, and environment. It examines businesses' dedication to addressing waste and pollution (Evans et al., 2017; Kuhlman & Farrington, 2010; Lozano, 2008). Additionally, it promotes equality, improves welfare and safety, and ensures business profitability and financial well-being (Evans et al., 2017; Lozano, 2008) to extend a long-term vision concerning the economic aspects of well-being and protecting natural resources (Steurer et al., 2005; WCED, 1987). However, implementing a sustainability-focused approach has proven challenging for businesses, society, and governments, owing to a comprehensive structural framework encompassing adverse environmental effects and unsustainable resource consumption trends, including water and land wasteful use (Drexhage & Murphy, 2010). Nevertheless, as Hopkins (2016) points out, the need for more precise distinctions between corporate sustainability and social responsibility emphasizes the need for clear distinctions. The discourse surrounding the conceptual integrity of sustainability, particularly its differentiation from corporate social

responsibility (CSR), continues a contentious debate among business leaders (Hopkins, 2016). This is evident on company websites, where CSR initiatives are often labeled sustainability (Heski-Leventhal., 2018).

1.4 Corporate Social Responsibility

The Corporate Social Responsibility (CSR) concept is widespread and has been around for a long time (Carroll, 1991; Heski-Leventhal., 2018). However, the concept still needs to be clarified, especially concerning the degree to which companies are responsible to the environment and society (Aquadelo et al., 2019). CSR is often portrayed as a voluntary commitment by companies to undertake initiatives that promote environmental and social responsibility through structured corporate responsibilities. These efforts should benefit internal and external stakeholders and are crucial for a company's long-term success (European Commission., 2001; Macassa et al., 2020). Although some aspects are not legally required, voluntary participation in CSR is essential for securing societal endorsement or a "license to operate," encouraging companies to uphold ethical practices and transparency, particularly during difficult times or in the wake of disasters (Blowfield & Murrey, 2008, p. 40). It should, however, be noted that some aspects relevant to CSR have been, or will be, regulated, such as the issuing of sustainability reports, given the obligatory requirements of the EU Corporate Sustainability Reporting Directive (CSRD), and the adoption of the European Sustainability Reporting Standards (ESRS) (European Commission, 2023).

Understanding CSR can be challenging due to its diverse interpretations across various cultures, business practices, and legal frameworks (Matten & Moon, 2008). Rasche et al. (2017) outline distinct viewpoints on CSR to shed light on the reasons and outcomes for companies adopting CSR practices. A significant motivation is the ethical obligations perceived by business leaders, driven by the societal expectation to integrate economic, environmental, and social sustainability within their corporate strategy (Rasche et al., 2017).

1.5 Corporate sustainability

The concept of corporate sustainability (CS) has gained broader recognition within the social sciences over time, and it is often described either as a result of CSR activities or as a component included within the scope of CSR, particularly in the business sector (Ebner & Baumgartner, 2006). In the discourse on sustainable business practices, a critical examination reveals that many business models, including those purporting to be circular, often neglect to adequately address the lifecycle of their products (Blowfield & Murrey, 2008). A prominent gap in product end-of-life management, raises questions about whether companies genuinely adhere to CSR principles (Blowfield & Murrey, 2008). Furthermore, Blowfield and Murrey (2008) underscore the imperative for businesses to evolve towards more sustainable practices through strategically renovating their business models, particularly in the current era marked by

environmental and resource pressures (Kerr & Landry, 2017; Willard, 2010). Steurer et al. (2005) proposed a framework to compare sustainable development (SD), CSR, and corporate sustainability (CS), pointing out their similarities and differences across various levels. This model emphasizes sustainability on a broader scale, integrating economic, social, and environmental aspects. It positions CS as rooted in the organization's essence, while CSR rests within a management approach and standards (Steurer et al., 2005).

Montiel (2008) acknowledges the relevance of the intersection of CSR and CS due to their overlapping environmental and social concerns despite having different foundational paradigms. Montiel (2008) further discusses how environmental issues are addressed within the broader social performance dimensions in CSR, whereas in CS, the social dimension is increasingly recognized as integral to sustainability. Moreover, the similarity between CSR and CS is highlighted through their shared goal of balancing economic prosperity, social integrity, and environmental responsibility. This balance underscores that responsible companies engage with stakeholder interests and community involvement and implement environmentally friendly practices as critical components of sustainability and social responsibility.

1.6 Business models

Teece (2010) articulates that the core of a business model rests on a firm's ability to forecast cash flows and generate income, effectively serving as a blueprint for the organization's financial and architectural structure. Such a model is instrumental in assessing a company's strategic aspirations, particularly when adopting new strategies. It provides a framework for management to examine the dynamics of competitive advantage and overall firm performance. This includes a comparative analysis against competitors, linking the efficiency of the chosen strategy with expected operational outcomes, financial performance, and cash flow forecasts (McGee et al., 2010).

Casadesus-Masanell and Richart (2011) proposed that designing a business model is fundamentally a managerial choice determining the organization's operational approach. This responsibility extends to ensuring accountability towards shareholders, particularly in the strategic process, as any oversight can significantly impact the company's financial health. They identify three principal components in the creation of a business model. The first encompasses strategic decisions that pervade the organization, including the location of facilities, workforce deployment, and employee incentive systems. The second component pertains to decisions regarding the organization's physical assets. The third, governance, involves determining the decision-making authority over the elements (Casadesus-Masanell & Richart, 2011).

Chesbrough and Rosenbloom's (2002) explain a linear process of how companies create value by managing resources, operations, and market dynamics at various stages, providing efficiency and effectiveness, as illustrated in Figure 1. They emphasize how the business model can stimulate the transition from the technical

domain as inputs and the social domain as economic outputs. Additionally, the model underscores the complexities of the value network, value chain, value proposition, cost, financial outcomes, and the firm's positioning, which are critical for sustaining a competitive advantage.

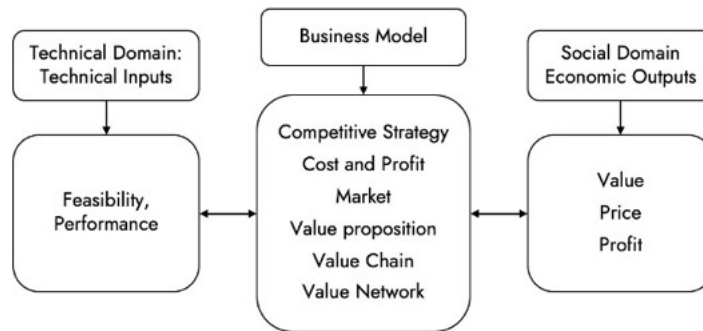


Figure 1. Business Model Mediates between the Technical and Economic Domains.

Source adopted from (Chesbrough & Rosenbloom, 2002, p. 32).

DaSilva and Trkman (2013) highlight the importance of a clear operational strategy to enhance the business model concept, emphasizing its distinctiveness and relationship to other management ideas. They also examine how business models can predict future competitive advantages and become a source of such advantages through the unique combination of their components. Zott and Amit (2010) emphasize the benefits of adopting an activity system perspective for business model design, focusing on strategic choices for growth and holistic thinking. They highlight the importance of overall design and suggest moving beyond traditional transaction cost economics by acknowledging firms' diverse capabilities and resources.

Similarly, Osterwalder and Pigneur (2010) developed the business model canvas as an innovative strategic management tool. It benefits both new and established businesses in aligning their activities by offering a structured framework. This framework highlights integrating various business aspects, from value creation to financial performance, encompassing resources and capabilities. It promotes a comprehensive understanding of how each component interacts with others, ensuring the business stays focused and adaptable and remains aligned with its strategic goals and customer needs. The canvas is visually organized and divided into nine key building blocks:

- **Customer segment.** This component emphasizes the target group. The focus is on customers' personal needs and problems. In this case, companies' approaches vary from one business to another in meeting customers' expectations and perceived value (Osterwalder & Pigneur, 2010; Porter, 1996).
- **Value proposition.** This building block relates to product improvements, developments, and customization offered to customers (Bocken et al., 2013; Osterwalder & Pigneur, 2010).

- **Channels.** This business model building block highlights the communication and interaction processes between employees and customers that influence customers' perceived value for the product and service, for example, sales and distribution (Osterwalder & Pigneur, 2010).
- **Customer relationship.** The emphasis is on how companies create a profound relationship with their customers, leading to value creation for both parties (Osterwalder & Pigneur, 2010; Porter, 1996).
- **Key activities.** One of the most critical components of the business model is key activities that address how companies intend to operate successfully (Osterwalder & Pigneur, 2010), companies' development, and technologies (Bocken & Short, 2021).
- **Key resources.** This building block component discusses how firms address their assets, such as financial, physical, intellectual, and human resources (Osterwalder & Pigneur, 2010). Human resource management addresses employee safety, training, and skills to contribute to companies' goals for positive outcome performance (Daft, 2016).
- **Key partners.** This building block component addresses what networks, partners, and suppliers are needed to reduce "risk and uncertainty" (Osterwalder & Pigneur, 2010, p. 38).
- **Revenue streams.** The focus is financial and places emphasis on revenue efficiency (Osterwalder & Pigneur, 2010).
- **Cost structure.** This component relates to how companies intend to deliver value and maintain customer relationships and their expected revenue, variable- and fixed-cost stream (Osterwalder & Pigneur, 2010).

Teece (2010) highlighted the critical role of thorough analysis in developing or revising sustainable business models. He stressed the importance of defining customer value propositions and addressing strategic questions to transform business structures into profits, viewing the business models as a conceptual, strategic tool rather than a mere financial one. However, Das and Bocken (2024) suggest the creation of a Business Case Database that would provide real-world examples enable companies to benchmark, innovate, and modify their sustainable strategies. They further highlight how regenerative business models restore and enhance social and environmental systems while ensuring financial viability, enabling companies to build resilience, drive innovation, and create lasting value for society and the environment (Das & Bocken, 2024).

1.7 Sustainable business model framework

The business model canvas is a strategic management and entrepreneurial tool enabling organizations to develop, articulate, and visualize their fundamental objectives

(Osterwalder & Pigneur, 2010). This tool emerged as a response to previous business model studies, needing a practical connection with comprehending business phenomena (Osterwalder, 2004). Instead of adhering to a basic problem-solution, Osterwalder and Pigneur's (2010) canvas offers a more nuanced approach that considers the complexities of organizational activities, the balancing of contradictory forces, and the uncertainty of external factors such as regulations, competition, and technological advancements (Daft, 2016; Hatch, 2018). In this context, "collaborating across different industries and with non-industry players, such as authorities or NGOs, is crucial for successfully implementing sustainable business models" (Bocken et al., 2014, p. 54).

Bocken (2015; 2018; Bocken et al, 2021) introduces a sustainability-centered framework to confront challenges that unsustainable business models fail to address. This framework is structured around three core components: value proposition, value creation and delivery, and value capture, aiming for a beneficial transformation for key stakeholders. As presented in Figure 2, value capture (the orange color) includes the cost structure and revenue streams that encompass the financial considerations within the entire system, as well as how resources are allocated and managed to ensure operational efficiency, competitiveness, and profitability.

Value creation and delivery (the yellow color) address key stakeholders, including suppliers, distributors, and partners, who are all integral to creating positive impacts. Key resources are materials, human and financial capital, networks, infrastructure, brand image, data, and knowledge. Customer segments and relationships emphasize the importance of understanding and nurturing the relationship between the company and its customers (Bocken, 2015; Bocken, 2021; Bocken et al., 2018). Channels refer to customers' touchpoints, including how they interact with the company and access its products or services.

According to Bocken (2015; 2018), value proposition (the green color) aligns with Elkington's (1998, 2004) Triple Bottom Line (TBL) concept, which evaluates a company's performance based on its social, economic, and environmental impacts, identified as people, profit, and the planet. Bocken (2021) emphasizes an organizational perspective for balancing activities, supporting companies in mitigating operations, and resolving value conflicts for a sustainable future, promoting positive environmental and societal influence through business (Bocken, 2015; Bocken, 2021; Bocken et al., 2018). This is achieved by engaging in activities that support societal well-being, addressing social issues, and fostering a positive relationship with the communities in which the company operates. Similarly, the environmental proposition (planet) supports the generating of positive impact on the planet. This involves implementing practices that benefit the environment, thus contributing to its health and sustainability. Such initiatives are integral to the company's operations, reflecting a commitment to ecological stewardship (Hart & Milstein, 2003; Thorisdottir et al., 2024). The economic proposition (profit) focuses on delivering value to customers,

ensuring the offers stand out compared to competitors. This does not only encompass the financial aspect but also the quality and benefits that the customers receive, leading to profitability and sustainable business growth. Figure 2 illustrates the framework used in this thesis.

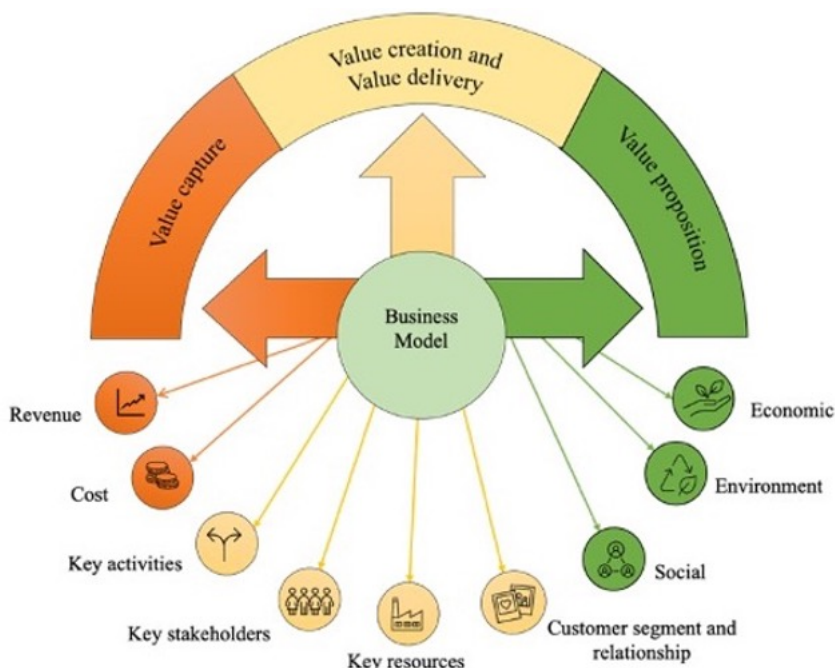


Figure 2. The business model framework used in this thesis.

Synthesized by authors from (Osterwalder & Pigneur, 2010; Bocken (2015; 2018; Bocken et al, 2021).

1.8 The fashion industry

The fashion industry is a broad phenomenon encompassing key elements such as textiles and apparel, which include all types of garments, accessories, footwear, and outerwear. Driven by aspiration, desire, and creativity (Hines & Bruce, 2001), it is among the “few remaining craft-based industries” (Black, 2012, p. 10), and it is still based on the continued reliance on sewing machines for most production processes (Black, 2012). According to information provided by the United Nations Economic Commission for Europe (UNECE, 2018), the fast-growing global fashion industry has experienced remarkable expansion since the early 2000s. It is worth \$ 2.5 trillion and employs over 75 million individuals globally. From 2000 to 2014, the output of garments overflowed, with consumers purchasing 60% more fashion items than in the previous decade or before 2000 and holding onto them for a much shorter time (Cobbing & Vicaire, 2016). However, the lifespan of each garment piece has significantly reduced, being kept for only half the duration compared to the past. This shift highlights the industry’s transition into the age of fast fashion (UNECE, 2018). In

2015, the fashion industry's annual revenue was \$1.8 trillion, with forecasting predicting a 17% increase, bringing it to \$2.106 trillion by 2025 (Cobbing & Vicaire, 2016). Data from Fashion United (2024) show that the fashion market grew by 6.1% between 2022 and 2023, reaching \$1.95 trillion in 2023. This suggests that only 8% growth is needed to surpass earlier predictions.

The fashion industry has a substantial environmental impact, making it one of the leading global contributors to pollution (EcoWatch., 2015; Nordic Fashion Association, 2016). Its production processes generate a significant carbon footprint and negatively impact natural resources, causing irreversible damage that has been evident for decades (European Parliament, 2020; EEA, 2012; Lash & Wellington, 2007). With its rapid growth and fast-paced production processes, the fashion industry significantly contributes to global waste and environmental degradation. Claudio (2007) and Cobbing and Vicaire (2016) highlight the industry's increasing pressure on natural resources, while Kerr and Landry (2017) and Willard (2010) point out their struggles with sustainability. Ellen MacArthur Foundation (2017) illustrates this issue, stating that "nearly every second garbage truck of apparel goes to landfills or is incinerated" (p. 37). Consumer behavior exacerbates this problem. Hae Jin Gam (2011) observes a general disinterest in eco-friendly clothing due to design and texture preferences, which make it unattractive to consumers. Nevertheless, growing concern about the industry's environmental impact suggests potential consumer support for sustainable fashion (Black, 2012; De Angelis et al., 2017; Niinimäki, 2010).

The industry's trend-driven nature furthers environmental crises. Claudio (2007) describes how fast fashion, delivering new trends frequently (Foroohar & Martin, 2005), leads to increased waste as clothes become quickly outdated. Jung and Jin (2016) contrast this with slow fashion's focus on quality. Compared to other industries, fashion is not recognized for taking responsibility for its waste. However, to accelerate circularity in the fashion industry, the EU published new regulations based on the "polluter pays principle" which is at the center of the extended producer responsibility (EPR) policy (Zero Waste Europe, 2022, p. 4). Whitehead (2014), consultant and columnist at the Ethical Fashion Forum, reveals staggering figures for garment waste in the US, with only a minor fraction being reusable. They emphasize the industry's enormous water consumption, particularly in cotton production, forecasting severe impacts on water resources (European Parliament, 2020; EcoWatch, 2015). The rising global population, expected to reach 8.5 billion by 2030 (Population Pyramid, 2023), will further strain these resources. Kerr and Landry (2017) project a significant increase in apparel consumption, leading to further environmental challenges.

1.9 Sustainable fashion

The fashion industry faces a critical challenge in integrating sustainability into its core practices. The report of Kerr and Landry (2017) highlights this issue, noting a slow shift towards sustainable practices and innovative business models. Particularly, rental

services, which represent a promising development in reducing apparel waste and promoting a more sustainable fashion industry, especially in Nordic countries. It is stated that governments and local authorities must collaborate with the business sector to promote sustainable consumption and production patterns, develop new policies, and focus on long-term visions (EEA, 2019). Technical and scientific capacity should furthermore be stimulated in developing countries (Eurostat, 2016).

Although the fashion industry is pressured to take responsibility for its social and ecological impacts, it often overlooks social, economic, and environmental impacts and human rights within its standards (De Brito et al., 2008; Nordic Fashion Association, 2016). Influential players and thinkers are needed to increase collaboration between the industry, policymakers, and local governments to move toward a sustainable future (Kruse, 2018). Consequently, stakeholder collaboration, sustainability integration, and employee engagement and training are crucial for fostering sustainability-oriented know-how throughout the organizations (Jerónimo et al., 2020; Wong & Ngai, 2021). Even though fashion businesses increasingly commit to sustainability, integrating these principles into core operations is challenging and can cause internal conflicts. This issue is evident in the fashion industry, which is frequently criticized for greenwashing due to its failure to embed sustainability promises into its business models (Adamkiewicz et al., 2022; Pedersen & Andersen, 2023).

The claim is being made that the fashion industry needs to adopt sustainable business models, moving away from the traditional "take, make, waste" (Ellen MacArthur Foundation, 2017, p. 48) approach and focusing on lifetime management of a product and end-of-life strategies (Niinimäki, 2024). In other words, such strategic planning must align initiatives with social and business benefits, addressing internal impacts of daily operations (inside-out linkages) and external influences such as societal trends and regulations (outside-in linkages) (Porter & Kramer, 2006)

The fashion industry has faced various challenges and changes in recent years, impacting its outlook for 2024. After experiencing significant growth in 2022, the industry encountered slower growth as consumer interest in fashion, including luxury segments, declined. This led to uneven performance and sales, especially in large markets such as Europe, the US, and China by 2023 (McKinsey Global Institute, 2024). Sustainability is among the pressing issues in the fashion industry, given the industry's reliance on low-cost country production (De Brito et al., 2008). Arguably, the industry is responsible for fostering sustainable fashion production by creating ethical and eco-friendly products that benefit the environment, the planet, and its people, including the workers' welfare (Vangsbo et al., 2014). Considering a product's entire lifecycle, including its environmental impact post-use, is crucial for sustainable development (Vangsbo et al., 2014). Vangsbo et al. (2014) emphasize the importance of environmental responsibility in supply chain management, strategy, and improvement. Environmental responsibility extends beyond legal obligations encouraging suppliers to adopt sustainable practices and use clean production technology (Johannsdóttir, 2014).

Fashion companies are shifting focus from cost-saving measures to strategies to grow sales through innovative pricing and promotional approaches. Supply chain management remains crucial, emphasizing transparent, collaborative relationships with suppliers. The industry is also grappling with the impact of new sustainability regulations in the EU and the US, challenges that mainly affect the fast-fashion industry (McKinsey Global Institute, 2024). Technological advancements, particularly in generative AI, are recognized as potential areas for growth, although a talent gap exists in effectively utilizing these technologies. Marketing strategies are evolving towards more authentic and relatable brand marketing, focusing on influencer collaborations (McKinsey Global Institute, 2024).

1.10 Research aim

This thesis aimed to identify the key drivers, challenges, and outcomes associated with adopting sustainable practices in the fashion industry, thereby contributing to developing more socially and environmentally responsible business models. The overall research aim is to explore how the fashion industry incorporates social, environmental, and economic value into its business models and redefine organizational boundaries to establish and sustain social and environmental responsibility. The following overarching research question are investigated in this context:

1. *How are sustainable business models and organizational boundaries of the Nordic fashion industry redefined in order to create social, environmental and economic value?*

Figure 3 illustrates sections 1 to 7 and contextualizes the four academic papers of this doctoral thesis.

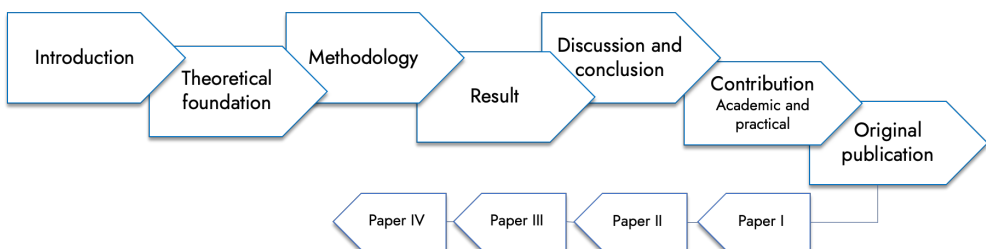


Figure 3. A summary of the following chapters of the thesis.

2 Theoretical foundation

In this chapter, the theoretical foundation relevant to this thesis is discussed. The study is rooted in institutional theory, which focuses on how organizations behave and the principles they follow (Powell & DiMaggio, 1991; Scott, 2014), examining how organizations conform to societal norms and expectations (Scott, 2014). Institutional theory emphasizes the importance of understanding how these contexts shape organizational behavior and practices, as this understanding helps explain similarities between organizations and societal expectations, guiding complex social structures to achieve their goals (Meyer et al., 2017; Meyer & Rowan, 1977; Powell & DiMaggio, 1991; Scott, 2014). The application of institutional theory has been confirmed in the fashion literature to understand formal and informal practices and to address environmental and social issues (Thorisdottir & Johannsdottir, 2020).

2.1 Institutional theory

Institutional theory, with its diverse insights into the organizational process, not only explains the expectations of stakeholders, authorities, and communities but also provides a practical foundation pathways for organizations. It is essential for organizations and industries to “meet their stakeholders’ cognitive and emotional expectations” (Daft, 2016, p. 198). Institutional theory has become prominent in the social sciences (Currie & Swanson, 2009) particularly in exploring the connection between the macro and micro levels of societies and how they influence the meso level, or the internal organizational environment (Wooten & Hoffman, 2017). Jepperson (1991) provided the following definitions to explain key terms such as, institution as the fundamental concept or *“the social order or pattern that has reached a certain state or property”* (p. 145) how they are institutionalized through *“the process of achieving such a state”* (p. 145) and institutionalism the *“theoretical approach that emphasizes institutional theories and aims to develop and apply them”* (p. 153).

The theoretical framework, as outlined by DiMaggio and Powell (1983), Jepperson (1991), and Singh et al. (1991), delves into the interplay between various organizations and the socially constructed beliefs and cognitions that form the institutional environment. These beliefs and cognitions are normative societal obligations entailing tangible elements that influence human behavior by acquiring a rule-like status (Meyer & Rowan, 1977). Consequently, organizations must conform to institutional norms and expectations to gain legitimacy, resources, and requirements from key stakeholders such as customers, investors, regulators, and the community (DiMaggio & Powell, 1983; Scott, 2014). From a social standpoint, this explains how members of organizations who share professional, economic, political, religious, or commercial

interests adhere to and engage with different rules, values, and norms within a broader social context (DiMaggio & Powell, 1991; Harries, 2012; Jepperson, 1991; Johansen & Waldorff, 2015).

As introduced by Selznick (1948), the institutional environment plays a fundamental role in understanding an organization's lifespan and how it embraces and embeds the norms, values, and practices taken for granted as part of its structure and operation. Institutionalization is driven by three forms of isomorphism: coercive, mimetic, and normative, which are crucial to understanding organizational behavior. These mechanisms explain how institutionalization leads organizations to adopt similar structures and practices (DiMaggio & Powell, 1983), offering unique insights into organizational processes by clarifying the expectations of stakeholders, governments, and communities (Daft, 2016).

Coercive isomorphism occurs when organizations adopt similar practices and behaviors due to external pressures. These pressures can include the political influence of legal requirements or the threat of punishment (DiMaggio & Powell, 1983).

Mimetic isomorphism arises when organizations respond to uncertainty by imitating the practices and behaviors of successful or prestigious organizations in their field. This imitation is often pursued to gain legitimacy and improve chances of survival. It is widespread in new organizations that establish their legitimacy and strive for success rather than choosing their niche and positioning in the market (DiMaggio & Powell, 1983).

Normative isomorphism appears when organizations adopt similar practices and behaviors based on shared norms and values within their institutional environment. These influences include professional standards or cultural expectations (Daft, 2016; DiMaggio & Powell, 1983; Jones, 2013).

Building on the discussion of isomorphism and organizational structures, Scott (2014) elaborates upon three institutional pillars: regulative, normative, and cultural-cognitive. These pillars interact with and influence organizational behavior, providing a comprehensive framework for understanding the multifaceted nature of institutional legitimacy and compliance (Scott, 2014). They "provide stability and meaning to social life" (p. 56) and are critical for understanding the various dimensions of social behavior and compliance within organizations, thereby guiding an organization's functioning within a broader institutional context, which sets the stage for exploring the dynamic interplay "between organizations and their environments" (Santos & Eisenhardt; 2005, p. 505) and how they respond to internal and external pressures (Höller, 2012; Wing, 2000; Wooten & Hoffman, 2017).

Scott (2014) emphasizes that although all three pillars contribute to the institutional level, the regulative pillar, comprising laws and regulations, employs the most significant influence in guiding organizations behavior and change. In contrast, the normative pillar encompasses norms and values. The cultural-cognitive pillar is rooted

in shared beliefs and assumptions and is as such vital in shaping individual behavior within institutions. However, even stable and long-lasting regulative systems can become susceptible to change and evolution under certain conditions. Maintaining stability and balance between institutional pillars is essential for the effectiveness of institutions. Scott (2014) emphasizes the importance of considering these institutional pillars to understand how they influence behavior through cultural values and norms, shared understanding and practices, and the formal rules guiding decision-making in an organization.

Dacin et al. (2002) explain that governance structures and regulatory systems exert a profound influence through coercive mechanisms as well as normative and cognitive processes, which define organizational forms that shape property rights distribution and set standards for organizational behavior, decision-making and development of organizational structure (Dacin et al., 2002; Tolbert & Zucker, 1998).

The Regulative pillar emphasizes compliance with formal rules to avoid sanctions, driven by cost-benefit analysis. Legitimacy is secured through adherence to legal frameworks enforced by laws and regulations (Scott, 2014). Legitimacy is achieved when actions are widely recognized, culturally supported, and aligned with shared cognition, providing certainty or creating confusion if not (Scott, 2014). Furthermore, Aldrich and Herker (1977) discussed the roles of political legitimacy, emphasizing power competence and organizational image by boosting visibility through advertising and public relations for external representation as a response to environmental pressure.

The Normative pillar Unlike the regulative and cognitive pillars, the normative pillar focuses on the ethical aspect of institutional influence. This is essential when explaining why organizations embrace certain practices, even when they are not legally required or directly tied to efficiency gains. It underscores the significance of legitimacy and ethical dedication when seeking social approval in organizational decision-making (Scott, 2001; Scott, 2014). The normative approach underscores the importance of ethical frameworks, common rules, and standards that guide organizations, impacting how they evolve and interact with their environments (Dacin et al., 2002). Rooted in social obligations and the logic of appropriateness, it aligns behavior with societal norms through mechanisms like certifications, helping organization achieving legitimacy (Scott, 2014), and ties professionalization with societal expectations of sustainable practices (Gauthier, 2013). However, despite companies' sustainability efforts, rapid market growth may increase their environmental footprint, challenging sustainability among global and local ecosystem pressures (Pogutz et al., 2011).

The Cultural-Cognitive pillar rests on taken-for-granted and shared understanding, where common beliefs and the shared logic of action are central. This pillar involves mimetic mechanisms, where organizations imitate others in their field, leading to isomorphism which can maintaining a status quo (Scott, 2014).

Scott (2005) discusses how the scope of analysis has expanded from individuals or groups within an organization to include the organization itself, its network of related actors, the population of similar organizations, and the broader field of interdependent organizations in the same domain.

Although organizations' internal and external environments have changed over the last decades, bureaucracy continues to impact potential efficiency and remains an "organizational form" (DiMaggio & Powell, 1983, p. 63). This form is influenced by political, social, and cultural factors that shape organizational behavior and practices (Scott, 2001), often exposing a paradox or tension between conformity and change (Zucker, 1987). Institutions play a significant role by framing the social bonds that tie the economy and society together through standards, rules, and practices. Operations within these frameworks are conducted by organizations (Harries, 2012). However, while adoption and innovation are crucial, they occur within the broader framework of isomorphism, which influences organizational structure and behavior (DiMaggio & Powell, 1983). Institutional theory, particularly in its modern forms, offers valuable insights into the norms, values, and rules that shape organizational behavior and decision-making processes (Zucker, 1987).

2.1.1 Institutional work

Institutional work refers to the intentional activities taken by individuals and organizations to create, maintain, or disrupt boundaries, institutional structures (Lawrence & Suddaby, 2006; Zietsma & Lawrence, 2010), and practices that form the structure of organizational fields, thereby playing a crucial role in their transformation (Zietsma & Lawrence, 2010). These activities occur within specific fields, involving advocacy, identity construction, and alignment with norms. Maintaining institutions involves a contrast between reinforcing accepted norms and creating or disrupting them, which leads to shifts in social and regulatory structures. A practice-based approach highlights how actors shape the institutional landscape through strategic or unintended actions (Lawrence & Suddaby, 2006).

Mechanisms created organizations, regulatory bodies, advocacy groups, professionals or other stakeholders with specialized knowledge, help sustain institutions but require ongoing maintenance and are subject the disruption, which shapes institutional boundaries. This includes, for example, enforcing norms, challenging established structures, or fostering new collaborations (Zietsma & Lawrence, 2010). The stability or transformation depends on the state of its boundaries and practices and the presence of actors able to exploit these dynamics. However, transformative institutional work can weaken boundaries and challenge existing practices, often displacing existing stakeholders, opening the field to new or external actors, fostering cross-boundary collaboration, and facilitating the development of new norms (Zietsma & Lawrence, 2010).

Battilana and D'Aunno (2009) emphasize the complexities of shaping, maintaining, and disrupting institutions. This is characterized by stability and legitimacy and how institutional work often requires balancing adherence to norms while challenging them to enable change creating tension between innovation and maintaining legitimacy. This paradox is evident when organizations must change but are constrained by the rules they seek to modify. Innovation may be seen as deviant in highly regulated fields, yet institutional change is essential for long-term survival (Battilana & D'Aunno, 2009).

2.2 Organizational theory

As a multifaceted field, organizational theory is crucial in understanding behavior and structure complexities. The theory has evolved by incorporating diverse perspectives, profoundly impacting the understanding of how organizations are influenced by and interact with their institutional environments (Powell & DiMaggio, 1983; Scott, 2001). Institutions increasingly shape social life, providing a complex environment for organizations and systems. Institutional theory is well-suited to help understand and potentially guide these developments (Scott, 2005).

The institutional theory provides insights into organizational processes, emphasizing how stakeholders and governments perceive the legitimacy of an organization's actions (Daft, 2016). It explains the likelihood of adopting strategies and structures from successful companies or competitors (DiMaggio & Powell, 1983) and how this can lead to increased homogeneity. However, to survive and thrive in a dynamic and uncertain environment, organizations must adapt, innovate, and differentiate themselves from competitors (Daft, 2016; DiMaggio & Powell, 1991). The organizational drive to gain a competitive advantage in the market is necessary to outperform competitors in terms of stability, customers, resources, and social, economic, and political power (Carroll & Delacroix, 1982), where they experiment with new ideas by taking risks even though the institutional environment may not support it (Daft, 2016; DiMaggio & Powell, 1983). This involves introducing a new product that challenges existing industry standards or redesigning the business model that disrupts traditional methods (Daft, 2016).

Organizational theory provides insights into how organizations are structured and interact within their internal and external environments. According to Daft (2016, p. 13), organizations are defined as social entities that are a) goal-oriented, b) intentionally structured and coordinated systems of activities, and c) connected to the external environment. They can be designed to foster learning and innovation (organic) or prioritize efficiency (mechanistic) while addressing elements such as design, culture, control systems, human resource policies, information, production, technology, network structures, and partnerships. Despite the focus on these elements, organizations must often contend with structural influences driven by competition or the need for efficiency, as bureaucracy remains the dominant organizational form (Powell & DiMaggio, 1983). Greenwood and Miller (2010) highlight that managing collective effort through effective design should be central to organizational theory, particularly in

shaping and implementing strategies, adapting to change, and facilitating coordinated collective behavior. Organizations are key mechanisms for achieving collective goals in modern societies. Far from being neutral entities, they act as collective actors with rights and powers, influencing outcomes and executing social processes through unique structural arrangements (Scott & Davis, 2016).

Effective management of these challenges involves optimizing structures, human resource practices, and information processes to achieve strategic goals and improve performance. Organizations are furthermore influenced by normative pressures from sources like government regulations, leading them to adopt standardized procedures, professional certifications, and compliance with legal mandates, potentially shifting focus away from primary task performance (Zucker, 1987). Therefore, normative aspects are essential in the design process as they shape behaviors and impact the acceptance and effectiveness of developing solid and unified organizational structures (Greenwood & Miller, 2010).

Performance gains achievable through innovation are realized once they are widely adopted. As organizations embrace these innovations, they gradually transition into recognized standard practices. Bansal (2005) highlights how mimetic, coercive, and normative pressures further drive this adoption process, leading to other businesses conforming to these norms and reinforcing them as institutionalized practices. However, it is important to integrate both resource-based and institutional perspectives when examining corporate sustainable development through environmental integrity, social equity, and economic prosperity, as it enables firms to effectively leverage their internal capabilities alongside external pressures to advance sustainable practices (Bansal, 2005).

2.2.1 Organizational boundaries

This study draws on the framework proposed by Santos and Eisenhardt (2005), which explores the existence and fundamental operations of organizational boundaries that define the formal structure of organizations. Additionally, it examines how sustainability influences these boundaries, particularly when incorporated into business models (Velter et al., 2019). Organizational boundaries are tangible, affecting collaboration across different organizations and significantly influencing organizational function, as noted by Wolfberg et al. (2017). This underscores the necessity of addressing complex issues related to organizational identity and structure (Gioia et al., 2000). Moreover, the importance of interaction and knowledge-sharing highlights the relevance of understanding organizational boundaries regarding cultural and social factors, external relations, resource dependence, and economic considerations (Scott & Davis, 2016). Institutional environments, which include market conditions, professional norms, and government regulations, play a crucial role in shaping organizational boundaries. These factors influence perceptions of legitimacy and acceptability within organizations and determine how organizations can navigate and adapt to external pressures (Meyer &

Rowan, 1977). Internal activities and external forces stem from institutional mechanisms (Scott, 2014) and shape organizational boundaries by limiting or expanding the range of actions and responsibilities in response to internal dynamics and external pressure (Santos & Eisenhardt, 2005; Scott, 2014).

Organizational boundaries at executive, strategic, and operational levels influence control through centralized or decentralized mechanisms. These internal boundaries can hinder sustainability efforts by limiting collaboration across different functional areas, thereby restricting the implementation of sustainable practices (Sarkis, 2012). Oliver (1993) highlights the critical role of tailoring boundary strategies to the specific demands of the external environment and organizational goals. This approach allows for nuanced boundary management, offering strategic advantages to address the complexities of organization-environment relations.

Establishing boundaries is crucial to overcoming the difficulties of a highly uncertain and competitive market (Santos & Eisenhardt, 2005; Santos & Eisenhardt, 2009). Organizations must balance differentiation and integration and adjust boundaries to operate efficiently, especially when external or internal driving forces threaten their performance and capabilities. Such leadership demands the authority to uphold the system's integrity and cohesion and achieve the integration essential for the system's effective performance (Schneider, 1987).

While companies have for a long time not been legally accountable for sustainability issues within their supply chains, they have faced significant reputational and economic risks from supplier misconduct. This has caused them to manage sustainability standards beyond their boundaries actively and has enabled them to extend ecological and social sustainability oversight across their operations (Leppelt et al., 2013). More recent developments suggest that this is changing. Accountability is being formalized, such as through the introduction of the Corporate Sustainability Due Diligence Directive (2024/1760). Coming into force in July 2024, these regulatory requirements mandate that companies identify and address adverse human rights and environmental impacts both within and beyond Europe (European Commission, 2024). Therefore, companies must demonstrate how they consider key stakeholders' interests, rights, and expectations, specifically those of supply-chain workers, from a broader sustainability perspective by integrating respect for human and labor rights into their strategies and business models. Addressing such complex boundaries within a sustainable business model can be challenging (Bjartmarz & Bocken, 2024). However, it underscores the importance of incorporating their well-being into the core of corporate sustainability efforts (European Sustainability Reporting Standards, 2022).

2.2.2 The boundary work

A boundary work perspective provides a specific view by examining how individuals and groups create, maintain, and navigate formal divisions that structure activities (Langley et al., 2019). Boundaries are shaped for various reasons, whether for personal

gain or as part of efforts to alter organizational patterns. Additionally, boundary work sheds light on organizational dynamics by offering insights into conflict, collaboration, and power relations and promoting a processual approach to understanding organizational design (Langley et al., 2019).

As understood through institutional theory, organizational boundaries are shaped by external social forces and evolve in response to pressures from regulators, investors, NGOs, and other stakeholders regarding sustainability matters (Pedersen & Gwozdz, 2014). The evolving nature of sustainability governance compels firms to reconfigure their boundaries, not just extend their oversight, but by integrating new governance structures and accountability mechanisms into their supply chain, operations, and business models (Weber et al., 2022). Sustainability-driven institutional pressures, therefore, require organizations to engage in boundary work that expands beyond economic concerns to include environmental and social responsibility, making firms more adaptive to external expectations (Campbell, 2007; Pedersen & Gwozdz, 2014; Weber et al., 2022).

The boundaries that limit an organization's ability and willingness to conform to institutional pressures, such as those imposed by stakeholders like regulators or investors, arise from organizational skepticism, political self-interest, and the desire for control, all of which constrain the willingness to comply (Oliver, 1991). Organizations might accept conformity when they question the legitimacy of institutional norms, face internal political interests that conflict with institutional objectives, or seek to maintain control over their operations and outcomes. However, an organization's ability to conform may be limited by insufficient resources, conflicting institutional pressures, or a lack of awareness of the expectations placed upon it (Oliver, 1991).

The institutional environment is dynamic, evolving with pressures such as globalization, where governments may have shifted regulatory responsibilities to the private sector (Campbell, 2007). Social movements and NGOs have pushed corporations to adopt responsible practices through dialogue and monitoring mechanisms. Such pressures have led to standards of corporate conduct that ensure responsible behavior, which can improve economic performance, as seen in the high competitiveness of the Nordic countries, which combine open economies with strong ethical corporate behavior (Campbell, 2007).

Weber et al. (2022) provide a nuanced understanding of boundary work strategies, power dynamics' influence, and trust's role in professional collaboration. They present micro-strategies that experts use to protect or limit their boundaries depending on external pressures, such as defensive approaches to restrict boundaries and accommodating ones that balance different interests. Timing and sequence are crucial in determining the outcomes of boundary strategies (Weber et al., 2022). Power dynamics, mainly situational control, can be more influential than social status, especially when one party has more knowledge or control of the situation, offering insight into how lower-status actors can leverage situational power in collaborative

settings. Furthermore, trust whether intentions-based or ability-based, is critical for applying boundary work strategies effectively, managing risks, and shaping collaboration success (Weber et al., 2022). Therefore, as sustainability pressures increase, these boundary strategies become essential in shaping how firms navigate institutional complexity (Leppelt et al., 2013). They enable firms to integrate sustainability into their core structures while maintaining operational control and stakeholder trust (Campbell, 2007; Hernes, 2004).

2.2.3 Boundary pressures and institutional forces in business models

Hernes (2004) discusses the functions of organizational boundaries and their role in shaping both internal dynamics (within the organization) and inter-organizational dynamics (interactions between different organizations). These boundaries differ in strength and substance across organizations or even within different units of the same organization. Hernes (2004) further emphasizes that ordering, distinction, and thresholds are key functions of boundaries. Ordering regulates internal interactions and behavior, using physical boundaries like rules or structures to define workflows, while mental boundaries guide thought processes and decision-making. Distinction separates the organization from its external environment, preserving its identity and differentiating it from others. Thresholds control the flow of people, ideas, and resources between the organization and its environment: higher thresholds create a more closed system, while lower thresholds allow greater exchange and adaptability (Hernes, 2004).

Sustainability emphasis challenges traditional boundary mechanisms by increasing firms' interactions with external forces or drivers. As a result, organizational boundaries must be, or are, altered to accommodate sustainability regulations and collaborative partnerships with regulatory bodies (Bocken et al., 2014; Weber et al., 2022). This evolution aligns companies' activities with market efficiency principles, emphasizing their ability to integrate sustainability emphasis into operational and strategic frameworks (Bocken et al., 2014). Pinkse et al. (2023) identify two critical pathways for integrating sustainability aspects into organization structures, cultures, and activities: discursive pathways, embed sustainability into business narratives, and cognitive pathways, which reshape managerial thinking for practical implementation, essential for legitimizing change.

Since sustainability influences managerial cognition across organizational boundaries, the interaction between sustainability pressures, resistance to changing business models, and organizational structures determines how effectively firms transform. However, some companies only engage in superficial discursive alteration, thus incorporating sustainability into their discourse without substantive action, resulting in greenwashing (Pinkse et al., 2023; Pedersen & Andersen, 2023; Thorisdottir et al., 2023). Others implement changes internally but fail to drive broader industry-wide transformation, limiting scalability (Pinkse et al., 2023).

Aligning with Santos and Eisenhardt's (2005) view on how organizational boundaries evolve in response to external pressures, the emphasis on sustainability challenges firms to reconfigure their competence and identity boundaries. This involves restructuring resource capacity and redefining roles to meet regulatory demands, societal expectations, and sustainability pressures, which drive firms to innovate their business models by adopting strategies such as maximizing material and energy efficiency, creating value from waste, and embracing stewardship roles (Bocken et al., 2014; Bocken et al., 2024). These shifts highlight the impact of sustainability emphasis on organizational structures and business model configurations.

Figure 4 summarizes the boundary pressure and how institutional isomorphism (external circle) pushes organizational boundaries (middle circle) and business models (central circle). The figure shows how organizational boundaries push and resist sustainability pressures, demonstrating the dynamic interaction between external forces and firm responses. Institutional environments, shaped by societal rules, norms, and cultural beliefs, exert external pressures, drive organizations to define boundaries and structure in their business models. Institutional isomorphism, coercive, mimetic, and normative pushes organizations to adopt similar practices. Coercive isomorphism, in particular, pressures organizations through regulations and laws, requiring them to adapt business models and redefine their boundaries to remain compliant. For example, new environmental laws may push organizations to include sustainable practices in their business models. However, business models push back by developing innovative strategies that meet regulatory requirements and enhance competitive advantage.

Mimetic isomorphism, as shown in Figure 4, pushes organizations to imitate successful competitors, especially in uncertain environments, by imitating practices from leading organizations to maintain legitimacy. However, business models push these boundaries by differentiating these practices through innovation, ensuring the organization remains unique while gaining legitimacy. Normative isomorphism arises from societal expectations and professional standards, such as CSR or sustainable innovation, those phusing organizational boundaries towards activities that align with global sustainability goals. Business models push back by incorporating these norms into core operations, offering new value propositions to stakeholders.

The regulative, normative, and cultural-cognitive pillars, presented in Figure 4, further explain how these pressures shape organizational boundaries. The regulative pillar pushes boundaries through laws and regulations, compelling organizations to adapt their structures to avoid sanctions. Business models push these boundaries by setting higher standards or influencing future regulations through innovation. The normative pillar pushes organizations to engage with global and local ecosystems and to meet societal expectations of sustainable practices. Such external pressures push organizations to adopt sustainable practices into their business models to adjust institutional environments. Business models push back by advancing sustainability

beyond what is expected, potentially reshaping societal expectations. The cultural-cognitive pillar pushes organizational boundaries and business models to conform to societal norms and values. Business models push organizational boundaries by introducing new practices that influence or shift societal beliefs, such as promoting CSR and sustainability innovation.

Figure 4 further presents how sustainable pressures from external stakeholders (e.g., regulators, NGOs, and social movements) push organizations to adopt responsible practices, especially in globalized contexts where higher standards are expected (Campbell, 2007). Business models push back by questioning the legitimacy of these norms, navigating internal political interests, or resource limitations (Oliver, 1991). Stakeholders such as customers, regulators, and investors impose institutional pressures that push organizational boundaries by expecting responsible practices like ethical behavior (Pedersen & Gwozdz, 2014). Business models push back by navigating power dynamics and trust in these relationships, adopting strategies to balance stakeholder demands (Weber et al., 2022).

Collaboration pressures push organizational boundaries by requiring the organization to navigate inter-organizational dynamics, where power relations and trust must be managed (Weber et al., 2022). Business models push back by strategically using boundary work to control collaboration outcomes, either imposing boundaries to limit external influence or lowering them for greater exchange when beneficial (Hernes, 2004).

Globalization, as presented in Figure 4, pushes organizational boundaries by shifting regulatory responsibility to the private sector and imposing global standards, such as responsible behavior and competitiveness in open markets (Campbell, 2007). Business models push back by leveraging internal boundaries to resist global pressures or questioning institutional expectations (Oliver, 1991). Market conditions are driven by globalization, customer demands, and regulatory expectations, which push organizations' boundaries by demanding consistency (Pedersen & Gwozdz, 2014). Business models push back by adjusting internal thresholds to control the flow of resources and information between the organization and the market (Hernes, 2004).

This demonstrates that sustainability pressures, through institutional mechanisms, actively redefine organizational boundaries. Organizations engage in boundary work to navigate sustainability-driven regulations, and other forms of pressure reinforcing the dynamic interaction between institutional theory and organizational adaptation (Hernes, 2004; Campbell, 2007; Weber et al., 2022).

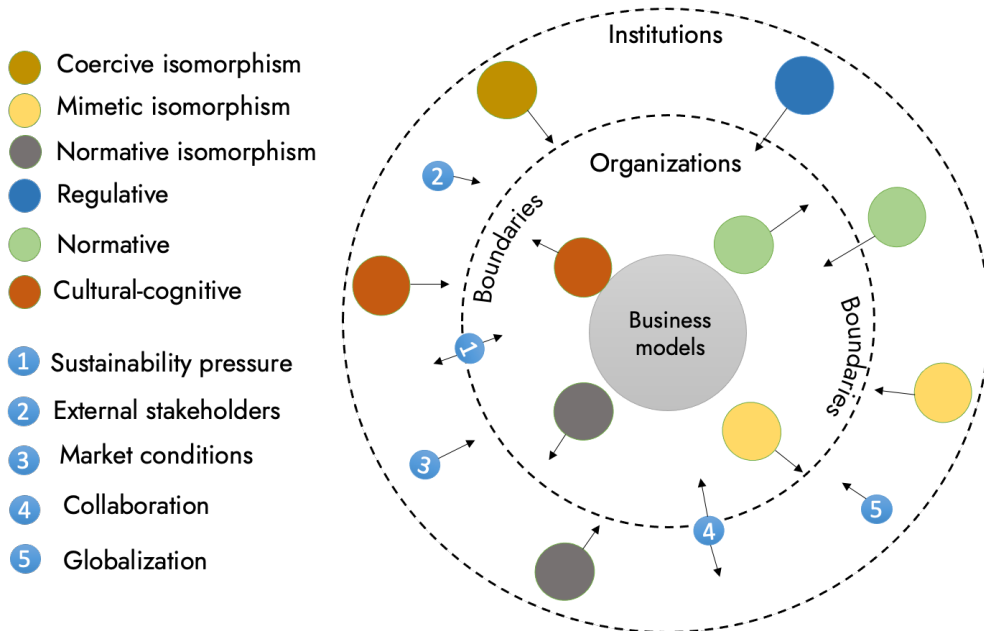


Figure 4. Boundary pressures: How institutional force shape, and are shaped, by business models.

Synthesized by authors.

3 Methodology

This chapter describes the thesis ontology, epistemological assumptions, and research approaches. The research methods, grounded theory, systematic review, and case study are then described in more detail, followed by case selection, data collection, and data analysis.

3.1 Philosophical underpinning

This research takes a pragmatic stance, utilizing qualitative methods (Charmaz, 2014; Creswell & Poth, 2018) to delve into the research problem and meet the demand for enhanced comprehension. As ontology, pragmatism reality is conceptualized as inherently practical and beneficial, allowing researchers to select research methods based on anticipated outcomes, thus emphasizing inquiry regarding the 'what' and 'how' aspects (Creswell & Poth, 2018), which reflects the worldview of actions, consequences, and situations (Creswell, 2014a). The research design is focused on understanding the nature of "reality and truth" (Morgan, 2007, p. 57). As William James (1907 as cited 2016, James, 2016) articulated, pragmatism emphasizes the practical consequences of ideas and actions and highlights the importance of beliefs in maintaining cherished human experiences (James, 2016).

Johnson and Onwuegbuzie (2004) contend that researchers must consider the cultural dimensions inherent in their approach, as these dimensions play a crucial role in achieving the desired outcomes without explicit value orientation (p.17). Thus, they advocate for a "compatibilist or pluralistic approach" within these assumptions (Johnson & Onwuegbuzie, 2004, p. 17). The main interest in the topic is driven by pragmatic thinking about practical solutions to the research problem. Moreover, it is essential to examine its appeal, including interpretations and "experiences of the organizational and social world's view" (Saunders et al., 2016 p. 147) from a perspective that relates more to social constructivism, also known as interpretivism (Creswell & Poth, 2018; Saunders et al., 2016). O'Reilly and Kiyimba (2015) argue that interpretivism relates to Kant's works concerning different ways of understanding the world, compared to "direct observation" (p. 11). They point out how interpretivism relates more to the communication between people and their reflection on the meaning of the reality of their experience of what happens in the social world (Crotty, 1998; O'Reilly & Kiyimba, 2015). This study, therefore, follows the social constructivism view as it relates to explaining the meaning of human and social reality (Crotty, 1998) in the context of a richer understanding of the phenomena examined or in "organizational realities" (Saunders et al., 2016, p. 135). According to Saunders et al. (2016), social constructivism fits well with business research as it echoes individual communications and interactions when they come together. Therefore, social constructivism as an

epistemological assumption reflects the knowledge and people's experiences on the topic studied (Creswell & Poth, 2018).

Crotty (1998) discusses the distinction between social construction and social constructivism, emphasizing that social construction highlights the creation of meaning as an individual process, where people interpret their experiences and construct their realities based on their perspectives (Young & Collin, 2004). In contrast, social constructivism highlights the construction as a social process that occurs through joint action and interaction within social contexts. It focuses on how individuals, influenced by history and culture, collectively construct the world they inhabit (Young & Collin, 2004). Social constructivism posits that knowledge is collaboratively constructed within groups, establishing a shared culture with mutual meanings and interpretations (Crotty, 1998). Knowledge is a social and collaborative process involving negotiation, reflection, and the construction of shared meanings (Creswell & Poth, 2018). Social constructivism challenges traditional views of knowledge: "All knowledge and all meaningful reality are contingent upon human practice" (Crotty, 1998, p. 42), as being discovered or transmitted from external reality, rather the active role of individuals and communities in creating meaning and understanding through social interaction is highlighted. This perspective emphasizes the role of social interactions, language, and shared understandings in shaping individuals' perceptions and interpretations of the world around them. Crotty (1998) asserts that humans shape reality, making it meaningful through their practices and activities, asserting that "all reality, as meaningful reality, is socially constructed without any exceptions" (p. 54).

3.2 Research approach

Qualitative research aims to uncover how people construct and interpret their social experiences (Denzin & Lincoln, 2005), construct their worlds, and assign meaning to their experiences (Merriam, 2009). This approach views reality as being shaped by social interactions and highlights the close connection between researchers and their subjects. It also acknowledges the influence of specific contexts on research and emphasizes the importance of values in the research process (Denzin & Lincoln, 2005). It is characterized by its dynamic nature, with questions and methods evolving during the research process, data being collected in natural settings, and analysis involving the identification of broad themes from detailed observations, as well as interpretation of findings (Creswell, 2014a).

3.2.1 Grounded theory

Grounded theory is described as a systematic approach with a specific structure that the researcher follows as a guideline from the beginning to the completion of the project. As a method, grounded theory provides a holistic strategy for data collection and analysis (Saunders et al., 2016). The definition of grounded theory relates to a research design that generates an understanding of activity or interaction shaped by the views of numerous individuals or interviewees, thereby grounding a theory in real-world

experiences (Creswell & Poth, 2018). It is essential to recognize the contributions of sociologists Glaser and Strauss when discussing grounded theory, as they pioneered this method in the 1960s through their influential book, *The Discovery of Grounded Theory*, published in 1967 (Corbin & Strauss, 2015). Their approach represented a significant change in qualitative research methods, offering an alternative to the quantitative techniques of that era. This involves a systematic method for generating theory from data, which is collected and analyzed continuously with a constant comparative method (Corbin & Strauss, 2015; Strauss & Corbin, 1998). Strauss and Corbin (1998) further discuss how the methodology evolved and emerged between the founders from prioritizing data-driven theory emergence, without prior theoretical frameworks, to a more structured version involving detailed coding procedures and the integration of theoretical frameworks (Strauss & Corbin, 1998), known as “theoretical sensitivity” (Saunders et al., 2016, p. 195), arguing that “professional experience” (Strauss & Corbin, 1998, p. 47) brings an understanding that shapes the analytic process.

Furthermore, theoretical sensitivity in grounded theory research refers to the researcher’s ability to recognize what is essential in the data and to give it meaning, without forcing concepts onto data but rather providing a comparative backdrop that enhances the theoretical framework (Saunders et al., 2016; Strauss & Corbin, 1998). The influence of the pragmatist tradition is particularly evident in grounded theory (Charmaz & Belgrave, 2019), as Strauss is rooted in this ideology, suggesting that reality and society emerge from interactions and focusing on communications and language (Charmaz, 2014).

The theory was further developed by adding interpretivism to social research when reality (Saunders et al., 2016; Morgan, 2007) emerges from social interactions through personal meaning and experience. Charmaz and Belgrave (2019) base this idea on Anselm Strauss’s early works and point out how constructivist grounded theory emphasizes the interaction between data’s structure and meaning. Compared to the objectivist perspective, which treats data as explicit, unambiguous, and separate, pragmatism suggests that individuals are inherently involved in how they perceive the world, viewing it through the lens of values (Charmaz & Belgrave, 2019). Constructivist grounded theorists analyze stories and the data within those stories by considering interviewees’ interpretations, language, and actions (Charmaz, 2006, 2014; Charmaz & Belgrave, 2019). Moreover, they contextualize the data within the “social, historical, and situational conditions in which it is produced” (Charmaz & Belgrave, 2019, p. 744). *“The constructivist grounded theory adopts an inductive, comparative, emergent, and open-ended approach of Glaser and Strauss’s (1967) original statement”* (Charmaz, 2014, p. 12). Figure 5 illustrates the methodological approaches used in this thesis.

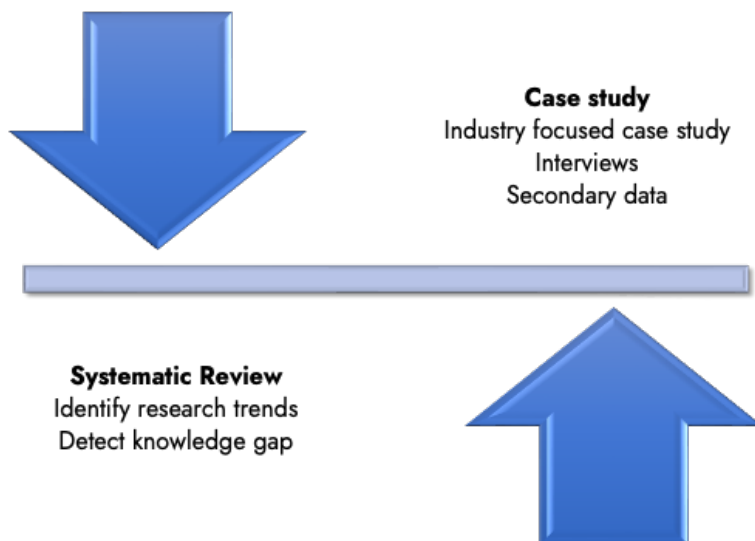


Figure 5. The methodological approaches used in this thesis.

3.2.2 Systematic reviews

Conducting a systematic literature review (SLR) is crucial for any research, as it allows the researcher to explore and evaluate the existing body of knowledge (Denyer & Tranfield, 2009). As such, SLR is a detailed methodology that identifies, selects, evaluates, and synthesizes research to draw clear conclusions about a topic's known and unknown aspects. It is distinguished by its rigorous criteria for including studies, ensuring transparency, and inclusivity of published work. SLR can reveal knowledge gaps, thus identifying valuable opportunities for further research and offering reliable evidence while identifying inconsistent findings that highlight areas for future study (Denyer & Tranfield, 2009). However, as Tranfield et al. (2003) pointed out, it can lead to potential bias and challenges in navigating evidence, which impacts the coherent synthesis of studies and decision-making in expanding the knowledge base. By adopting guidance from medical science, Denyer and Tranfield (2009) ensure that the SLR process is explanatory, inclusive, transparent, and facilitates learning (Saunders et al., 2016).

In terms of identifying the research gap in the literature on sustainable fashion, the first systematic review utilized the ProQuest database to search for papers focusing on how the fashion industry integrates sustainability into business models, if and how such practices are measured regarding transparency for overall improvements. It also examined how the fashion industry measures the results of sustainability actions and the drivers influencing these actions. The main criteria for selecting papers for review were peer-reviewed papers written in English. The period for selected papers spanned from 2000 to 2018.

In the second systematic literature review, databases such as Web of Science and EBSCOhost were utilized to identify relevant academic papers exploring corporate social responsibility and its influence on the fashion industry's emphasis on sustainability. The search period for selected papers published spanned from January 1970 to 2019, focusing on peer-reviewed works written in English.

Table 2. Summarizes the data-gathering process for the thesis.

Data source	Data type	Criteria	Total	To analyze
Systematic review Source: ProQuest	Peer-reviewed papers	<ul style="list-style-type: none"> - Written in English - Relates to Sustainability emphasis - Relevant to fashion business models - sustainability - Focuses on measuring or reporting - Selection period 2000–2018 	Academic papers found: 422 Papers screened: 300 Full papers read: 29 Papers analyzed: 19	Key elements for sustainability in business models Published papers related to the topic
Systematic review Source: <ul style="list-style-type: none"> - Web of Science - EBSCOhost's 	Peer-reviewed papers	<ul style="list-style-type: none"> - Written in English - Relates and focuses on CSR and sustainability - Relevant to the fashion industry - Selection period 1970–2019 	Academic papers found: 892 Papers screened: 318 Full papers analyzed: 209	How CSR influence sustainability within the fashion industry Published papers related to the topic
Semi-structured interviews	Recorded audio materials	Members of local fashion associations	11 Interviews, 665 minutes of recorded audio. 195 pages of transcribed text. 4 pages of field notes	Value systems and the interplay between sustainable business models and organizational boundaries
Secondary data	Sustainability reports Homepages: Sustainability statements	Fashion associations Fashion companies	Homepages: 38 Sustainability Reports analyzed: 28 Period: 2018–2020 Fashion blogs: 2	Complementary and validatory for primary data

3.2.3 Case study

Case study research as a qualitative approach is characterized by the researcher examining real life, the contemporary bounded system (either a single case or multiple cases) through comprehensive data gathering from various sources of information, such as observations, interviews, audiovisual content, and documents and reports (Creswell & Poth, 2018). According to Yin (2009), case studies enable researchers to preserve the comprehensive and significant attributes of real-life occurrences, including the life cycle of individuals, the behavior of small groups, organizational relationships, and the development of industries. As part of the case design, Yin (2009) explains five rationales for selecting a single-case approach: 1) critical case when testing a theory, 2) unique case when investigating ordinary circumstances, 3) representative case in everyday situations, 4) revelatory case inaccessible to social science and 5) longitudinal case for different points in time (p. 47-49). According to VanWynsberghe (2007), the interpretation of a case study is not solely focused on the case's self-revelation but also the discovery or construction of the analytical framework. This perspective marks a significant shift, indicating that researchers cannot precisely determine the analytical focus from the beginning. Instead, it emerges and becomes more apparent as the study advances.

Therefore, an industry-specific case study approach was suitable for this study, as it was used to explore the strategic approaches and mechanisms the fashion industry employs to redefine its boundaries that enable sustainable value creation and delivery, together with how these companies integrate evolving social, environmental, and economic value into their business models to establish and maintain sustainability. The justification for choosing an industry-specific case study rather than multiple case studies stems from its classification as a "revelatory case" (Yin, 2009, p. 49), a recognized rationale for single-case selection, and is well suited for uncovering fewer familiar aspects. This approach enables profound insights into how sustainability can be aligned within Nordic industry-specific business models, which can be seen as a best practice case, that includes practical aspects, challenges, and opportunities. Each example presented in the data was useful for developing the business model and is discussed further in the findings. The selection aims to facilitate a nuanced understanding of complex social structures (Yin, 2009) and occurrences within their genuine contexts (Yin, 2009; Merriam, 2009). This strength of the method lies in its ability to conduct thorough inductive process of investigation (Creswell, 2014; Merriam, 2009).

3.2.4 Case selection as a bounded criterion

Merriam (2009) outlines that a case study entails an in-depth examination of a distinct, defined topic or unit of analysis. For this thesis, the bounded system or criteria was the Nordic fashion industry, which has been documented for its homogeneity, leadership in sustainability activities, and achievements related to sustainable development goals (Lafortune et al., 2022; SDSN & IEEP, 2020; Strand, 2014). The central argument is

that organizational practices evolve and become institutionalized primarily because they are considered legitimate within and across national boundaries (Matten & Moon, 2008).

The first criterion for outlining the scope of this study was contacting an executive of a fashion association, a non-governmental organization (NGO) that serves as an umbrella for various Nordic fashion associations and operates as a collaborative platform for discussing and implementing sustainability initiatives across the industry. This NGO actively promotes and implements innovative sustainable practices by leveraging its members' unique strengths and diverse perspectives.

The process of selecting research interviewees was specifically outlined, following the approach of identifying potential candidates from a specific "segment of a population" (Collis & Hussey, 2014, p. 131). The data collection phase involved six associations, including the umbrella association and fashion associations in the five Nordic countries, Denmark, Finland, Norway, Iceland, and Sweden, all dedicated to sustainability.

The selection of interviewees followed a specific method known as snowball or networking sampling (Merriam, 2009). In this approach, association managers, as specialists in implementing sustainability within the fashion industry, were asked to recommend candidates from among five to ten company members based on their sustainability performance. This led to the inclusion of thirty-two companies, with six located in Denmark, eight in Finland, seven in Norway, five in Iceland, and six in Sweden. The next stage involved gathering managers' contact details for CSR or sustainability corporate actors within these companies. This was done by emailing companies' main offices and service desks or using LinkedIn message outreach to arrange interviews after explaining the study's purpose. Despite several attempts to reach all candidates in the sample, there was no response from two fashion associations and twenty-five companies. Within this non-responsive group, some expressed their unavailability or noted their involvement in similar research efforts previously. Instead, a few highlighted information on their websites or in company sustainability reports, emphasizing the value of using secondary data for this research. Thereby, materials from entities and associations that did not reply were incorporated, including information from websites, blogs, social media posts, and sustainability reports from 2018 to 2020.

3.2.5 Data collection for this thesis

Data were collected through semi-structured interviews and secondary data to provide answers to the research questions proposed. The secondary data sources comprised sustainability reports, texts from company websites, researchers' memos, and field notes taken during the interviews, which are discussed further in the subsequent sections. This data collection took place from early 2020 to late 2023. Figure 6 illustrates the data collection from phases I and II of the interviews and secondary data.

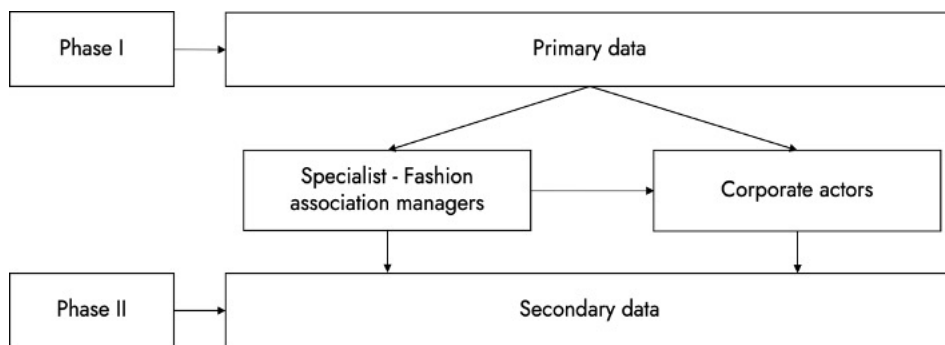


Figure 6. Overview of data collection for this thesis.

3.2.6 Phase I - Interviews

Eleven semi-structured interviews were conducted with interviewees from the Nordic fashion industry, including four managers from different fashion associations across the Nordic countries. Interviews with specialists with extensive knowledge and training in a specific field are valuable for gathering in-depth information from individuals (Brinkmann & Kvale, 2015), in this case managers in implementing sustainability strategies and emphasis within the fashion industry. These interviews did provide orientation in the field or complement ongoing data collection (Flick, 2014). As detailed in Chapter 3.2.4, a snowball sampling method identified 32 fashion companies, resulting in seven interviews conducted with four sustainability managers and three with executives and company owners as corporate actors (see further in Appendix A).

The interviews occurred between May 2021 and January 2022. Four interviews took place at the interviewees’ places of work, one was held over the phone, and six were conducted online via Zoom. Two semi-structured interview guides were developed to gather information consistently (Brinkmann & Kvale, 2015; Charmaz, 2006), focusing on open-ended questions. The first was used to collect background details from the associations, and second one to gather necessary company information. The interviews varied from 40 to 75 minutes and were scheduled at the convenience of the interviewees.

3.2.7 Phase II - Secondary data

Secondary data for this research were collected from various sources, including twenty-five fashion companies, and eight CSR/sustainability reports from 2018 to 2020, information provided at the website of fashion associations, and information two fashion blogs relevant to the study. This data included textual contributions from corporate actors such as, company owners, executive directors, managers, and sustainability managers. This collection process, aimed at cross-verifying data from diverse sources such as companies’ sustainability reports and websites information, sought to understand the foundational themes or perspectives (Creswell & Poth, 2018;

Creswell, 2014b). The secondary data provided additional context and information and complemented the interview data, facilitating robust cross-validation and comparison. Such an approach significantly bolstered the credibility and reliability of the research findings (Saunders et al., 2016).

3.2.8 Data analysis

All interviews were recorded with the interviewees' permission and transcribed verbatim. Charmaz (2014) highlights the significance of constructing meanings and realities through the interaction between the researcher and interviewees, advocating for an approach where theories emerge directly from the data, emphasizing reflexivity and the co-construction of knowledge. Creswell and Poth (2018) argue the importance of ensuring a comprehensive analysis adaptable to the study's needs. By integrating the constructivist grounded theory of Charmaz, which focuses on the iterative process of data collection and analysis with a certain flexibility, and rooted in the interviewees' experiences, researchers can achieve a rich, interviewee-centered analysis that honors multiple viewpoints and facilitates the emergence of grounded theory (Creswell & Poth, 2018).

According to Charmaz (2014), data analysis and coding "is the process of defining what data is about by categorizing that simultaneously summarizes and accounts for each piece of data" (p. 111). The data was analyzed by following Charmaz's (2006;2014) recommendation: keeping openness, allowing unexpected insights to surface, and ensuring codes are grounded in the data.

The initial coding stage involved examining the research data, analyzing and transcribing interviewee responses, and reviewing field notes written after each interview. These were categorized using MAXQDA (VERBI, 2022), an analytical tool suitable for analyzing qualitative data. To prevent the risks that can emerge during the coding process through mechanical coding, the text was read line by line to identify and capture the interviewees' exact words and relevant information from secondary sources, avoiding the imposition of preconceived categories (Charmaz, 2014). Charmaz (2006, 2014) stressed coding topics as actions rather than themes, using action verbs to highlight the data's dynamics. Figure 7 illustrates the data analysis process for this thesis. The codes show the initial coding stage and categorize the focus coding stage. Further details on coding development are provided in Appendix B for Paper III and Appendix C for Paper IV.

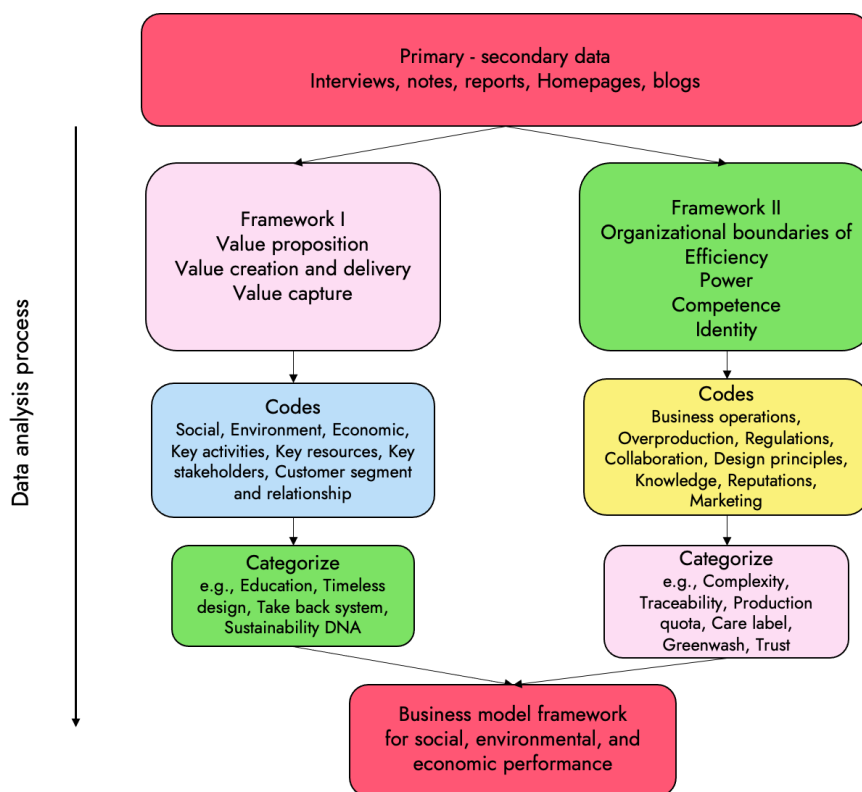


Figure 7. Overview of the data analysis.

The focus stage shifts to synthesizing data through the most significant initial codes, aiming to explain larger segments conceptually (Charmaz, 2006; 2014). It involves refining codes, integrating them into categories, and identifying relationships. This is done by creating sub-codes while keeping the data unstructured or "simple, direct, and spontaneous" (Charmaz, 2014, p. 113). In this study, initial and focus coding was applied across two data sources, Nordic fashion industry specialists, corporate actors and secondary data.

Rather than comparing companies, the final coding step employed a comparative method to identify similarities and differences within the data, resulting in distinct categories that emerged throughout the process. The focus coding stage requires researchers to constantly compare data with codes, refining and focusing the analysis further. It bridges the open-ended exploration of initial coding and the targeted theory-building efforts of later stages.

This thesis uses an inductive reasoning approach "that begins with study of a range of individual cases and extrapolates patterns to form a conceptual category" (Charmaz, 2014, p. 343). This research approach is inductive to a better understanding of the research subjects where data is collected (Saunders et al., 2016) to explore the nature of sustainability in fashion business models. The inductive approach entails analyzing various individual cases and discerning patterns to construct a more comprehensive

conceptual framework, as outlined by Charmaz (2014) and supported by Creswell (2014a) and Saunders et al. (2016). Hence, examining a small sample may be more suitable than a larger number, as with the deductive approach (Saunders et al., 2016). Table 3 presents the development of coding and text analysis on value aspects, where NFMs stands for Nordic fashion managers (Appendix A), with information drawn from primary and secondary data (see further in Appendix D).

Table 3. Examples of text analysis and coding development on the value aspects.

Framework	Initial codes	Focused codes	Aggregate dimension	Illustrated examples
Value proposition, Value creation and delivery, Value capture	Education	Social	Value proposition	We are a small company; only a few employees know what the company stands for regarding sustainability and CSR (NFC16).
	Take back system	Economic		It is a broken system. Thirty percent of garments are worn only once or twice before being discarded, and old garments are frequently exported to countries that do not require these donations (NFMs32).
	Awareness	Customer segment and relationship	Value creation and delivery	We aim to promote sustainable practices and focus on raising awareness of our products by enhancing knowledge about materials and clothing care (NFMs13).
	Technology	Key activity		[...] We need new technology, which is a huge barrier for us (NFC32).
	Finance	Revenue stream	Value capture	We set our prices responsibly, ensuring they cover the costs required to maintain sustainable, ethical production while preserving our quality standards (NFMs13; NFMs30).

Table 4 presents coding and text analysis development on organizational boundaries, where PD stands for primary data and SD for secondary data (see further in Appendix A).

Table 4. Examples of text analysis and coding development on aspects of boundaries.

Framework	Initial codes	Focused codes	Theoretical coding	Illustrated examples
Organizational boundaries of Efficiency Power Competence Identity	Management	Business operations	Efficiency	Our management system, focused on environmental sustainability, aims to improve the company's performance. Our suppliers and subcontractors must evaluate environmental impacts and set clear improvement goals (PD3).
	Human rights	Ethical practices	Power	We donate to and support several organizations (SD2; SD3; SD7). We uphold human rights by following the UN's Universal Declaration of Human Rights across all our operations, and we demand that our suppliers do the same (SD1; SD2; SD8).
	"We are running out of time"	Volatile markets	Competence	We strive to develop innovative technologies that enable a circular system and transform peak stock into raw materials (NFM13; NFM18; NFM32). However, this process is time-consuming, and we are running out of time (NFM31; NFM32).
	Hamster wheel	Production life cycle	Identity	The changing seasons necessitate the creation of new collections regularly (NFM13). It is like a hamster wheel, where we are constantly racing to launch our spring, summer, autumn, and winter collections to stay competitive, avoiding missing out on sales that our competitors capture (NFM13; NFM31; NFM32).

Interviewing specialists in the field of sustainability within the fashion industry contributed theoretical insights, while corporate actors offered practical experiences and operational perspectives; a total of eleven interviews provided diverse perspectives and gave a well-rounded understanding of the implementation of sustainability

emphasis in the Nordic fashion industry. Furthermore, secondary data supported these findings but did not introduce new dimensions to existing categories, confirming that the analysis had thoroughly captured the key concepts (Creswell & Poth, 2018). Nevertheless, data triangulation strengthened and reinforced the study results (Flick, 2014; Denzin, 2012). Additional interviews were unnecessary since theoretical saturation was reached (Charmaz, 2014).

3.3 Triangulation

This thesis employed triangulation, drawing from primary and secondary data sources to mitigate risks and enhance validity (Denzin, 2012; Creswell, 2014; Flick, 2014). It explicitly aimed to cross-check and validate findings, providing a reliable and nuanced understanding of sustainability practices within the fashion industry. Triangulation practice advocates using multiple data sources, methodologies, theories, and investigators to cross-verify findings (Denzin, 2012; Creswell, 2014; Flick, 2014) to gain an in-depth understanding of a phenomenon. It recognizes that objective reality cannot be fully captured, only represented (Denzin, 2012), thus providing deeper insights beyond those of a single method or perspective (Flick, 2014).

Data triangulation entails collecting data from different times, spaces, and participants to understand the research problem (Creswell, 2014). Yin (2009) suggests that triangulation strengthens case study research by allowing researchers to develop converging lines of inquiry, ensuring that findings are robust and reliable. Triangulation involves examining a research issue from multiple perspectives using different methods or combining various data types. This approach enhances research quality, as each source contributes unique insights, providing a more profound understanding than any single method alone (Flick, 2011).

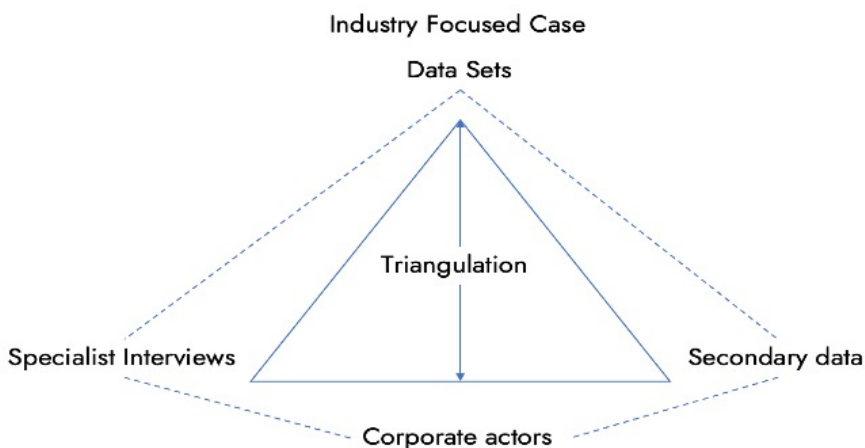


Figure 8. The level of triangulation across primary and secondary data in qualitative research.

By following Flick's (2014) steps to explore consistency and variation within the data, deeper insights can be gained into how Nordic fashion industry specialists (expert perspectives), corporate actors (practical implementation and industry practices), and secondary data (sustainability reports and webpage texts reflecting public-facing commitments and industry descriptions of sustainability activities) engage with sustainability. This approach ensures a well-rounded analysis by linking high-level expertise, operational realities, and publicly documented sustainability efforts as an industry-specific case study (see Figure 8). By leveraging the strength of triangulation, the findings can be assessed to determine whether they converge (show consistency), contradict, or complement one another (Flick, 2014).

The analysis follows a structured process. First, topics related to the "sense of actions" (Charmaz, 2014, p. 120) are identified in the specialist interviews. Next, the corporate actors' interviews are examined to explore how sustainability is understood and implemented at the operational level. Finally, the secondary data is analyzed to assess how sustainability is publicly represented. Then, patterns across these datasets were compared to identify similarities and differences, particularly between the interviews and the secondary data, utilizing the potential of triangulation at this level.

Paper III revealed differences across data sources and nuances in sustainability practices by incorporating secondary data. For instance, while the primary data emphasizes minimizing consumption as a central sustainability practice, this focus is absent in secondary data, suggesting a gap between actual practices and sustainability reporting. Additionally, while a sustainability roadmap is described as a guiding framework in the secondary data from four out of five Nordic countries, it appears in the primary data of only one of these countries.

Furthermore, although both data sources emphasize timeless design in the context of sustainable business models, discrepancies arise between primary and secondary data. For example, rental was mentioned as part of the solution in both data sources for Danish, Norwegian, and Swedish companies, while repair was discussed as a solution in interviews with Icelandic and Norwegian companies and in the secondary data, except in the case of the Danish companies. Differences between data sources were notable in discussions of marketing, industry reputation, cost efficiency, and investment decisions regarding sustainability. While individuals interviewed from Denmark, Iceland, and Norway underscored the importance of addressing these topics, industry reports, and company websites did not reflect these statements, especially concerning cost efficiency, where the discussion was absent in the secondary data (see Appendix D). This approach, therefore, enriches the overall analysis and provides a more comprehensive perspective, mainly when there are gaps in the primary data.

In Paper IV, differences between primary and secondary data were notable regarding the complexity of business operations and efficiency, which appeared only in the primary data and related to the resource limitation for sustainable materials. Such complexity did not come through in the secondary data. Raw materials, however, were

considered important in interviews with managers in Denmark and Norway to improve traceability, though this discussion was only apparent in the secondary data from Denmark and Sweden. Even though human rights seem to be a broad topic in both data sources, the discussion related to collaboration did not reflect such conversations. Through the interviews, Danish and Norwegian managers considered collaboration with consumers and authorities critical to addressing environmental and social impacts. Collaboration with consumers was, however, only mentioned in text and reports from Denmark, while collaboration with authorities was further mentioned in secondary data from Denmark, Finland, and Sweden (see Appendix E).

Further differences between data from these two sources were notable in discussions about greenwashing, which was apparent in the interviews, but it was only in Danish reports and texts where this issue was discussed openly in their reports and text. These discrepancies highlight how triangulation provides a fuller understanding of sustainability approaches and clarifies complex sustainability trends across Nordic countries (see Table 5).

Table 5. Example of data triangulation: Primary and secondary data insights.

Greenwash	
Primary data Specialist	<i>The fashion industry faces challenges with greenwashing, as brands must ensure their sustainability claims are truthful and legally compliant. While sustainability is a core value for many companies, not all brands can be considered sustainable. The industry actors must focus on corporate social responsibility (CSR), transparency, and proper sustainability communication to address such issues. Educational programs guide brands in structuring their supply chains for better oversight and help them understand what can legally be claimed about sustainability. Regulatory bodies emphasize that companies must provide clear evidence to support any sustainability claims, preventing misleading statements (PD11)</i>
Primary data corporate actors	<i>Sustainability is widely recognized as important, but the challenge lies in how to implement it. While some companies are making genuine efforts, many brands, especially outside certain regions, are still not acting. Awareness has grown significantly in the fashion industry over the past five years, yet gaps remain [...], raising concerns about whether all sustainability claims are truly backed by meaningful initiatives (PD2).</i>
Secondary data	<i>In an industry responsible for up to 10% of global emissions, where greenwashing is "the new black," industry-wide standards and third-party auditing are essential to ensure actions have actual impact rather than just good intentions (SD3).</i>

Using secondary data from multiple sources enabled triangulation that facilitated a comprehensive understanding of the phenomenon studied, enhancing the validity and credibility of the outcomes while avoiding sole reliance on possibly personal quotes from interviews (Yin, 2009). Additionally, diverse data collection is essential for illuminating themes, perspectives (Creswell & Poth, 2018; Lincoln & Guba, 1985), and categories (Charmaz, 2014) that enhance the validity of findings. This enables assessing how individuals respond to ideas and routines and interpret various perspectives, thus elucidating the underlying practices in textual and documentary materials (Charmaz, 2014). This approach is critical for capturing a comprehensive array of viewpoints from interviewees and analyzing texts related to inequality and its mitigation in the sustainability discourse. Such comprehensive representation is vital for ensuring the findings' credibility and reliability. Although triangulation was used to strengthen validity and reliability, eliminating biases in interpretive research is challenging. Subjective interpretations could, therefore, have impacted the analysis and conclusions.

3.4 Validity and reliability

By combining primary and secondary data collected for the research, secondary data offered extra information and context, thus complementing the interview data. This approach allowed for cross-validation and comparison of information, thus enhancing the credibility and reliability of the research findings. This triangulation of data using different data sources deepens the understanding of the phenomenon from multiple perspectives (Creswell & Poth, 2018), in this case, the sustainability practices emphasized by Nordic fashion associations and companies, analyzed as an industry case, to ensure "validity and reliability" (Merriam, 2009, p. 216) of the study.

Reliability in qualitative research focuses on the consistency and neutrality of the research process (Merriam, 2009), but a well-documented and transparent chain of evidence allows for replication and verification of the study's processes and findings (Saunders et al., 2016; Yin, 2009). Reflexive practices can enhance dependability by demonstrating consistency in data collection and analysis (Saunders et al., 2016; Creswell, 2014). Although reliability is a fundamental quality of research excellence, it does not guarantee a high quality of research on its own, as overall quality also relates to validity in qualitative research, which is central to credibility and transferability in social sciences (Saunders et al., 2016). The researcher's ability to interpret and present interviewees' perspectives accurately ensures that the findings are accurate to the data (Creswell, 2014). Therefore, it is essential to account for the researcher's role as an instrument in qualitative research, advocating for reflective practices that enhance the credibility of the findings (Charmaz, 2014; Merriam, 2009).

3.5 Ethical issues

Brinkman and Kvale (2015) declared ethical issues in research progress, which are essential to consider throughout the research process, remaining relevant during the interview progression and up to the final report. They suggest that authors consider improving situations in their investigations by approaching the subject serenely, securing the interviewee's anonymity respectfully, and being loyal to the information given throughout the interview process. This is also something authors need to consider during the transcription, analysis, and reporting process, or when the interviewee is becoming too critical or being true to the "oral statement" (Brinkmann & Kvale, 2015, p. 86) given and how information is presented in the final report (Brinkmann & Kvale, 2015).

A request was emailed to select companies' managers, where the study aim was explained, asking for contributions through interviews. Invitees received a detailed consent form by email outlining the study's purpose, methods, potential risks, and benefits. At the beginning of each interview, this form also explained their right to withdraw from the study without any consequences. Consent was also obtained verbally, ensuring interviewees fully understood their role and could make an informed decision. Those who replied and agreed to contribute were guaranteed that all information provided would remain strictly confidential. It was also explained how their contributions were without any obligations, and they could end the interview at any time, as suggested by Brinkmann and Kvale (2015) and Creswell and Poth (2018). Interviewees' voices have been included in the research papers "without labeling they might not embrace" (Creswell & Poth, 2018, p. 54).

Furthermore, transcribing and reporting data was conducted to ensure that the identity of individuals and information could not be linked to their companies. Therefore, interviews and companies will not be identifiable in any publications presenting the results unless they grant specific permission. This approach aligns with the guidelines suggested by Brinkman and Kvale (2015). Personal identifiers were removed to secure the anonymity of the interviewees and their companies/sources. In Papers III and IV, each was marked with initials without directly linking the discussions to them. All collected data are stored securely in encrypted digital format, accessible only to the researcher. Identifiable information is separated from the data at the earliest opportunity and destroyed once it is no longer needed. These measures ensure the privacy and security of interviewees' information throughout and after the conclusion of the research.

The thesis adheres to ethical standards by presenting the research process to interviewees, securing informed consent, and employing a semi-structured interview approach. Consequently, the research is carried out with a commitment to integrity, encompassing reliability, honesty, respect, and accountability. This thesis has been executed in compliance with these ethical guidelines of the Ethics Committee at the University of Iceland (Ethics Committee, n.d.).

3.6 Research bias and assumptions

According to Creswell and Poth (2018), “*all researchers bring value into their study that characterizes qualitative studies*” (p. 21). Axiological assumptions underscore the importance of recognizing and addressing the potential influences that might sway research outcomes—for example, the cultural aspect of research, suggesting a compatibilist or pluralistic approach to avoid bias (Creswell & Poth, 2018; Johnson & Onwuegbuzie, 2004). Therefore, the researcher must acknowledge the potential impact of previous experiences on the choice of this research project. There is a strong inclination towards examining sustainability action from a new perspective, informed by real-world experiences within the fashion industry. The researcher is conscious of her integral role in the research process. To prevent bias, the researcher strives to be true to values when discussing the subject with honesty, whilst exercising professionalism by respecting different views individuals might have on sustainable action in the industry, which can be shaped by social, cultural, and historical contexts (Creswell & Poth, 2018; Crotty, 1998; Saunders et al., 2016).

Furthermore, the researcher understands how personal knowledge might manifest within the research data, underscoring the need for an ethical stance emphasizing neutrality. This stance aims to create a necessary distance to fully capture the interviewees’ viewpoints and experiences, fostering the development of new understandings of the investigated topic. Through this commitment to maintaining an ethical approach, the research aimed to explore the subject matter thoroughly and impartially.

4 Results

This section summarizes the main results from four incorporated papers. Despite different findings and contributions, these papers influence each other and address the overall research aim which is to explore how the fashion industry incorporates social, environmental, and economic value into their business models and redefine organizational boundaries to establish and sustain social and environmental responsibility. Through this thesis, the researcher sought to identify the key drivers, challenges, and outcomes of adopting sustainable practices within the fashion industry, contributing to developing resilient, socially, and environmentally responsible business models than they currently are. The chapter concludes with a summary derived from the four supplemented papers.

4.1 Summary of supplemented papers

Paper I: Sustainability within Fashion Business Models: A Systematic Literature Review.

Published in *Sustainability*, 2019, 11, 2233; Doi: 10.3390/su11082233

Paper I responds to research questions #1 and #2: How is sustainability measured and/or reported in fashion business models? What drivers influence sustainability within the fashion business models?

Over the years, the fashion industry has faced criticism for its unsustainable consumption of natural resources. The fashion industry, furthermore, is often linked to discussions about climate change due to its significant role in environmental harm. Over the years, the industry has faced criticism for its unsustainable consumption of natural resources. This has prompted demands for slower production processes, opportunities for recycling, and waste reduction. Additionally, there has been a push towards incorporating sustainability and circular principles. Although large fashion companies, especially in Nordic region, have introduced sustainable business models, critics have pointed out the linear processes in these models, emphasizing their continuing unsustainable activities. In early 2018, a search for academic evidence revealed few published papers. Therefore, Paper I, as a systematic literature review, aimed to enhance the understanding of how the fashion industry integrates sustainability into its business models. Additionally, it investigates whether sustainability-related practices are measured to ensure transparency and improvement and identifies the drivers of sustainability in fashion business models. The data was collected from the ProQuest database, utilizing the search strings "Business model," "Fashion," "Sustainability," and "Measuring," which yielded 422 papers. After a thorough examination, nineteen papers related to fashion industry sustainability, measuring, or reporting sustainability were analyzed further.

Paper I identified the diverse approaches used to integrate sustainability-emphasis into fashion business models by focusing on innovation, model structure, and competitive advantage. Furthermore, the findings emphasize the importance of competitive advantage through reusing, recycling, and transforming waste into new products, alongside the need for organizational value focusing on technology and consumer behavior trends. Paper I also highlighted an urgent need to change business models to support sustainable development, as the current models might only partially support sustainability goals. Extensive research on how sustainability practices are integrating into fashion business models, however, calls for further exploration. The findings also noted the challenges fashion companies face in incorporating sustainability practices into their business models due to a lack of consumer interest in eco-friendly products. These findings emphasize the need to incorporate education into business models to inform consumers about the social and environmental issues stemming from mass production. Moreover, the findings also highlight how sustainability is measured or reported in fashion business models, although only a few papers focused on CSR, GRI standards, Apparel and footwear sector supplement (AFSS), and the triple bottom-line method for sustainability within business models and supply chains. This led to the conclusion that there is a critical need for the fashion industry to measure sustainability practices, as the value of environmental actions is inherent within fashion business models.

The findings of Paper I identified internal and external drivers for sustainability integrated into business models. Internal drivers are: (1) organizational innovations, (2) value creation for the company and its stakeholders, (3) equity, (4) authenticity, (5) functionality, (6) localism, and (7) exclusivity. External drivers relate to (1) government and regulatory pressure, (2) market pressure, (3) closed loop/circularity pressure. The findings also discussed how the fashion industry could reduce overall consumption by redesigning sustainable and fashionable items and appealing to consumers' interest in renting, reusing, repairing, and upcycling fashion garments. The findings indicated that consumers perceive value related to their emotions and price and are likelier to buy products from fast fashion brands rather than purchasing quality products from slow fashion brands. Sustainability-related issues and ethical consumption did not seem to influence their purchasing decisions and emotional factors unless they are directly affected. This underlines the educational need regarding the social and environmental issues the fashion industry causes, thereby encouraging consumer to reconsider their choices.

The findings also concluded that the circular economy (CE) emphasis could benefit the fashion industry by closing fashion loops, for example, by reducing the need to extract new raw materials, with resources being reused and recycled continuously, and minimizing waste generation. It was also concluded that governments could promote sustainability policies, regulations, and standards and actively cooperate with the fashion industry and academia to find sustainable solutions.

Paper II: Corporate Social Responsibility Influencing Sustainability within the Fashion Industry. A Systematic Review

Published in *Sustainability*, 2020, 12, 9167; Doi:10.3390/su12219167

Paper II responds to the research purpose of exploring CSR and how it influences sustainability within the fashion industry.

The fashion industry is pressured to address environmental and social issues but struggles to fully integrate CSR, with few companies hiring CSR experts. The industry's focus on minimizing the cost of production fuels consumerism despite the potential long-term benefits of CSR for creating value. Motivating drivers for adopting CSR vary, from improving reputation to gaining a competitive edge, but the impact of these actions is uncertain. Additionally, the industry attempts to support diversity and reduce consumerism but faces challenges in making eco-friendly fashion appealing due to design and texture concerns.

CSR encompasses a wide range of practices, especially in the fashion industry, which often overlaps with sustainability efforts. As an umbrella term covering various sustainability issues, CSR in fashion can include everything from environmental to social responsibilities. This broad scope of CSR highlights the industry's increasing focus on integrating sustainability into its practices, underlining the importance of a comprehensive approach to addressing environmental and social concerns within fashion. A systematic literature review was carried out to map existing knowledge and explore how CSR influences sustainability in fashion discussion.

The systematic literature review approach was used in this study to synthesize secondary data from the Web of Science and EBSCOhost's Academic Source Premier and Business Source Premier. In terms of covering a broad selection of CSR and sustainability papers concerning the fashion industry, the search string was as follows: (Corporate Social Responsibility or CSR or corporate responsib* or stakeholder* or economic sustainab* or environment sustainab* or social sustainab*) and (Fashion* or apparel* or clothes* or garments* or textile*). This search yielded 892 papers from 1970 to 2019. After a thorough examination, a total of 209 papers related to CSR, sustainability, and fashion were analyzed further.

The study employed qualitative content analysis (QCA) related to an inductive approach. The analysis involved open coding techniques, utilizing software programs for text examination, such as MAXQDA2018 and Microsoft Excel 365, to categorize and integrate concepts for development and implementation. This iterative process of examining and refining the data helped define categories based on the literature, ensuring the methods were well-suited to fit the nature of the study. Examples of the coding frame, categories and main topics of CSR, and sustainability in Paper II are illustrated in Figure 9.

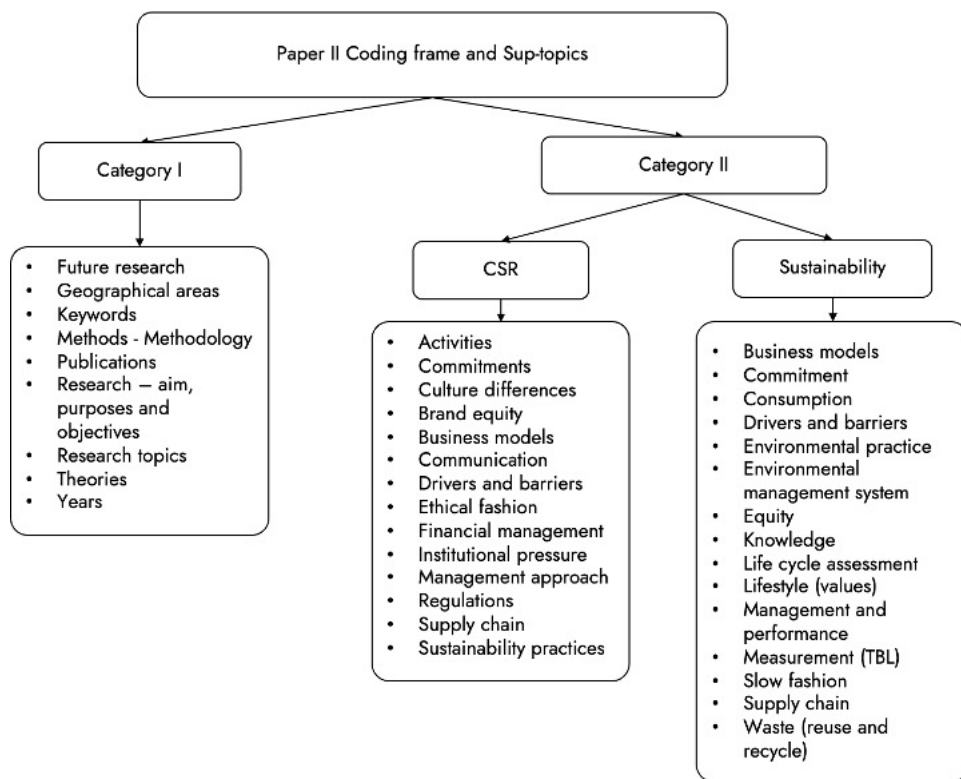


Figure 9. Examples of the coding frame, categories and sub-topics in Paper II.

The study findings highlight a growing interest in CSR and sustainability aspects related to the fashion industry. No papers were published from 1970 to 2003. Thirteen were published from 2003 to 2009, fifty between 2010 and 2014, and the majority, in total 146, between 2015 and 2019. This indicated growing attention and an upward trend in the exploration of CSR and sustainability-matters relevant to fashion. The results identified geographical areas such as Europe (24%), Asia (24%), South America (3%), Africa (2.5%), Scandinavia (2.5%), North America (1%), Australia (0.5%), and other countries (35%), which also included the Nordic countries. The literature revealed different theoretical approaches such as institutional theory, stakeholder theory, theory of planned behavior, theory of reasoned action, and agency theory.

Regarding the aim, purpose, and objective presented in the papers regarding CSR and sustainability matters, scholars investigated CSR and sustainability within supply chains and examined how these practices were managed. Furthermore, scholars studied the impact of rising social expectations for responsible environmental practices, and its effect on value creation and competitive advantage. They also explored the barriers to CSR implementation, the influence of managers on stakeholders, and how consumer perceptions of CSR influence purchasing decisions and financial outcomes for companies.

The study identified different sub-topics used when investigating CSR and sustainability related to the fashion industry, as presented in Figure 9. *The image* associated with CSR commitments influences companies' performance by demonstrating a dedication to contributing societal value and creating appropriate working conditions. Such activities that enhance social justice can positively improve image and influence consumer purchase intentions. *Labor force*: The focus should be on improving work conditions, such as by addressing issues related to sweatshops, and mitigating the effects of industrial disasters, like the Rana Plaza factory collapse in Bangladesh in 2013. The responsibility lies with authorities, factory owners, fashion companies (low-price policy, marketing practices), and consumers (increased demand). Activists and multinational companies have the negotiation power to improve workers' welfare.

Cultural differences: These aspects can hinder CSR implementation, especially in hierarchical societies where top-down structures affect the adoption of CSR practices. Effective CSR strategy requires collaboration among multinational and domestic stakeholders.

Communication: Companies use various platforms, including social media, websites and reports to communicate their CSR activities. The aim is to inform consumers about companies' efforts to address social and environmental issues, highlighting differences in focus across regions. Hence, it is essential to communicate the company's accomplishments clearly and transparently. *Brand equity*: Engaging consumers in CSR efforts through marketing campaigns can foster a sense of personal involvement in such attempts. A brand's performance influences consumer awareness and brand equity, particularly regarding worker treatment and human rights. *Ethical fashion and consumer behavior*: Ethical considerations in fashion influence consumer attitudes towards sustainable and ethically produced products. The relationship between ethical fashion practices and consumer purchase intentions is stronger for slow or luxury brands.

Financial management: The financial returns from CSR investments are monitored through the return on investment (ROI) and internal rate of return (IRR), highlighting CSR as a potential source of value creation. *Drivers and barriers*: Factors driving CSR commitment and activities include customer satisfaction, brand protection, and ethical orientation. Barriers include lack of awareness and lack of training, financial constraints, and management commitment. *Regulatory and legal perspectives*: There are differences in CSR approaches between regions, such as the US and UK, with variations in regulatory frameworks and stakeholder engagement strategies. *Institutional pressures*: Due to stakeholder pressure, Nordic fashion companies prioritize innovation in their CSR efforts. *Initiatives underscores the crucial role of effective management in implementing CSR strategies.*

Management: Fashion companies attempt to address external stakeholder pressures by forming a social structure due to a lack of a comprehensive approach to CSR strategies. *Supply chain*: Implementing CSR strategies in supply chains can reduce natural resource usage and promote sustainability. Focusing on human rights and workers'

welfare in developing countries is crucial for maintaining a company's reputation and ethical stance.

Sub-topics related to sustainability are business models (including innovation), commitment, consumption, drivers and barriers, environmental practice, environmental management system, equity, knowledge, life cycle assessment (LCA), lifestyle (values), management and performance, measurement (TBL), slow fashion, supply chain, and waste (reuse and recycle) as illustrated in Figure 9.

The discussion regarding *business models for sustainability* focuses on shifting from linear to circular models to foster sustainable practices. Innovations in business models are essential when adopting new sustainability approaches or technologies. Performance measurement across environmental, social, and financial outcomes is crucial. *Sustainability Commitment*: This aspect encourages fashion companies to address economic, social, and environmental issues. Luxury fashion managers play a significant role in sustainable product communication, enhancing their brand's reputation for sustainable development. *Consumer behavior and consumption*: The discussion highlights the importance of guiding consumers towards responsible consumption and the challenges in marketing environmentally friendly products. The role of fashion leaders and influencers in promoting sustainable fashion is emphasized.

Drivers and barriers: Identifying motivations and barriers to purchasing environmentally friendly products, including lack of information, greenwashing concerns, and regulatory barriers. Collaborative actions between stakeholders are suggested to overcome these challenges. *Supply chain*: The pressure from governments and stakeholders on companies to engage in environmental conservation for a competitive advantage is highlighted by the implementation of Environmental Management Systems (EMS) and the impact on financial performance. *Knowledge and education*: The lack of knowledge and awareness about sustainability among consumers and the industry suggests that education and understanding are crucial in promoting sustainable practices. *Life Cycle Assessment (LCA)*: Emphasizing the need for a framework to guide managerial actions to assess and improve fashion products' environmental impacts and energy consumption.

Management's role: Stresses the importance of resource management, stakeholder involvement, and performance monitoring to ensure sustainability in production and supply chain practices. *Global reporting initiative (GRI) and Triple bottom line (TBL)*: Frameworks fashion companies can use to measure and improve the environmental, economic, and social aspects of sustainability, aiming for increased accountability and transparency across supply chains. *Sustainable fashion*: Examines the conceptual distinctions and strategies to reduce consumerism's burden while raising awareness of environmentally friendly products.

The main result from this study outlines diverse CSR aspects and impacts in the literature on the fashion industry, as the subtopics suggest. The study furthermore

underscores the complexity of CSR, involving a wide range of stakeholders, strategies, and effects. It highlights the critical role of communication, stakeholder engagement, cultural considerations, and regulatory frameworks in effectively implementing CSR practices across industries.

The result of this study regarding sustainability in the context of the fashion industry emphasizes the need for a holistic approach that includes business model innovation. Additionally, the complexity of implementing sustainable practices in the fashion industry highlights the need for comprehensive approaches that include business model innovation, consumer education, effective supply chain management, and strategic management efforts to improve environmental and social impacts.

Paper III: Social, environmental, and economic value in sustainable fashion business models.

Published in Journal of Cleaner Production, 2024, 442, 141091, <https://doi.org/10.1016/j.jclepro.2024.141091>

Paper III responds to following research questions #1: How do Nordic fashion companies combine social, environmental, and economic values to form SBMs? and #2: What are the main challenges these companies face in developing such models?

The general discussion related to the transition needed in response to the climate crisis and other environmental challenges is slow and complex for the fashion industry, which is among the world's largest polluters due to its high levels of waste, resource consumption, and use of harmful chemicals. Previous research showed how the fashion industry has been criticized for its lack of accountability regarding environmental impacts and for not addressing the negative social consequences of its operations. The traditional business model, driven by low-cost consumerism and mass production, promotes a throwaway culture of garments, therefore a significant rethinking and redesigning of business models and the end-life management of products is needed to foster organizational changes within the industry.

Furthermore, EU regulations must be addressed to promote circularity and extend producer responsibility (EPR), urging a shift towards sustainable practices. Therefore, the fashion industry is urged to develop new frameworks for how businesses operate to ensure sustainable value creation, demonstrating a move towards integrating environmental considerations into companies' core strategies. Even with the comprehensive literature on business models and unsustainable activities, research explicitly focusing on fashion SBMs, particularly in the Nordic context, still faces limitations. Nordic countries, such as Finland, Sweden, Denmark, and Norway, are noted for their homogeneity and significant sustainability performance. Focusing on sustainability within the fashion industry emphasizes collaborative efforts, the importance of ethical production, and closing the loop by prioritizing these aspects over profit. The focus on creating value for customers, the environment, society, or organizations is a crucial driver of sustainability within the fashion industry.

Additionally, producing durable, repairable clothing by extending the garment lifespans reinforces the sustainable fashion movement.

Based on this, the main aim of Paper III was to explain the combinations of social, environmental, and economic values that form the basis of SBMs in the Nordic fashion industry (i.e., clothing companies in Denmark, Finland, Norway, Iceland, and Sweden) and identify the main challenges they face in developing such models.

The results show that the elements for sustainability in fashion business models related to value proposition are

- Social proposition (education, equality, and well-being)
- Environment proposition (ethics, productions, timeless design, stewardship, and waste management)
- Economic proposition (minimize consumption, take back system, recycle, rent, repair, and reuse).

Elements for sustainability in fashion business models related to value creation and delivery involve

- Key activities (sustainability DNA, sustainability road map, and technology),
- Key resources (certifications and raw materials),
- Key stakeholders (associations, employees, suppliers, and governments)
- Customer segments and relationships (awareness, education of consumers, marketing, and reputation).

Value capture includes cost (cost efficiency) and revenue (investment, revenue stream). Value proposition advocates for a holistic approach to business that incorporates social responsibility, environmental stewardship, economic sustainability, challenging companies to adopt practices that benefit society, the environment, and the economy.

The social proposition pertains to education, equality, well-being, and the significance of involving employees, suppliers, and partners in sustainability initiatives. To prevent accidents and foster health and safety in the workplace, fashion companies advocate for written contracts, fair working hours, and adherence to laws and union standards for all factory workers. Regarding employee welfare, fashion companies monitor employee satisfaction to enhance the working environment, focusing on gender diversity, equal pay, and non-discrimination.

The results demonstrate how the environmental proposition is linked to ethical management, enhancing transparency within the supply chain, and a dedication to social responsibility by highlighting craftsmanship and quality design. This also indicates that fashion companies strive to minimize their carbon footprint. Their commitment to environmental stewardship is evidenced by responsibly managing resources, reducing textile waste, and investigating recycling and upcycling opportunities.

The Economic proposition emphasizes the minimization of consumption and introducing systems for recycling, renting, repairing, and reusing products to extend their lifespan and reduce waste. The fashion industry faces challenges such as overconsumption and a high percentage of clothes ending up in landfills or being incinerated. The findings suggest that sustainable production techniques and reducing sales promotions are essential to minimizing consumption. Additionally, smaller companies' difficulties in collecting used clothing from consumers highlights the need for industry-wide solutions, specifically when the implementation of a take-back system for used items is hindered by insufficient infrastructure.

The value creation and delivery results emphasize how sustainability is ingrained in companies' business models, referring to it as the companies' DNA. This focus stems from a deep-rooted commitment to responsible business practices, with many managers noting sustainability as part of their routine long before it became a widespread concern. Efforts to incorporate sustainability issues into SBMs include adopting a sustainability roadmap aligned with global standards, for example, including the UN's SDGs, the UN Global Compact, or the GRI standards, and sustainable solutions, such as improved material recycling and reduced water usage in production.

Certifications are crucial for fashion companies to meet sustainability standards. There is a significant emphasis on sourcing traceable and sustainable raw materials, such as cotton-like fiber from waste, and a move towards using recyclable, ethical, and water-efficient materials. Fashion companies engage with various stakeholders, including non-profit organizations, employees, suppliers, and governments, to enhance their sustainability efforts. They value long-term relationships with suppliers who adhere to sustainability standards and human rights. Interviewees discussed the urgent need for proactive governments to set sustainability regulations, which is crucial to support circularity or at least to produce a system that works.

Even though consumer awareness of the impacts of overconsumption and the importance of sustainability in fashion is increasing, fashion companies aim to educate consumers about making responsible choices and extending the lifespan of garments through maintenance tips. Fashion companies use marketing communication conveying sustainability through social media and other platforms while maintaining the Nordic reputation for high-quality, sustainable products that appeal to global consumers.

Paper IV: A boundary perspective on sustainable business models: insight from the Nordic fashion industry

Published in Journal of Fashion Marketing and Management, 2025, 1-24.
<https://doi.org/10.1108/jfmm-05-2024-0190>

Paper IV responds to following research questions #1: How do sustainable fashion business models reshape the boundaries of efficiency, power, competence, and identity? #2: What main challenges to fashion business models are brought about by the organizational boundaries of efficiency, power, competence, and identity?

Previous research has explained the fashion industry's complexity and dynamic influence on consumerism. The industry's environmental impact, from production to disposal, highlights the urgent need for technological innovations to improve sustainability, reduce resource use, and cut waste generation, thereby lessening its ecological footprint.

This study was conducted in response to an identified need or request to expand studies that look beyond internal processes to include external factors. It focuses on organizational actions and interactions that impact sustainability, how organizational boundaries influence the adoption of sustainable fashion models, and the challenges this poses for sustainability in the industry by drawing on a normative approach to organizational boundaries: efficiency, power, competence, and identity. Overall, the aim was to explore how sustainable fashion business models reshape and are reshaped by the boundaries of efficiency, power, competence, and identity in the fashion industry thereby providing new insights into the challenges emerging from redesigning the fenceposts of existing business models.

Paper IV shows a dualistic relationship between sustainability-related activities and the Nordic fashion industry that pushes and challenges the boundaries of efficiency, power, competence, and identity.

Sustainability activities related to boundaries of efficiency, such as business operations, business decisions, and overproduction, challenge the Nordic fashion industry to adopt more responsible practices despite limitations like reconciling cost structures with sustainability goals. Due to supply chain complexity and a lack of sustainable materials, the fashion industry needs to integrate sustainable practices into its business operations. Balancing competitiveness with sustainability is challenging, and environmentally responsible choices often conflict with favorable business decisions, complicating the pursuit of a sustainable future. The industry addresses its commitment to sustainability by using recycled materials, recyclable packaging, and low-impact practices. The shift towards circular business models emphasizes sustainability in all decisions. However, challenges remain in supply chain transparency and sourcing reliable, sustainable materials, highlighting the need for better sourcing and risk mitigation.

Overproduction in fashion is an urgent and significant issue. Solutions include cost-per-wear, waste reduction, hi-tech functional clothing, and limited well-designed garments. The new European regulations on EPR now demand reduced overproduction and short-lived clothing, which could increase costs and force the industry to act swiftly to maintain transparency and sustainability, thereby slowing production to minimize excess inventory and waste.

The results of boundaries of power related to regulations and ethical practices also reveal that fashion companies struggle to comply with collaboration efforts between the fashion industry and governments to enact sustainable practices. The industry's regulatory concerns include limited local production and new production volume

regulations. Proposed solutions include limiting the outputs of large companies, setting production and sales quotas, recycling unsold items, and taxation based on production levels to prevent unsustainable practices.

Collaboration with suppliers, consumers, authorities, NGOs, and charities is essential for addressing sustainability issues, as isolated efforts are insufficient. However, the partnerships among authorities, designers, and marketers hold the key to innovative sustainability solutions. The industry is moving towards responsible practices, emphasizing accountability and ethical guidelines for suppliers, including minimizing the use of chemicals, prioritizing human rights, and ensuring compliance with social responsibility standards. The key focus is on long-term supplier relationships, improved working conditions, and addressing human rights violations.

Challenges include ensuring transparency in relationships with subcontractors, the high costs of changing suppliers, and the small companies dependency on their suppliers. Engaging with NGOs and environmental agencies aids in developing comprehensive social, economic, and environmental solutions. However, the lack of cooperation between the fashion industry and governments can hinder or delay the implementation of sustainable practices, for example, by failing to establish mutually agreed-upon regulations to address overproduction and mass consumption and to support effective recycling processes. Education and loyalty programs promoting responsible consumption are essential, as consumers value and tie to brands that emphasize ethical practices and sustainability standards.

The boundaries of competence centers around design principles, providing lasting value, and addressing knowledge gaps, new technology, and unstable markets. The fashion industry's design principles relate to timeless and gender-neutral clothing that lasts generations while balancing recycling and product longevity. Furthermore, the industry encourages consumers to wash less, repair, and resell garments. The industry claims to obtain costly certifications to demonstrate responsible sourcing. Despite the high certification cost for fashion products, the industry prioritizes traceability and sustainable materials to attract and retain talent. Fashion managers find attracting and retaining talented employees crucial, reflecting an employee's desire to align with responsible companies. However, training programs for employees are limited due to time constraints. Technology, such as digital avatars, may reduce resource usage, but recycling technology needs improvement. The industry seeks sustainable solutions during post-pandemic market instability but has yet to achieve true circularity in developing a sustainable system.

Sustainability emphasis and consumer perception are central issues in the fashion industry, shaping boundaries of identity through product lifecycles, reputation, and marketing. Since 2015, industry efforts have focused on clothing recycling and donation programs, appealing to consumers' morals. While rental services remain unpopular, repair services are gaining traction. The Nordic fashion industry is moving away from seasonal demand-driven collections, recreating trendy items, or offering

timeless, adaptable items to enhance sustainability, opting for smaller rather than larger companies. Transparent communication is crucial for building trust in sustainability claims, with greenwashing posing a significant challenge. Greenwashing involves misleading by using environmental claims, undermining trust, and affecting companies, influencers, and organizations globally. Accurate, fact-based information is essential to maintain consumer trust.

Consumer education is also necessary to promote sustainable choices in fashion, emphasizing the product life cycle and the principles of refuse, reduce, reuse, repair, and recycle. Key efforts include reducing carbon footprints, repurposing materials, supporting the secondhand market, extending product lifespans, and recycling to minimize virgin resource use. Despite the link between the life cycle and recycling, companies are restricted from collecting used items from customers.

4.2 Integration of the main result of the study

The main findings of the papers are integrated into two figures, Figure 10 and Figure 11. Figure 10 synthesizes the findings of papers I and II, demonstrating the internal and external drivers that influence CSR and sustainability. Figure 10 combines Papers III and IV findings, emphasizing the business model elements (Paper III) and boundaries (Paper IV).

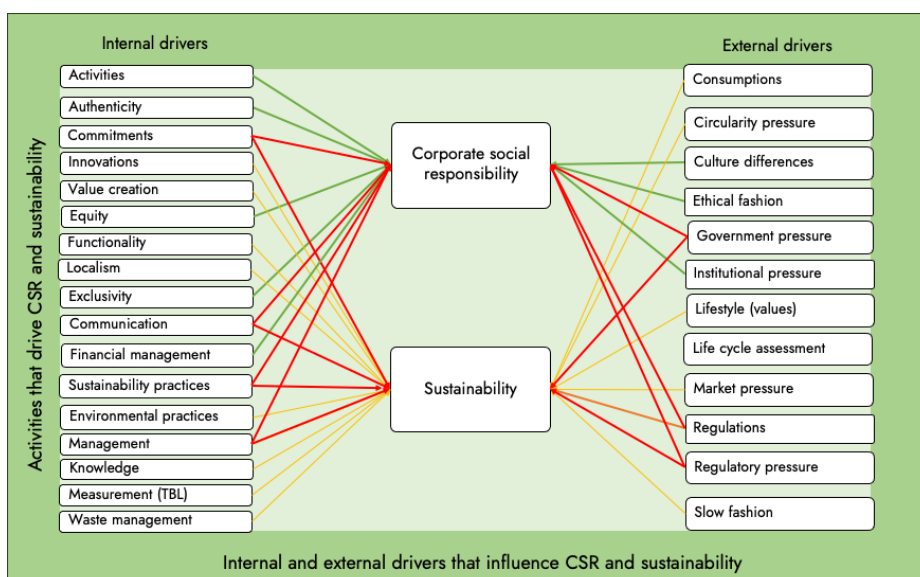


Figure 10. An integrated framework of the interplay between CSR and sustainability.

Lines marked in red on the framework show the interplay between CSR and sustainability, such as commitments as an internal driver of CSR and sustainability, reflecting core business strategies that create positive social, environmental, and economic impacts. As an internal driver, communication also illustrates the industry's strategies for effectively communicating its effort by reaching different stakeholders and

the broader community. Sustainability practice and management as internal drivers contribute to how the fashion industry could fulfill its commitments to CSR, benefiting the environment, society, and economy while enhancing its business performance.

The framework also highlights the role of external drivers in shaping CSR and sustainability in the fashion industry. Government pressure, regulations, and regulatory pressure are key factors that drive the industry to adopt more responsible practices than the industry currently does. These include initiatives to reduce carbon emissions, reporting on CSR and sustainability activities, and ensuring responsible lifecycle management of products, such as waste and taking back used items. This demonstrates the industry's responsiveness to external pressures and commitment to sustainable practices; as such, it provides a practical measure of what drives sustainability, the interplay between CSR and sustainability, how the fashion industry integrates sustainability into its strategies and their motivation, action, and impact when adopting sustainable practices (see Figure 10, red lines). The green lines in Figure 10 relate to internal and external drivers for CSR in the fashion industry, such as industry activities, commitments, and financial management (internal drivers), while external drivers involve cultural differences, ethical fashion trends, and institutional pressures. The yellow lines describe sustainability internal drivers, such as value creation, equity among workers, and knowledge, while external drivers relate to sustainability practices, slow fashion, consumption, and circularity pressures.

By integrating the main findings from paper III and IV, the study describes value proposition (green lines), value creation, value delivery (yellow lines), and value capture (orange lines), as a conceptual framework to address sustainable elements in fashion business models, which reshape and are reshaped by organizational boundaries.

The framework presented in Figure 11 illustrates the interconnected business model elements that impact and interact with sustainability efforts within the fashion industry. It begins by examining the value proposition, focusing on the social, environmental, and economic aspects. Value creation and delivery includes key activities, resources, stakeholders, consumer segments, relationships, while value capture relates to cost structure and revenue streams. The framework also addresses the business model elements related to these aspects. Additionally, it covers the organizational boundaries of efficiency, power, competence, and identity. It explores how these boundaries reshape sustainability in fashion business models, the interconnection between the value elements and the organizational boundaries, and the challenges they present.

Figure 11 illustrates the interconnection between business model elements and organizational boundaries. For example, this interconnection relates to fashion production as a business model element, with the boundaries of efficiency addressing the challenges of dealing with an overload of inventories and slowing down the production pace to achieve sustainability. Design principles, which reshape the boundaries of competence, are interconnected with the element of timeless design in a

sustainable business model. However, market instability makes this approach challenging for the industry. Creating timeless items requires designers to focus on high-quality, durable materials and classic styles that remain attractive over many seasons. The business model elements related to value creation and delivery, such as awareness and reputation, are linked to the boundaries of identity and marketing, which reshape fashion business models due to a lack of consumer trust and the industry’s reputation for greenwashing when discussing sustainability activities.

Industry stakeholders can utilize this framework as it highlights broader patterns in sustainability elements concerning value creation, value delivery, and value capture. Additionally, it is a valuable resource for exploring the dualistic relationship between sustainable fashion business models and organizational boundaries within the Nordic fashion industry.

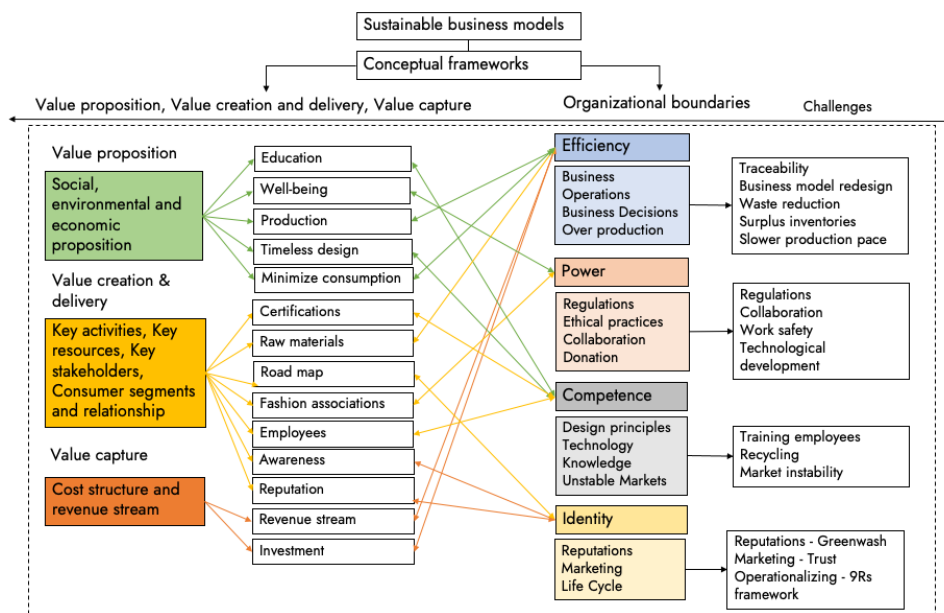


Figure 11. An integrated framework for sustainability in fashion business models.

5 Discussion and conclusion

This thesis aimed to identify the key drivers, challenges, and outcomes associated with adopting sustainable practices in the fashion industry, thereby contributing to the development more socially and environmentally responsible business models. The overall research aim was to explore how the fashion industry incorporated social, environmental, and economic performance into its business models and redefined organizational boundaries to establish and sustain social and environmental responsibility.

This study examined sustainability in fashion business models by analyzing four main areas: Firstly, it explored the motivation behind sustainability in such models. Secondly, it discusses how CSR, as an umbrella term, influenced and overlapped with sustainability, as pointed out in the literature (Ebner & Baumgartner, 2006; Haski-Leventhal, 2018; Montiel, 2008). Thirdly, it identified and categorizes social, environmental, and economic value in sustainable fashion business models. Fourthly, it explored how such models push and are pushed by organizational boundaries of efficiency, power, competence, and identity drawn from empirical evidence from specialist and corporate actors, as well as from the secondary data these companies provided on the homepages. This study aimed to contribute to filling the gap related to industry-specific unsustainable business models (Bocken & Short, 2021).

This study addressed knowledge gaps identified in papers I, II, and III and highlighted in existing literature related to unsustainable business models (Bocken & Short, 2021; Chesbrough, 2010; Evans et al., 2017; Schaltegger et al., 2011) or between an actual performance regarding environmental and social sustainability in the fashion industry (Todeschini et al., 2017). It expanded the field by focusing on organizational boundaries (Santos & Eisenhardt, 2005) and bridged specific gaps identified in Paper IV regarding how sustainable business models reshaped and were reshaped by organizational boundaries, as well as examining the influence of these boundaries on the adoption of such models, to understand the impact and challenges of organizational boundaries on sustainability initiatives within the industry.

5.1 The framework of key drivers and the interplay between CSR and sustainability

Paper I identified internal and external drivers of CSR and sustainability in the literature, explained how sustainability emphasis is integrated into fashion business models, and examined whether these efforts strengthen transparency and disclosure. Given the industry's reputation as a major polluter, incorporating sustainable practices into fashion business models is crucial. Adopting these practices can enhance societal and environmental well-being while ensuring greater transparency, especially in production processes known for their pollution levels. This includes examining the components of

business models, factors motivating decisions, metrics, performance benchmarks, and transparency in reporting.

Regarding sustainability measurement in fashion business models, the industry utilizes GRI standards (Kozłowski et al., 2015), the AFSS as reporting guidelines (Kozłowski et al., 2015), or the TBL method (Park & Kim, 2016). In contrast, other companies prioritize CSR as a guideline in their annual reports (Lueg et al., 2015). However, measuring sustainability practices in the fashion industry is fundamental, as the values for social, economic, and environmental actions are essential within business models (Park & Kim, 2016).

In paper I seven internal drivers were identified relevant to fashion industry business models: 1) organizational innovations (Westerlund, 2013), 2) value creation (Jung & Jin, 2016), 3) equity (Jung & Jin, 2016), (4) authenticity (Jung & Jin, 2016), (5) functionality (Jung & Jin, 2016), (6) localism (Jung & Jin, 2016), and (7) exclusivity (Jung & Jin, 2016). There are three external drivers of importance: 1) government and regulatory pressure (Pedersen & Reitan, 2015), 2) market pressure (Lang et al., 2016), and 3) closed-loop/circularity pressure (Wilson, 2015). These drivers do not align with the literature other than in respect to value creation (Ballon, 2007; Magretta, 2022; Osterwalder & Pigneur, 2010; Teece, 2010), which is considered a significant driver for sustainability, as it integrates social, economic, and environmental benefits, ensuring the long-term viability and positive impact (De Brito et al., 2008; Kerr & Landry, 2017; Yunus et al., 2010). By prioritizing value creation, businesses can innovate and develop sustainable practices that meet stakeholder needs (Osterwalder & Pigneur, 2010), enhance competitiveness, and contribute to overall well-being by addressing key sustainability challenges comprehensively (Sorescu et al., 2011; Wilson, 2015).

Paper II offers an in-depth literature review that advances the understanding of CSR and sustainability within the fashion industry. The study maps current practices toward a more sustainable and socially responsible future by highlighting relevant topics, identifying research gaps, and directions for future studies. The research results show a complex interplay between CSR practices and sustainability innovations, and reveal how the fashion industry addresses sustainability through managerial actions (Shen et al., 2015), business model innovation (Pedersen et al., 2018), and supply chain management (Wu et al., 2012). It also highlights the importance of CSR in enhancing a company's commitment to social, environmental, and economic sustainability, for example, by enhancing consumer awareness about the impacts of mass consumption and offering environmentally friendly products that may help reducing the ecological footprint and improve a company's image (Lee & Lee, 2018).

Micro-level: The interplay between CSR and sustainability is evident in stakeholder interactions and organizational dynamics. *Consumers'* behavior and concerns for environmental and societal impact can influence their response to sustainable and ethical fashion (Kozłowska, 2011; Nassivera et al., 2017; Song & Ko, 2017). For example, consumers' interest in purchasing fashion items from brands that actively implement CSR practices is growing (Preuss & Perschke, 2009). *Drivers:* CSR and sustainability practices are therefore driven by stakeholder pressure (Govindasamy & Suresh, 2018).

Barriers relate to a lack of knowledge and resources within organizations (Desore & Narula, 2018; Govindasamy & Suresh, 2018), which can be overcome with collective stakeholder efforts. Lack of stakeholders' awareness, employees' knowledge, and management commitment is a barrier to CSR and sustainability alignments (Shen et al., 2015). Furthermore, market demands and regulatory pressures encourage sustainable actions (Desore & Narula, 2018). The high cost of eco-friendly products can prevent consumers from buying such products. Therefore, the claim is being made that it is crucial to balance cost and sustainability emphasis, as this is essential for broader adoption (Desore & Narula, 2018) as presented in Figure 12.

The employees' dimension relates to how positive attitudes motivate and engage the workforce toward CSR policies to enhance sustainability culture, engagement, and productivity (Preuss & Perschke, 2009; Priyankara et al., 2018). The *management* dimension concerns how management control systems, such as GRI or TBL frameworks, monitor and improve sustainability efforts, ensuring CSR and sustainability goals are met (Cortes, 2017; Leoni, 2017).

The dimensions within **the meso-level** are business, drivers and barriers, supply chain, and sustainability. The *business* dimension includes discussing brand equity to CSR practices, addressing fashion products' environmental and economic impacts, and how these practices enhance company images and influence consumer purchases (Woo & Jin, 2016). It also covers working conditions within factories and worker satisfaction (Chen et al., 2017; Lee & Lee, 2018; Paik et al., 2017). *Drivers*: relates to the management's ability to implement such a structure and government consulting services (Wu et al., 2012). *Barriers*: Financial constraints, lack of consumer awareness, insufficient concern for reputation, and inadequate processes for reviewing and redefining strategies can hinder the effective implementation of CSR and sustainability initiatives (Shen et al., 2015). *CSR dimension* links to how the sustainability roadmap incorporates CSR policy due to market expectations for ethical production (Kozłowski et al., 2012; Moretto et al., 2018), where the fashion industry focuses on improving workers welfare through stakeholder cooperation (Tran & Jeppesen, 2016). *Supply chain management* addresses performance, environmental impacts, and social issues (Fornasiero et al., 2017; Kim & Kim, 2017; Koksal et al., 2017). The sustainability dimension highlights low-cost production models and employee perceptions of corporate sustainability (Lee et al., 2018; R. Lueg et al., 2015).

Macro-level includes dimensions of activism, countries, culture, drivers and barriers, economics, human rights, and industry (see Figure 12). *Activism* describes anti-sweatshop movements and global labor issues (Bair & Palpacuer, 2012), pressuring the fashion industry to adopt voluntary codes of conduct (Bartley & Egels-Zanden, 2015) to improve labor conditions, enhance brand reputation, and meet ethical demands (Bair & Palpacuer, 2012). In the *countries* dimension, the focus is on social responsibility management among fashion companies, negotiators, and suppliers in developing countries (Koksal et al., 2018) and suppliers' implementation of sustainable practices (Huq et al., 2014). The dimension of *culture* focuses on the role of CSR implementation, which is crucial, especially regarding cross-cultural impacts on brand

equity (Woo & Jin, 2016), highlighting the need for understanding CSR in different cultural contexts.

Drivers: CSR and sustainability drivers include consumer demand, corporate reputation, competitive advantage, stakeholder pressure, market opportunities, and leadership commitment (Thorisdottir & Johannsdottir, 2019). *Barriers:* Relates to challenges the fashion industry faces (Desore & Narula, 2018), such as the need for laws and regulations enforcing CSR practices, standards, diversity, and consumer awareness due to misinformation. *Economic* aspects stem from the importance of green entrepreneurship in economic development (Burzyńska et al., 2018) and legal, ethical, and philanthropic perspectives on consumer purchase intentions (Lee & Lee, 2015). Furthermore, the *human rights* dimension discusses policies to protect social welfare and human rights using the UN guiding principles on business and human rights as a guideline (Salcito et al., 2015). In Figure 12, the fashion industry is placed at the center to highlight its pivotal role within the micro, meso, and macro environments. While the industry is part of the macro environment, influenced by global trends and regulations, it directly interacts with micro-level actors (consumers, employees) and meso-level entities (industry networks within the supply chain). This central positioning emphasizes the industry’s interconnectedness, showing how it influences and is influenced by these multiple environmental layers and highlighting the diversity within the fashion industry.

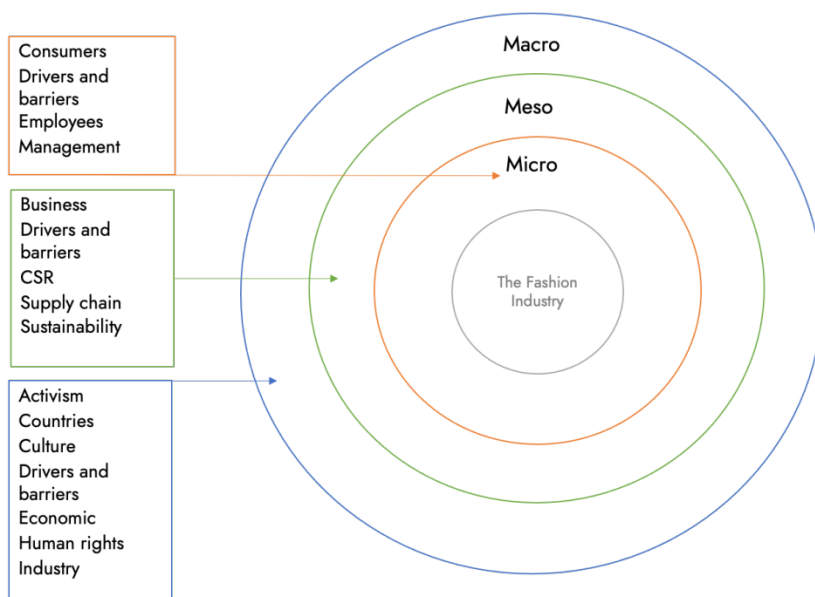


Figure 12. CSR and sustainability dimensions at micro, meso, and macro level.

Source adapted from Paper II.

5.2 The framework for sustainability in fashion business models

Paper III further advanced the understanding of the fashion industry's effort by providing insight from the Nordic industry's perspective on incorporating social, environmental, and economic values into its business models, utilizing the theoretical framework of Bocken and Short (2013), with the data summarized into a single model. While contrasting with existing framework, the study highlighted the industry's agenda and challenges in achieving sustainability. Paper III identified elements of sustainability integrated into the Nordic fashion industry. However, it concluded that the industry still falls short of the holistic approach necessary for becoming climate-neutral (Strand et al., 2014). Opportunities for improvement include reducing the number of annual collections, addressing the negative consequences of outsourcing production without ensuring workers' welfare or managing environmental impacts effectively, reducing consumption, educating customers on sustainability, managing waste efficiently, and implementing take-back systems for used garments (Bocken, 2021; Macchion et al., 2021; Rani & Saha, 2021). Moreover, Paper III highlights a lack of cooperation (Daft, 2016) between the fashion industry and governments (Kruse, 2018), which poses a barrier to developing comprehensive sustainability solutions.

Figure 13 shows the aspiration discussion in relation to the future sustainable business models of the fashion industry. However, Paper III illustrates both the progress and the significant gaps in the fashion industry's approach to sustainability. It emphasizes the need for a more integrated and comprehensive strategy beyond current practices to fully address the industry's environmental, social, and economic impacts. The findings reveal a lack of infrastructure to support new EPR policies (Zero Waste Europe, 2022). Fashion companies claim sustainability as part of their DNA but often neglect core issues like waste management. Few companies recycle end-of-life products or use cutting scraps, focusing instead on separating plastics, paper, and organic waste. This highlights the industry's lack of responsibility for waste (Zero Waste Europe, 2022). These findings align with those of Nayak et al. (2021) regarding the need for practical waste management solutions, as well as supporting the argument that the fashion industry lacks sustainable practices to transition from unsustainable to sustainable models Blowfield and Murrey (2008), De Brito et al. (2008), Ellen MacArthur Foundation (2017), Kerr and Landry (2017), Thorisdottir and Johannsdottir (2019), and Bocken and Short (2021).

Nevertheless, fashion managers are optimistic about increasing government interaction by 2030 to develop recycling technologies and tackle the waste issue. However, this is challenging due to low bargaining power and rising market demand, especially post-COVID-19

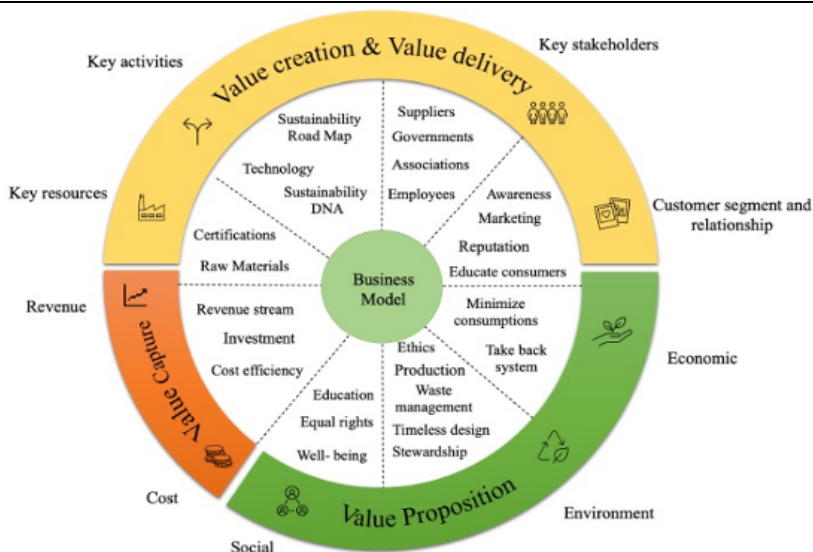


Figure 13. Aspirational discussion concerning future sustainable fashion business model elements. Adopted from Paper III.

The pandemic destabilized markets, leading to unsustainable actions and new supplier partnerships as demonstrated in Figure 14, which illustrated current business models in the fashion industry. This study suggests the need for a holistic approach to sustainability, consistent with Vătămănescu et al. (2021) and Haukkala et al. (2023), who argue that the pandemic drove companies to adopt innovative practices and enhance transparency and trust. As a result, business as usual is no longer feasible.

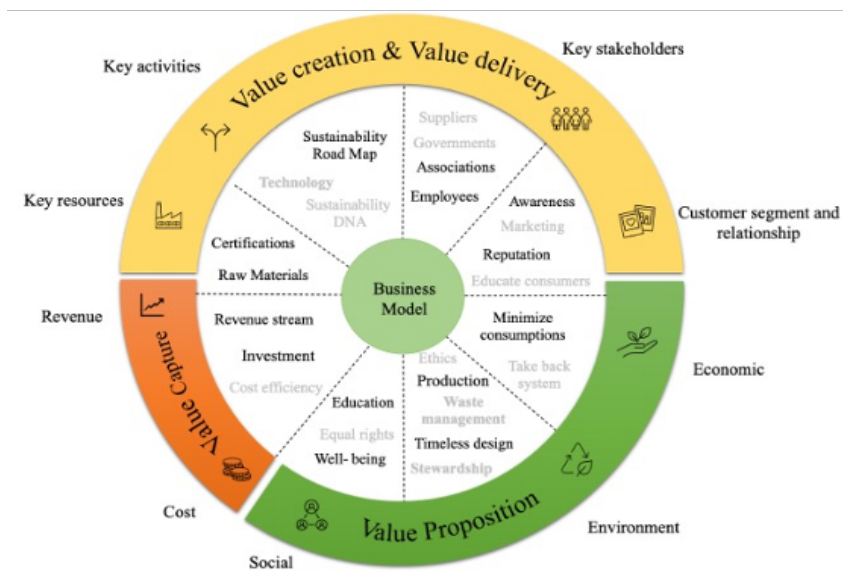


Figure 14. Examples of current fashion business models revealed by the data. Adopted from Paper III.

In Paper IV, the theoretical underpinnings stem from Santos and Eisenhardt's (2005) studies on the boundaries of efficiency, power, competence, and identity, each with unique features based on the normative perspectives of organizational theory (Scott, 2014). The paper synthesizes the findings from various to draw conclusion for the Nordic fashion industry case study by defining and explaining its organizational boundaries of efficiency, power, competence, and identity, supporting the industry to embrace sustainable practices effectively.

Sustainability enhances efficiency through responsible production, waste reduction, and process optimization, calculating "cost-per-wear" to tackle overproduction and waste. The findings reveal how sustainability business models reshape the boundaries of power through regulations to limit production or quotas that fashion managers impose as the fashion industry struggles to reduce waste, surplus inventories, and slow production. These measures could mitigate waste-related risks and introduce uncertainties in recycling and EPR policies (Zero Waste Europe, 2022), affecting environmental improvement efforts and societal expectations of sustainable practices. Market instability after the pandemic reshaped the boundaries of competence. This instability has affected circularity development, requiring the fashion industry to modify its operations to gain better control in unpredictable markets, thereby addressing rising raw material prices and instability (Hatch, 2018).

Paper IV also concludes that the industry needs to broaden its skills, especially regarding technology, to match its sustainability ambitions, addressing potential greenwashing risks to protect its reputation (Hatch, 2018; Pedersen & Andersen, 2023). Communicating a genuine commitment to sustainability is critical to embedding it into a company's mission and reshaping its identity, which is crucial for the industry's long-term sustainability (Business of Fashion, 2023; R. Lueg et al., 2015; Wong & Ngai, 2021).

Based on the findings from Paper IV, Figure 15 illustrates the internal and external factors that influence how sustainable fashion business models reshape organizational boundaries and how these boundaries are reshaped. The inner circle highlights internal factors such as cost per wear, trust, and production quotas, while the outer circle emphasizes external pressures, including seasonal trends, collaboration, and new regulations. The italicized gray text represents factors identified in the literature, underlined text indicates alignment with empirical findings, and bold text introduces new insights from the study.

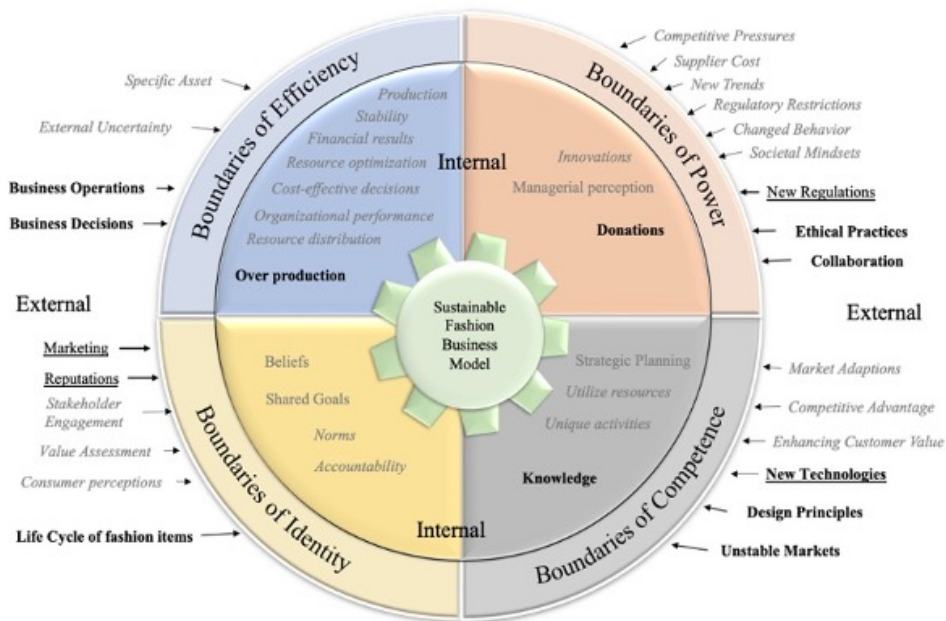


Figure 15. Examples of how sustainable business models reshape and are reshaped by organizational boundaries in the fashion industry.

Adapted from Paper IV. Conceptual framework of the fashion business model.

Prior research has indicated how internal and external drivers relates to social, economic, and environmental benefits, addressing the impacts of daily operations and how external pressure stems from societal trends and regulations (Porter & Kramer, 2006). The findings presented in Paper II shed light on how value is created, delivered, and captured in the fashion industry by building on Bocken’s (2015) and Bocken et al. (2018) conceptual framework for sustainable business models. Furthermore, Paper IV provides a descriptive analysis of the organizational boundaries of Santos and Eisenhardt (2005) and the impact and challenges that arise from redesigning the existing fashion business models, aligning theory with empirical evidence from the fashion industry. Specifically, the interaction between internal activities and external forces, which shape organizational boundaries, manifests through regulative, normative, and cognitive dimensions, each exerting distinct influences on organizational behavior and decision-making processes (Santos & Eisenhardt, 2005; Scott, 2014).

Figure 16 demonstrates the dynamic interaction between institutional internal activities and external forces, and the fashion industry, showing how these pressures affect organizational boundaries and impact value mapping within sustainable business models based on findings from papers III and IV findings. The internal dynamics and external pressures related to regulative, normative, and cognitive aspects (Scott, 2014) explain how institutions shape organizations’ behavior (Höller, 2012; Santos & Eisenhardt, 2005; Wing, 2000; Wooten & Hoffman, 2017).

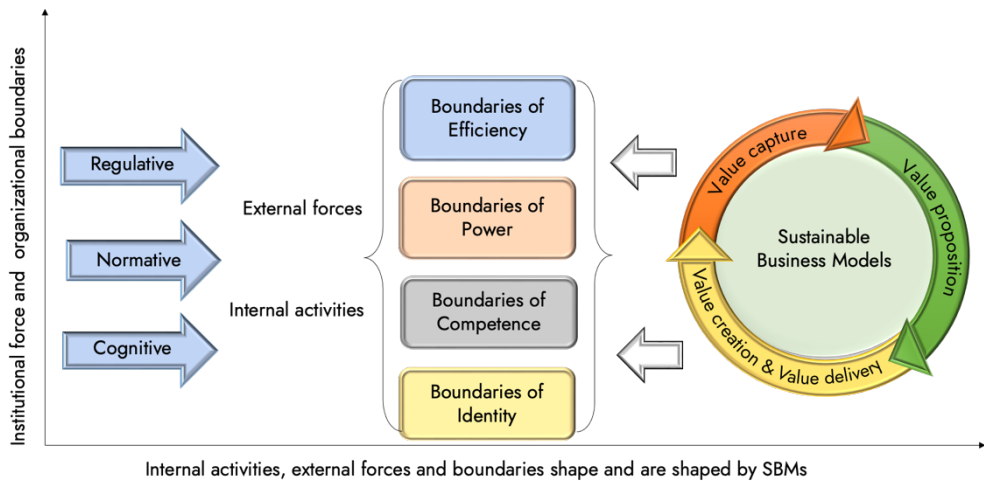


Figure 16. The reciprocal influence of internal activities, external forces, and boundaries in shaping and being shaped by SBMs.

5.3 Internal activities and external forces on boundaries impact value mapping in sustainable business models

The interplay between regulative, normative and cognitive pillars (Scott, 2014) and organizational boundaries (Santos & Eisenhardt, 2005) is not just a theoretical construct but a fundamental aspect of the thesis analysis. This interplay creates an understanding of how internal activities and external forces influence an organization. Such understanding is crucial for organizations as they adapt and evolve by incorporating sustainability activities (Sarkis, 2012). Certain concepts, such as legitimacy, shared understanding, and isomorphism (DiMaggio & Powell, 1983), affect multiple boundaries, such as efficiency, competence, power, and identity (Santos & Eisenhardt, 2005). This structure acknowledges the overlapping concepts to maintain clarity when categorizing the information based on internal activities and external force.

This structure acknowledges the overlapping concepts to maintain clarity when categorizing information based on internal activities and external pressures. The following section will further connect the study findings to the regulative, normative, and cultural-cognitive pillars, demonstrating how each pillar influences sustainable fashion business models. These findings will provide new insights into how businesses navigate pressures and reshape organizational boundaries in response to these pillars and how they align with or differ from existing literature.

5.3.1 Regulative pillars

Although companies may not be legally required to manage sustainability of their suppliers, the potential reputational and financial risks from supplier missteps prompts them to do so (Leppelt et al., 2013). This relates to how external forces from regulatory

pillars influences the boundaries of efficiency in the fashion industry. The findings from Paper IV, furthermore, reveal that external forces push the fashion industry to enhance efficiency by improving traceability in how materials are sourced. This underscores the need for comprehensive sustainability business model redesigns (Chesbrough, 2010; Evans et al., 2017). The analysis also demonstrates how the fashion industry strives to integrate sustainability into its operations as a solution to reducing overproduction, thereby reshaping boundaries of efficiency through cost-per-wear calculations.

Institutional environments shape organizational boundaries, including market conditions, professional norms, and government regulations (Meyer & Rowan, 1977), as well as competitive pressure (Santos & Eisenhardt, 2005). These factors influence perceptions of legitimacy and acceptability within organizations and determine how they can navigate and adapt to external forces (Meyer & Rowan, 1977) on boundaries of power. The findings in Paper IV revealed internal activities in the regulative context to stem the mass production of large organizations', for example, by the application of taxes or quotas based on the production level. Such actions impact boundaries of power as these new rules and regulations require a commitment, influencing operational practices and strategic directions, along with the industry resisting change (Scott, 2014). However, these measures can create uncertainties in recycling policies (Pfeffer & Gerald, 2003), impacting the industry's efforts toward environmental improvement and societal expectations of sustainable practices (Gauthier, 2013), such as the EPR regulations policy standards (Zero Waste Europe, 2022) that extends producer responsibility.

Internal activities arise from regulative pillars that impact boundaries of power at the executive, strategic, and operational levels, affecting control through centralization or decentralization. Limiting cross-functional collaboration and restricting sustainable practices can hinder sustainability activities within organizations (Sarkis, 2012), including those in the fashion industry. According to Paper IV, collaboration with suppliers, consumers, authorities, NGOs, and charities can improve labor conditions, reduce environmental impact, and enhance consumer transparency, benefiting society and business performance (Hatch, 2018; Porter & Kramer, 2006). However, challenges in supplier collaboration prevent the actuality of these benefits, highlighting the issue's complexity (Wong & Ngai, 2021). Improvements in factory conditions, including production control and work safety, require cooperation among suppliers and competitors (Velter et al., 2019).

Additionally, internal activities influencing boundaries of competence underscores the critical role of tailoring boundary strategies to the specific demands of the environment and organizational goals. This nuanced boundary management offers strategic advantages to address the complexities of organization-environment relations (Oliver, 1993). Paper IV emphasizes prioritizing design principles for durable fashion products and enhances employee sustainability training (Jerónimo et al., 2020; Wong & Ngai, 2021). Challenges to sustainability goals include time constraints and insufficient training. Implementing new technology, such as avatars for product showcases, shows promise but needs further advancement. The lack of progress in sustainable clothing and recycling solutions hinders organizational performance and complicates business models (Chesbrough & Rosenbloom, 2002; Daft, 2016; Santos & Eisenhardt, 2005).

Market instability since the pandemic has also affected circularity development, requiring operational adjustments to manage rising prices and instability (Hatch, 2018).

5.3.2 Normative pillars

External forces stemming from professionalization, norms, and societal expectations toward sustainable practices (Gauthier, 2013), profoundly impact the boundaries of efficiency and competence. However, rapid market growth can enlarge the environmental footprint, posing challenges to sustainability and pressures on global and local ecosystems (Pogutz et al., 2011). By setting the standards for sustainable practices, these normative pillars significantly influence how organizations define and maintain their boundaries (Scott & Davis, 2016) regarding sustainability goals. The fashion industry's efforts to integrate sustainability into its operations and business models reflect normative pressures to conform to societal expectations of responsible behavior (Chesbrough & Rosenbloom, 2002).

According to the findings in Paper IV, the external forces on boundaries of efficiency and sustainable practices reveals the industry standard and commitment to using recycled materials, recyclable packing, and simple design. Although the findings align with Vangsbo et al. (2014), who noted that the fashion industry faces challenges integrating sustainability due to its holistic approach required, which demand low impact from design to recycling, the industry objective remains to reshape traditional norms and standards by embedding sustainable practices into its daily business operations.

Internal activities and external forces, which shape organizational boundaries by limiting or expanding the scope of action and responsibility, influence the boundaries of competence based on social obligations, where expectations govern behavior. These expectations are supported through normative mechanisms, such as certifications or a sense of accountability or integrity (Scott, 2014). Despite the high cost of certifications, especially for SMEs, there is a strong motivation within the industry to prioritize certifications for responsible sourcing and production to be seen as accountable fashion companies (Paper IV).

Internal activities arise from normative pillars that influence the boundaries of competence, which relates to the logic of rightness, where actions are aligned with societal norms and values. Legitimacy is achieved when actions are morally managed (Scott, 2014) and ethical standards followed. This includes the importance of collaboration between the industry players and competitors to improve factory workers' safety (Velter et al., 2019). However, the findings in Paper IV reveal that the industry emphasizes fostering employees' knowledge of sustainability through training. In addition, industry managers recognize the importance of increasing collaboration to enhance factory worker safety.

The internal activities stems from normative mechanisms on boundaries of identity through accountability, which upholds expectations and contributes to aligning them with societal norms and values (Scott, 2014). Through clear marketing communication, efforts to increase and build consumer trust (Hatch, 2018) reflect the normative values of honesty and integrity in business practices. The findings in Paper IV show that

actions such as encouraging responsible consumption to support the life cycle of products, providing care labels, or offering repair services are examples of communication activities aimed at building trust. Nevertheless, mass production continues, raising concerns as consumers use clothes to reflect their identity or social status as a form of self-expression (Black, 2012; De Angelis et al., 2017; Niinimäki, 2010).

5.3.3 Cultural - cognitive pillars

External forces on the boundaries of competence, power, and identity relates to the roles of political legitimacy and how images are enhanced through advertising and public relations for external representation in response to environmental pressure (Aldrich & Herker, 1977). The findings in Paper IV reveal regulatory issues concerning recycling policies and clothing disposal, highlighting the industry's struggle to comply with environmental regulations. Furthermore, the need for technological development to support sustainability, such as through cradle-to-cradle solutions (Chesbrough & Rosenbloom, 2002; Daft, 2016; Santos & Eisenhardt, 2005), reflects the challenges in innovation and adaptation thus highlighting the importance of developing a sustainability-oriented mindset (Wong & Ngai, 2021) and of embedding sustainability into organizational culture.

Internal activities that derives from cognitive pillars on boundaries of efficiency is related to how organizations imitate their peers, resulting in isomorphism (Scott, 2014). Internal pressure on boundaries of efficiency relies on shared understandings and common beliefs (Scott, 2014). Actions gain legitimacy when widely recognized and culturally supported, providing certainty or causing confusion if misaligned with shared cognition (Scott, 2014). The findings presented in Paper IV show how fashion industry managers aim to prioritize transparency, monitoring production processes, sourcing raw materials, and managing supply chain risk. These efforts show the importance of addressing sustainability challenges systematically (Santos & Eisenhardt, 2005).

Internal activities stemming from cognitive pillars on boundaries of identity rests on addressing complex organizational identity and structural issues (Gioia et al., 2000). The shared understanding is, however, often taken for granted, where common beliefs and the shared logic of action are central (Scott, 2014). The fashion industry faces challenges concerning its identity and must redefine its purpose, values, and identity to align with its sustainability goals. This involves addressing greenwashing issues, where promises to stakeholders may be inconsistent with actions, potentially damaging their reputations mainly due to the industry's flawed business models that disconnect sustainability from its value propositions (Pedersen & Andersen, 2023). Communicating a genuine commitment to sustainability is essential for integrating sustainability into the industry's identity and mission in building trust and preventing greenwashing (Hatch, 2018).

5.4 The challenges of implementing sustainability-emphasis in in fashion industry business models

Academic literature has paid greater attention to sustainable business models than unsustainable ones (Bocken & Short, 2021; Kozlowski et al., 2018; Wong & Ngai, 2021). Furthermore, there seemed to be a gap regarding barriers and challenges to achieving full-scale sustainability integration into fashion business models (Bocken & Short, 2021).

Paper III concluded that the industry remains unsustainable due to slow progress in adopting sustainable practices and persistent issues such as short-lived products, water-intensive processes, polluting materials, and inadequate recycling systems. There is also a lack of collaboration with governments and competitors to promote sustainability actively. The findings align with existing literature in the fashion industry, highlighting the need to increase knowledge among designers, stakeholders, and consumers to envision and implement sustainable design strategies collaboratively (Bocken & Short, 2021; Daft, 2016; Jerónimo et al., 2020; Kozlowski et al., 2018; Wong & Ngai, 2021). Furthermore, it is apparent how the industry lacks sustainable practices and solutions to transition from unsustainable business models to more sustainable ones, supporting the findings of Bocken and Short (2021), MacArthur Foundation (2017), Blowfield and Murrey (2008), and De Brito et al. (2008).

The empirical evidence pointed out the fashion industry's main challenges when addressing sustainability issues. At the value proposition level, the fashion industry's main challenges relate to waste management and take-back systems. The industry lacks the necessary infrastructure for circularity and for promoting equal rights, safety, and well-being for factory workers, due to low bargaining power with suppliers and increased market demand for higher production volumes, especially after COVID-19.

Based on the study findings shown in Figure 17, the proposed framework, sustainable business model boundary framework (SBMBF), illustrates how internal activities and external forces on organizational boundaries of efficiency, power, competence and identity impact business models within the fashion industry. For example, external forces influencing the boundaries of efficiency demand transparency regarding raw materials, and production. While the literature supports this need (Chesbrough, 2010; Evans et al., 2017), clear sustainability plans remain insufficient. External regulatory and competitive pressures reshape boundaries of power (Santos & Eisenhardt, 2005), while external demands for durable designs, along with employee skills and training, address boundaries of competence. Promoting responsible consumption and aligning marketing with consumer trust and employee commitment (Black, 2012; De Angelis et al., 2017; Niinimäki, 2010) place external forces on the boundaries of identity, forcing organizations to operate within certain boundaries that align with external norms and expectations (Santos & Eisenhardt, 2005).

At the value creation and delivery level, the findings reveal that the industry lacks new technology for recycling, marketing, consumer education, and collaboration with governments and suppliers to fulfill their sustainability ambitions. Furthermore, the recent pandemic has led to unsustainable practices due to increased production demands and unstable markets with many fashion suppliers exiting the market, resulting in production delays and intensified uncertainty in meeting demand.

At the value capture level, it relates to challenges to maintaining cost efficiency due to rapidly increasing and fluctuating costs stemming from COVID-19. This includes costs relevant to labor, materials, delivery, and shipping, making it difficult to estimate the price of cotton or recycled materials in the near future thus complicating the overall pricing structure.

The findings differ from the literature and shed light on unacknowledged elements that play a significant role in sustainability efforts, including timeless and genderless designs that aim to minimize consumption. The challenges include the industry falling short in detailing how it intends to reduce consumption or educating consumers by paying attention to waste management recommendations and by incorporating a take-back system for used clothes (see Figure 17). This thesis explores sustainable practices in the fashion industry, highlighting the complex relationship between organizational boundaries and business models. Challenges in integrating sustainability emphasis are identified and insights into the need for business model restructuring are provided.

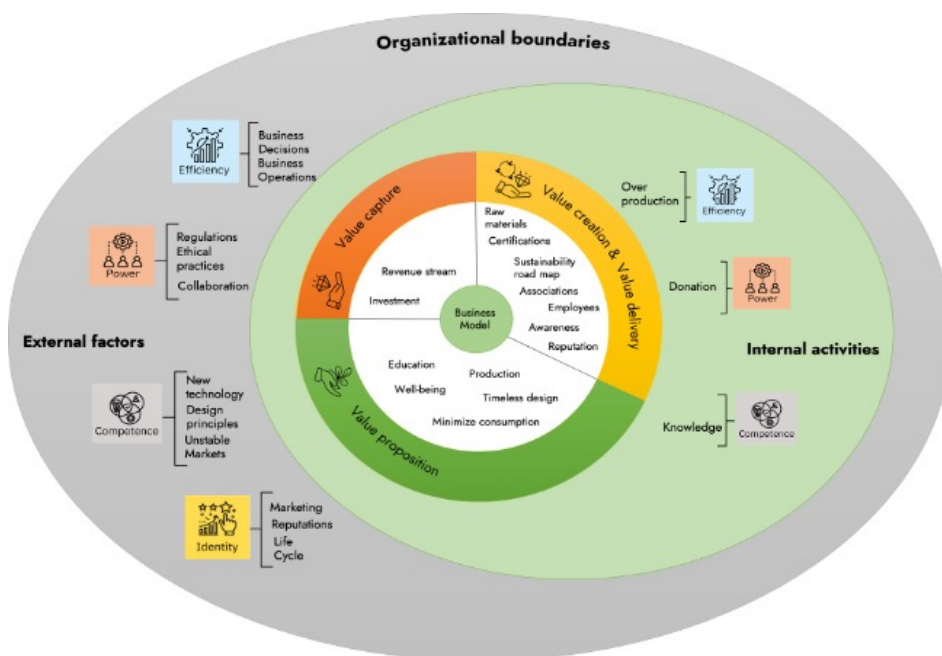


Figure 17. Sustainable business model boundary framework: Internal activities and external forces that challenging sustainable fashion business models.

Sources derived from the findings of Paper III and IV.

6 Academic and practical contributions

6.1 Theoretical contribution

This thesis contributes to academia in the field of CSR and sustainability, with a specific focus on the fashion industry. This contribution commenced with Paper 1, is the offering of insights into the frameworks and models that explain how sustainability practices are integrated into the business operations of the fashion industry. The contribution to the theoretical understanding of sustainability in the fashion industry relates to explaining the measurement techniques, and driving forces that guide the industry's actions, potentially leading to new perspectives and BM in these areas.

Paper I, lays the foundation by identifying and categorizing internal (e.g., value creation, equity, authenticity) and external (government, regulatory, market pressure, and closed-loop pressure) drivers that shape sustainability in the fashion industry. Paper I also highlights the motivations for integrating sustainability within fashion business models. It provides an overview of the industry's reporting standards, such as GRI, the AFSS guidelines, and the TBL method, illustrating how fashion companies prioritize CSR in their annual reports. The implication further addresses the importance of a commitment to transparent reporting, serving as a cornerstone for accountability and aligns the industry with broader sustainability goals. Paper I, therefore, sets the groundwork for Paper II. Building on the work of Paper I, identified a research gap in understanding sustainability, as it appeared, in some cases, as a term overlapping with CSR.

Paper II further synthesizes the fashion literature to understand the industry's response to CSR and sustainability pressures. Paper I highlighted that the focus was mainly on the environmental dimension, emphasizing the need to address broader economic, environmental, and social responsibility aspects. Paper II extends the current understanding of CSR and sustainability emphasis in the fashion industry at the micro, meso, and macro levels by emphasizing the existing knowledge regarding the industry's practices and expected responses to adopting social- and environmental-related standards. The existing knowledge on CSR, sustainability, and the fashion industry is enriched by mapping current practices and how the industry uses these concepts. This synthesis offers a starting point for future studies, supported by existing academic studies, and addresses the research gap related to the topic in the fashion industry. Papers I and II extend the current understanding of the interplay between CSR and sustainability in the fashion industry, highlighting the need to investigate further elements related to sustainable fashion business models, thereby providing a groundwork for Papers III and IV.

Building upon the work presented in Paper II, Paper III enhances the understanding of how fashion companies integrate sustainability emphasis into their business models. Paper III extends beyond existing literature by examining how value is created, delivered, and captured through an in-depth analysis of empirical evidence from the Nordic fashion industry with a focus on sustainability. Specifically, it provides a broader perspective on sustainability elements in business models by highlighting differences between the aspirational discussions of sustainability elements in future fashion business models and current elements observed in the Nordic fashion industry. While the current literature thoroughly covers business models (e.g. Osterwalder & Pigneur, 2010; Pedersen & Netter, 2015; Bocken & Short, 2021) and unsustainable practices (Bocken & Short, 2021), the complexity of the field specifies the need for industry-focused research on SBMs. Paper III addresses this gap by adapting and refining the conceptual value mapping framework of Bocken (2015) and Bocken et al. (2018), so that it enables an analyze on how the fashion industry incorporates sustainability considerations into their business models.

This study, therefore, modifies the framework by identifying and conceptualizing sustainability elements relevant to the industry and develops subcategories related to value proposition, value creation and delivery, and value capture by providing a more detailed, industry-specific perspective. For instance, within the value proposition the subcategories of education, well-being, production and timeless design highlights the social, environmental, and economic proposition. In value creation and delivery elements such as, certifications, raw materials, road maps, fashion associations, employees and awareness demonstrate how the fashion industry integrates sustainability emphasis into their business models. Meanwhile, value capture, through revenue stream and investments, reflects the financial and strategic implications of sustainability-driven business models.

Despite ambitious claims, current practices fall short of aligning with sustainability goals, revealing a critical gap between the industry's sustainability narratives and their actual business practices. As revealed in Paper III, this misalignment underscores the challenges of transforming sustainability commitments into fashion business models as the sustainability elements observed in the fashion industry are notably fewer and less ambitious than intended. Furthermore, it provides insights into the barriers to integrating social, economic, and environmental aspects into the fashion business models and how the industry aligns its value system with sustainability goals, highlighting opportunities for sustainability integration. In doing so, Paper III contributes to the literature by revealing the challenges industries face in addressing unsustainable practices and meeting the criteria for sustainable business models (Blowfield & Murrey, 2008; Bocken, 2015; Bocken & Short, 2021). This study highlights the barriers to achieving climate neutrality, the lack of regulations for "take-back systems" and the need for greater collaboration both between industry competitors and between the industry and authorities to establish enforceable sustainability standards.

Paper IV builds on the work of Paper III by addressing the proposed direction regarding barriers to scaling SBMs in the fashion industry. Specifically, it examines how such models shape and reshape organizational boundaries. Santos and Eisenhardt's (2005) theoretical framework on organizational boundaries is valuable for analyzing how internal activities and external forces shape the boundaries of efficiency, power, competence, and identity in this study. Furthermore, this study highlights how sustainability pressures challenge organizational boundary mechanisms by emphasizing the complexities the fashion industry faces when adapting business models to address sustainability challenges. This thesis brings a novel perspective to organizational theory, especially concerning sustainable business practices in a highly dynamic field. Based on empirical evidence, Paper IV extends theoretical understanding in this area by focusing on the Nordic fashion industry's internal activities and external factors related to sustainability activities. This study, therefore, offers a foundation for researchers to explore further how the fashion industry navigates complex environments to align its practices with emerging opportunities and external expectations.

The current literature highlights a knowledge gap regarding the link between business models practices and actual performance, particularly in the case of environmental and social sustainability (Todeschini et al., 2017). This gap includes specific implications, potential social and environmental risks, and viable solutions that require further exploration (Chesbrough, 2010; Evans et al., 2017; Schaltegger et al., 2011). Paper III brought attention to this discussion by concluding that sustainable fashion often addresses issues inherent in unsustainable business models only superficially. Addressing this gap requires actionable guidance for integrating sustainability into business models (Bocken et al., 2013; Kozlowski et al., 2018). Santos and Eisenhardt (2005) emphasize the need for broader studies on organizational boundaries, emphasizing the importance of understanding how these boundaries influence sustainable business practices.

The theoretical implication of the study is its novel perspective, which combines institutional theory with organizational boundaries. This is done by providing a new sustainable business model boundary framework (SBMBF) for understanding how internal activities and external forces influence sustainable business practices, particularly in terms of efficiency, power, and competence. This thesis demonstrates how external regulatory forces (regulative), push the fashion industry to enhance traceability in material sourcing and shift operational goals toward sustainability. In response, the Nordic fashion industry pushes back by proposing production-based taxes or quotas to address overproduction. Societal expectations and professional norms (Normative) drive the fashion industry to adopt recycled materials and reduce its environmental footprint, aligning with societal values. The industry pushes back the boundaries of competence by adopting certifications, promoting product life cycles, and building trust, which pushes the boundaries of identity by meeting societal expectations.

Cultural-cognitive forces shape boundaries of competence, power, and identity as companies respond to environmental pressure and regulatory demands, particularly regarding recycling policies and technological innovations. Organizational practices in the fashion industry emphasize shared understanding and legitimacy in sustainability practices. However, redefining the industry's identity to align with sustainability goals remains challenging.

Paper IV adds to the literature and Santos and Eisenhardt's (2005) work by focusing on the Nordic fashion industry's internal activities and external factors. However, SBMs, for instance, challenge conceptions of organizational boundaries by extending them so that they include environmental and societal aspects, which fall outside traditional cost- and profit-centered boundaries. For instance, boundaries of efficiency are reshaped through efforts to integrate sustainability through the cost-per-wear concept, which focuses on reducing overproduction as an internal activity. Donations reshape boundaries of power by positioning the fashion industry as a responsible actor within society. Internal activities that reshape boundaries of competence are driven by knowledge investing in employee training and education to build internal expertise in sustainability. External forces that shape boundaries of competence include design principles enforced through care labels to influence consumer behavior and support sustainability goals through sustainable actions, such as washing less frequently and repairing and reselling garments.

These forces drive organizations to balance efficiency, power, competence, and identity with sustainability goals, fostering a holistic and adaptive approach to sustainable practices. Therefore, establishing a genuine commitment to sustainability is crucial for integrating these goals into core organizational values. Thus, embedding sustainability within the business model and brand identity underscores the importance of transparency, organizational alignment, and a sustainability-oriented mindset to strengthen trust and fulfill social expectations, especially in addressing greenwashing concerns. This study demonstrates that sustainability pressures, acting through institutional mechanisms, drive organizations to engage in boundary work actively, redefining their governance structures and strategic frameworks. Firms must continuously navigate sustainability-driven regulations, reinforcing the dynamic interaction between institutional theory and organizational adaptation (Hernes, 2004; Campbell, 2007; Weber et al., 2022). These findings highlight the evolving role of sustainability in shaping organizational boundaries, requiring firms to adapt to shifting regulatory and stakeholder expectations.

6.2 Practical contributions

The practical implications of this thesis are relevant to practitioners in the fashion industry, including policymakers, fashion managers, suppliers, and manufacturers. It provides actionable strategies for businesses, such as (a) adopting circular business models, (b) enhancing transparency, (c) focusing on recyclable and low-impact materials, and (d) promoting cost-per-wear awareness while also acknowledging the

challenges they face in implementing sustainable practices, such as financial constraints, stakeholder conflicts, or regulatory limitations. The thesis emphasizes SBMs in the Nordic fashion industry, highlighting the main obstacles to sustainability initiatives. Given that the BM is a strategic tool for analyzing competitive advantage and firm performance (Teece, 2010), it covers various aspects, from resources and capabilities to value creation and financial outcomes (Osterwalder & Pigneur, 2010). It also highlights the benefits of an activity system perspective, promoting strategic growth and holistic thinking (Zott & Amit, 2010).

By synthesizing the literature, this thesis reveals how the fashion industry integrates sustainability emphasis into its BMs, measures these practices for transparency purposes, and identifies key driving forces for actions. These insights are vital for policymakers and fashion managers, helping to shape effective strategies, standards, and regulations to address environmental challenges and enhance industry accountability. For fashion managers, the thesis provides a comprehensive, in-depth analysis of how the fashion industry operates, a deeper understanding of critical issues, and practical, actionable strategies for addressing socially and environmentally friendly standards. For policymakers, it has the capacity to inform the creation of regulations that address areas where self-regulation through CSR is insufficient, ensuring that the push toward higher sustainability standards is comprehensive and enforceable. For example, strengthening regulations against greenwashing and encouraging influencers to support verified sustainable choices can further drive responsible consumer behavior and support initiatives encouraging consumer engagement in sustainable fashion, such as incentives for resale, rental, and repair models, while promoting transparency in digital fashion.

Furthermore, the thesis offers a better understanding of how value is created, delivered, and captured in the Nordic fashion industry, offering broader patterns of value creation, value delivery, and value capture within the Nordic fashion industry. The BM framework is valuable for policymakers and industry managers as it can enhance their understanding of the key elements of SBM by deepening the understanding of the challenges and opportunities associated with integrating sustainability emphasis into the fashion industry. Such understandings are also applicable to policymakers and fashion associations, which are crucial in facilitating cooperation and negotiations between industry competitors to drive the necessary changes to transform traditional fashion BM into SBFMs. Additionally, this thesis provides a better understanding of the organizational boundaries' perspective on SBMs. It is a valuable resource for policymakers and industry managers dedicated to promoting sustainability within the fashion industry.

To successfully scale sustainable business models in the fashion industry, organizations must extend traditional boundaries of efficiency, power, competence, and identity to integrate environmental and social sustainability into core value and practices. This requires reducing overproduction (efficiency), investing in sustainability knowledge acquisition and training (competence), and aligning brand identity with sustainability goals emphasized through transparency to address societal expectations and mitigate

greenwashing concerns. By embedding sustainability into core values and practices, the fashion industry can align their operations more effectively with external pressures, societal expectations, and regulatory demands, extending environmental and social outcomes. By identifying sustainability-related boundaries and exploring their implications, this research provides fashion industry managers with the knowledge they need to pursue and implement sustainable practices based on empirical evidence of how organizational boundaries and external environmental factors influence the fashion industry.

6.3 Limitations and suggestions for further research

The thesis acknowledges several limitations and opportunities for further research. Both papers I and II were based on a systematic literature review (SLR) with different selection criteria for each one. ProQuest was used to search for peer-reviewed papers written in English and published between 2000 and 2018. The focus was placed on fashion, business models, sustainability, and measurement, and these terms were written within quotation marks to ensure relevant papers were not excluded due to writing style. The source of information was obtained from only one database, which, although it covers a large share of studies, may have resulted in some studies being left out of the review. Further research could extend this scope by investigating sustainability strategies, the driving forces influencing sustainable actions, supply chain transparency, measurements, key performance indicators, and disclosure. It further suggests a deeper exploration of sustainability matters in fashion business models, focusing on the driving forces behind environmental, economic, and social actions and the transparency and impact of production processes (Blowfield & Murrey, 2008; UNEP, 2015; Claudio, 2007; Cobbing & Vicaire, 2016). Further research in these areas was suggested as essential to understanding the motivations and broader benefits of sustainability matters in the industry.

The SLR conducted in Paper II was limited to peer-reviewed papers written in English from two databases, The Web of Science and EBSCOhost's Academic Source Premier and Business Source Premier, as they include extensive coverage of relevant published papers within the search period from 1970 to 2019. The focus was placed on CSR, sustainability, and fashion, which might have led to the oversight of relevant papers that were not written in the English language or were not explicitly focused on topics such as economics, environment, ethics, consumption, consumer behavior, corporate sustainability, marketing, relationships, regulations, stakeholders, strategies, social responsibility, supply chain and management, and technology. Paper II highlights the need to investigate the interplay between CSR and sustainability, with the need to explore the integration of economic, environmental, and social responsibility (Bocken, 2015; Bocken & Short, 2021) in the fashion industry (Claudio, 2007). Both Papers I and II underline the need to explore sustainability activities in fashion business models (FBMs).

Paper III and Paper IV followed the same research method by utilizing an industry-focused case study and relying on the same source of information. The selection

criteria, of companies belonging to the single case was focused on Nordic fashion companies (NFCs) that are members of local fashion associations (NFAs), excluding other fashion companies and may therefore only partially capture the broader population or similar contexts. Including a wider range of stakeholder voices, smaller businesses, and companies from different geographical regions would also provide a more comprehensive representation of the fashion industry as a whole. Paper III suggests that future research could include critical sustainability factors, such as banning the destruction of unsold goods and implementing digital passports for products to communicate their environmental impact, including advice on repair and recycling. Future studies should examine the challenges of scaling SBMs and the role of organizational boundaries in achieving sustainability goals, as this is a promising research direction. Paper IV addressed the previous suggestion of future research regarding investigating organizational boundaries and limiting the full realization of sustainability goals in SBMs. The findings concluded with the relevance of expanding the knowledge base concerning fashion companies' intentions to achieve sustainability across all operational dimensions. Integrating collaboration with stakeholders, traceability, and responsible production and consumption into a sustainable business model is crucial for enhancing sustainability (Bocken et al., 2014) in the fashion industry.

The purpose of qualitative studies is not to generalize broadly about the outcome. Furthermore, the focus on Nordic countries and the reliance on eleven interviews and secondary data may limit the generalizability of the findings as they do not fully capture diverse perspectives. Moreover, the sampling may introduce selection bias, as the participants might not fully represent the range of viewpoints within the Nordic region. While the Nordic countries are considered leaders in emphasizing sustainability and have relatively homogeneous populations, these factors may not apply to countries with different cultural norms. However, when considering the findings and tacit knowledge, it should be noted that supply chains operate across international borders, influencing global business, including the Nordic context, and vice versa. This, in turn, opens a path for further studies to examine whether these results hold in diverse global or national contexts.

At the same time, while this study delves into the boundaries of efficiency, power, competence, and identity within SBMs in the Nordic fashion industry, it does not explicitly engage with the boundary of management. However, future studies could build on these findings by integrating the concept of boundary management to explore how SBMs can be strategically managed by balancing boundaries of efficiency, power, competence, and identity. Such an approach could allow for a deeper understanding of how sustainable practices reshape traditional organizational boundaries and provide insights into how organizations adapt and maintain coherence to meet evolving environmental and societal expectations while managing internal alignment. Furthermore, future work might also take exploration of consumer behavior and interest in sustainable fashion choices, as well as their engagement with resale, rental, and repair. Another interesting area of study would be the role of influencers and how personalization and digital fashion affect sustainable fashion choices.

6.4 General conclusion

There is an increasing interest within academia regarding CSR and sustainability actions within the fashion industry. This interest appears to be related to the expanding role of sustainable fashion, which evaluates how the fashion industry deals with its responsibilities towards the economy, environment, and society. Although several authors have discussed CSR and sustainability within the fashion industry, most have studied these separately. Even though the fashion industry is moving towards sustainable fashion, companies are only recently beginning to shift their focus towards sustainability, recognizing their economic, environmental, and social responsibilities. However, challenges persist in fully implementing these changes, and the industry still has a long way to go to achieve this goal. The literature reflects on unsustainable activities within the fashion industry and criticizes it for greenwashing and failure to incorporate sustainability promises into its BM. Unsustainable practices are still prevalent across various dimensions of the industry, including short product lifecycles, water-intensive processes, and inadequate take-back systems. Despite the potential benefits of adopting sustainable practices, collaboration with governments and competitors remains insufficient, thus requiring changes.

This thesis developed an integrated framework for sustainability in fashion business model, highlighting the interconnected elements of the business model that influence sustainability efforts in the Nordic fashion industry. It examines the value proposition through social, environmental, and economic lenses, then explores value creation, delivery, and capture, focusing on key activities, resources, stakeholders, and revenue streams. Additionally, organizational boundaries of efficiency, power, competence, and identity and their role in reshaping sustainable fashion business models are considered. For example, the framework connects production challenges with the efficiency boundary, addressing inventory overload and slower production for sustainability. Timeless design principles are connected to competence, although market instability complicates this approach. The framework also ties value creation elements, for example, awareness and reputation to identity, emphasizing issues such as consumer trust and the industry's reputation for greenwashing. This framework serves as a valuable tool for industry stakeholders by highlighting patterns in sustainability related to value creation, delivery, and capture, particularly within the Nordic fashion industry. Therefore, it is an opportunity for future research, for example, by investigating the challenges of environmentally friendly fashion practices and explain how diverse stakeholders, such as fashion associations, governments, suppliers, consumers, and employees, can drive or hinder the integration of design thinking in sustainable fashion business models. Furthermore, the lack of infrastructure in the fashion industry for taking back used garments creates an opportunity to investigate how implementing extended producer responsibility (EPR) regulations can improve sustainable practices or if the regulations might enhance sustainable practices and influence waste management and take-back systems.

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Original Publications

**Paper I: Sustainability within Fashion Business
Models: A Systematic Literature Review**

Paper I

Thorisdottir, TS., & Johannsdottir, L. Sustainability within Fashion Business Models: A Systematic Literature Review. *Sustainability* 2019, 11(8), 2233; doi.org/10.3390/su11082233

Submission received: 12 February 2019 / Accepted: 10 April 2019 / Published: 13 April 2019. (This article belongs to the Special Issue Psychology of Sustainability and Sustainable Development)

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**Paper II: Corporate Social Responsibility
Influencing Sustainability within the Fashion
Industry. A Systematic Review**

Paper II

Thorisdottir, TS., & Johannsdottir, L. Corporate Social Responsibility Influencing Sustainability within the Fashion Industry. A Systematic Review. *Sustainability* (2020), 12(21), 9167; doi.org/10.3390/su12219167

Submission received: 4 October 2020 / Accepted: 30 October 2020 / Published: 4 November 2020

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Paper III: Social, environmental, and economic value in sustainable fashion business models

Paper III

Thorisdottir, TS., Johannsdottir, L., Pedersen, E.R.G., & Niinimäki, K. (2024), Social, environmental, and economic value in sustainable fashion business models. *Journal of Cleaner Production*, 442, 141091, doi.org/10.1016/j.jclepro.2024.141091
Received 6 February 2023 / Accepted 2 February 2024 / Available online 5 February 2024.

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**Paper IV: A boundary perspective on sustainable
business models: insight from the Nordic fashion
industry**

Paper IV

Thorisdottir, T. S., Johannsdottir, L., Pedersen, E. R. G., & Niinimäki, K. (2025). A boundary perspective on sustainable business models: insights from the Nordic fashion industry. *Journal of Fashion Marketing and Management*, 1-24.

<https://doi.org/10.1108/jfmm-05-2024-0190>

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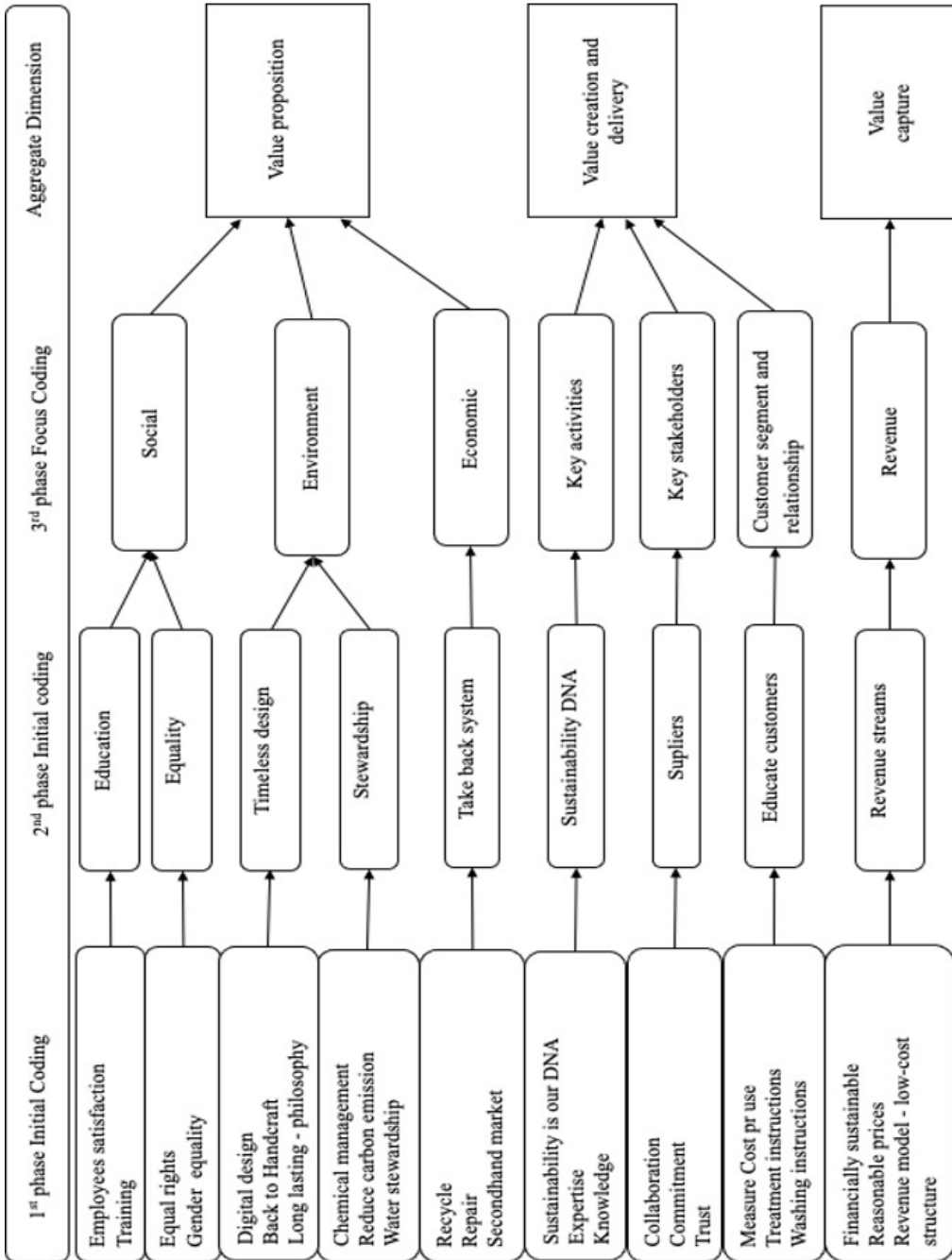
Appendix A. Data type and ID.

Information drawn from Paper III and Paper IV

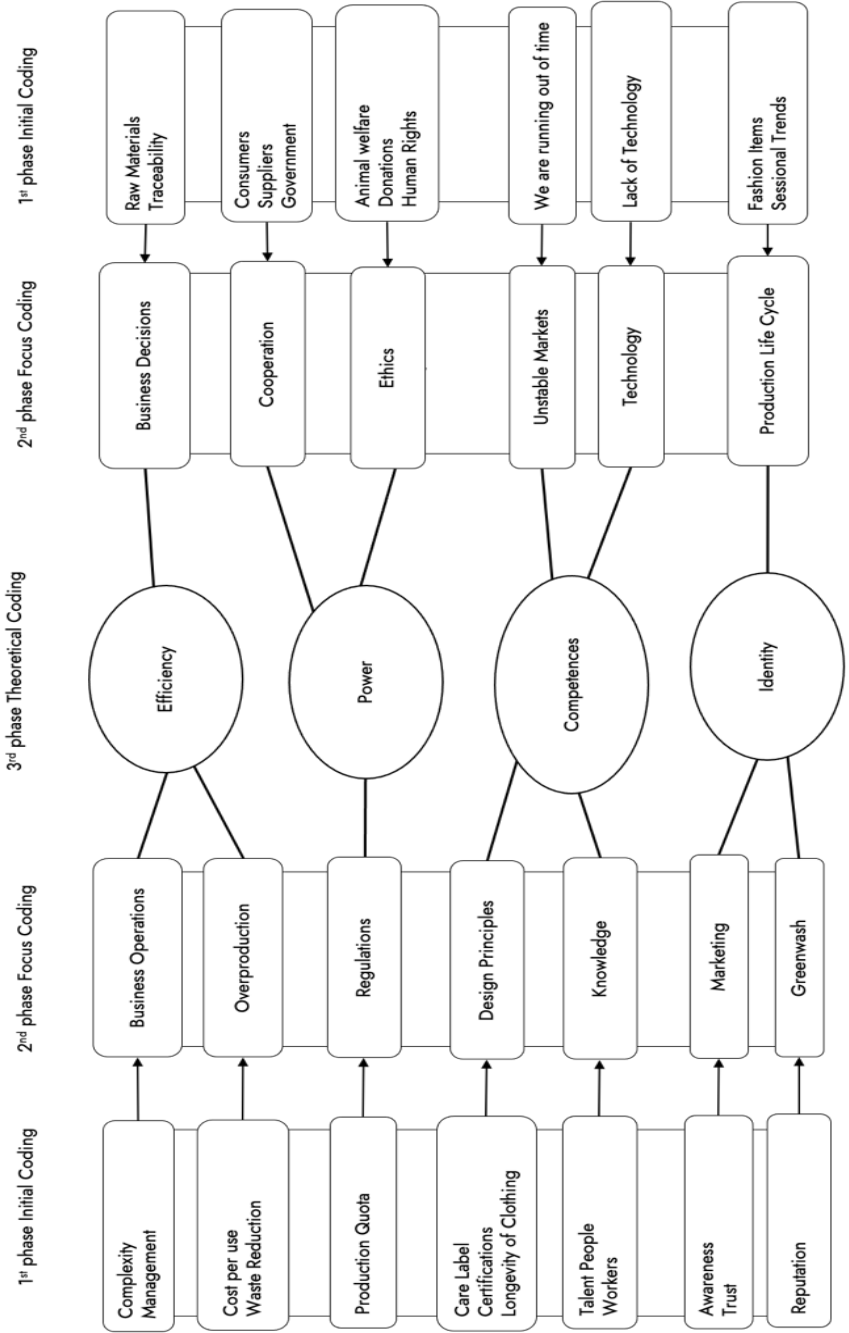
ID Paper III	ID Paper IV	Sector	Data collection
NFA1	PD1	Consulting	Interview (Executive 40:00 min)
NFA2	PD5	Consulting	Interview (Mid-level manager 55:00 min)
NFA3	PD11	Consulting	Interview (Mid-level manager 65:00 min)
NFA4	PD9	Consulting	Interview (Mid-level manager 75:00 min)
NFA5	SD26	Consulting	Homepage, Fashion blogs
NFA6	SD27	Consulting	Homepage, Fashion blogs
NFC1	PD2	Apparel	Interview, (Mid-level manager 40:00 min) Sustainability reports (2018-2020)
NFC2	PD3	Apparel	Interview, (Mid-level manager 55:00 min) Homepage
NFC3	PD4	Apparel	Interview, (Mid-level manager 65:00 min) Homepage, (CSR report 2018-2019)
NFC4	SD1	Apparel	Homepage Sustainability reports (2018-2020, Head of creativity)
NFC5	SD2	Apparel	Homepage, Sustainability reports (2018-2020, Senior Designer)
NFC6	SD3	Apparel	Homepage, Sustainability report (2018-2020, Sustainability manager)
NFC7	SD4	Apparel	Homepage, Sustainability and CSR statements (Managing director)
NFC8	SD5	Apparel	Homepage, Sustainability and CSR statements (Owner)
NFC9	SD6	Apparel	Homepage, Sustainability and CSR statements (Owner)
NFC10	SD7	Apparel	Homepage, Sustainability and CSR statements (Sustainability manager)
NFC11	SD8	Apparel	Homepage, Sustainability and CSR statements (Head of design)
NFC12	SD9	Apparel	Homepage, Sustainability report (2018-2019, Executive director)
NFC13	SD10	Apparel	Homepage, Sustainability and CSR statements (Executive director)
NFC14	SD11	Apparel	Homepage, Sustainability and CSR statements (Executive director)
NFC15	PD6	Apparel	Interview, (Mid-level manager 65:00 min), Homepage Sustainability statements

NFC16	PD7	Apparel	Interviews, (Owner 70:00 min), Homepage Sustainability statements
NFC17	PD8	Apparel	Interviews, (Owner 65:00 min), Homepage Sustainability statements
NFC18	SD12	Apparel	Homepage, Sustainability statements (Owner)
NFC19	SD13	Apparel	Homepage, Sustainability and CSR statements (Owner)
NFC20	PD10	Apparel	Interviews, (Mid-level manager 70:00 min), Homepage CSR statements
NFC21	SD14	Apparel	Homepage, CSR statements (Managing director)
NFC22	SD15	Apparel	Homepage, Sustainability and CSR statements (Executive director)
NFC23	SD16	Apparel	Homepage, Sustainability and CSR statements (Executive director)
NFC24	SD17	Apparel	Homepage, Sustainability and CSR statements (Head of PR)
NFC25	SD18	Apparel	Homepage, Sustainability and CSR statements (Executive director)
NFC26	SD19	Apparel	Homepage, Sustainability and CSR statements (Executive director)
NFC27	SD20	Apparel	Homepage, Sustainability report (2018-2020 Sustainability director)
NFC28	SD21	Apparel	Homepage, Sustainability report (2018-2020, Sustainability director)
NFC29	SD22	Apparel	Homepage, Sustainability and CSR statements (Executive director)
NFC30	SD23	Apparel	Homepage Sustainability report (2018-2019, Sustainability director)
NFC31	SD24	Apparel	Homepage, Sustainability and CSR statements (Sustainability director)
NFC32	SD25	Apparel	Homepage, Sustainability and CSR statements (Sustainability director)

Appendix B. Coding development: The value aspects. Paper III



Appendix C. Coding development: Aspects of boundaries. Paper IV



Appendix D. Primary vs secondary data: Paper III

Primary vs. secondary data on the value aspects in Sustainable Fashion Business Models, with DK, FI, IS, NO, and SE representing the country codes used in the analysis.

Source adapted from Paper III.

	Primary data	Secondary data
Value proposition		
Social		
Education	DK, IS, NO	DK, FI, IS, SE
Equality	DK, IS, NO	DK, FI, IS, NO SE
Well-being	DK, IS, NO	DK, FI, IS, NO, SE
Environment		
Ethics	DK, IS, NO,	FI, NO, SE
Productions	DK, IS, NO,	DK, FI, NO, SE
Timeless design	DK, IS, NO	DK, FI, IS, NO, SE
Stewardship	DK, IS, NO	DK, FI, IS, NO, SE
Waste management	DK, IS, NO	DK, FI, IS, NO, SE
Economic		
Minimize consumption	DK, IS, NO	NO, SE
Take back system	DK, IS	FI, SE
Recycle,	DK, IS, NO	FI, NO, SE
Rent	DK, NO	DK, NO, SE
Repair	IS, NO	FI, IS, NO, SE
Reuse	IS, NO	FI, NO
Value creation and delivery		
Key activities		
Sustainability DNA	DK, IS,	DK, FI,
Sustainability Map	Road NO	DK, FI, NO, SE
Technology	DK, NO	NO
Key stakeholders		
Associations	DK, IS, NO	FI, NO, SE

	Employees	DK, IS, NO	FI, IS, SE
	Suppliers	DK, IS, NO	DK, FI, IS, NO, SE
	Governments	DK, IS, NO	DK, FI, SE
Key resources			
	Certifications	DK, IS, NO	DK, FI, IS, NO, SE
	Raw materials	DK, IS, NO	DK, FI, IS, NO, SE
Customer segment and relationship			
	Awareness	DK, IS, NO,	DK, FI,
	Educate consumers	DK, IS, NO	DK, FI, NO, SE,
	Marketing	DK, IS, NO	DK,
	Reputation	DK, NO	NO,
Value capture			
Cost			
	Cost efficiency	DK, IS, NO	
Revenue			
	Investment	DK	DK, FI
	Revenue stream	DK, IS, NO	DK, FI

Appendix E. Primary vs secondary data: Paper IV.

Primary vs. secondary data on organizational boundaries in sustainable fashion business models, with DK, FI, IS, NO, and SE representing the country codes used in the Paper IV analysis.

	Primary data	Secondary data
Boundaries of efficiency		
Business operations		
Complexity	DK, NO	
Management	DK, IS, NO	DK, FI, SE
Business decisions		
Raw material	DK, IS, NO	DK, FI, IS, SE
Traceability	DK, NO	DK, SE
Overproduction		
Cost-per-wear	DK, NO	SE
Waste reduction	DK, IS, NO	DK, FI, IS, NO, SE
Boundaries of power		
Regulations		
Production Quota	IS, NO	
Ethical practices		
Animal Welfare		DK, NO, SE
Donations	IS	DK, IS, FI
Human Rights	DK, IS, NO	DK, FI, NO, SE
Collaboration		
Consumers	DK, NO	DK
Suppliers	DK, IS	DK, FI, SE
Authorities	DK, NO	DK, FI, SE
Boundaries of competence		
Design principles		
Care label	DK, IS, NO	DK, FI, NO, SE
Certifications	DK, IS, NO	DK, FI, IS, NO, SE
Longevity of clothing	DK, IS, NO	DK, FI, IS, NO, SE
Knowledge		
Talent people	DK, IS	DK, IS, SE
Workers	IS, NO	DK, FI, SE

Unstable markets			
	"We are running out of time"	DK, IS, NO	FI
Technology			
	Lack of technology	DK, NO	NO, SE
Boundaries of identity			
Reputations			
	Greenwash	DK, IS, NO	DK
Marketing			
	Awareness	DK, IS, NO	DK, FI, SE
	Trust	DK, IS, NO	FI, NO, SE
Product life cycle			
	Fashion Items	DK, IS, NO,	FI, NO, SE
	Seasonal trends	DK, IS, NO,	DK, FI,