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# Auditing Sustainability in Global Supply Chains

Exploring Challenges and Solutions in the Finnish Fashion Industry

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**ABSTRACT:**
Muotiteollisuus on yksi maailman saastuttavimmista teollisuuden aloista. Materiaalit, jätteenkäsittely ja veden kulutus tuovat merkittäviä haasteita muotiteollisuuden kestävyydelle. Monet yritykset ovat lähivuosina pyrkineet parantamaan ympäristötoimiaan ja asettamaan kestävyystavoitteita. Yksi tapa yritykselle todistaa toimensa kestävyyden eteen on hankkia kestävyyssertifikaatti auditoinnin kautta. Kestävyysauditointien luotettavuutta on viime vuosina kyseenalaistettu monien tieteenharjoittajien toimesta ja diskurssi näiden kestävyyssertifikaattien ympärillä kääntyy usein jopa väitteisiin viherpesusta. Kestävyys-teeman tärkeys, kritiikki auditointien luotettavuudesta ja sen analysoiminen tekee tästä tutkielmasta relevantin osan kestävyyskeskustelua.

Tässä pro gradu -tutkielmassa perehdytään kestävyysauditointeihin ja niiden esteisiin muotiteollisuuden kansainvälisissä toimitusketjuissa. Neljä estettä kestävyysauditoinneille tämän tutkimuksen mukaan ovat: toimitusketjujen kompleksisuus, sisäiset esteet ja ulkoiset odotukset, auditointien rajoitteet sekä standardoinnin puute. Tutkimus toteutettiin useamman suomalaisen case yrityksen toissijaisen datan kvalitatiivisella analysoinnilla. Käytetty data koostui pääsääntöisesti yritysten vastuullisuusraporteista. Avoimuus on tärkeää näiden esteiden ylittämisessä ja sen tulisi käydä ilmi yrityksen vastuullisuusraportoinnissa. Tutkimuksessa kävi myös ilmi, että vaikka yritys olisikin esimerkiksi ympäristösertifioitu, voi se pärjätä huonosti kolmannen osapuolen kestävyysmittauksissa.

Läpinäkyvyys toimitusketjuissa tulisi ulottua myös ensimmäisen tason toimittajan yli, avoimuuteen vastuullisuusraportoinnissa tulisi panostaa ja auditointien vaikutuksista tulisi raportoida paremmin, jotta niiden vaikutukset voitaisiin ymmärtää. Näistä raporteista selviää, että yrityksillä on tavoitteita edetä kohti kestävämpää liiketoimintaa. Tämä tutkielma osoittaa, että myös suomalaisessa muotiteollisuudessa on paljon tehtävänä kestävyyden saavuttamiseksi.

**KEYWORDS:** Global supply chain, sustainability, certification, compliance

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## Abbreviation

- NGO - Non-Governmental Organization
- BSCI - Business Social Compliance Initiative
- FSC - Forest Stewardship Council
- PEFC - Programme for the Endorsement of Forest Certification
- OEKO-TEX - Textile certification system
- SBTi - Science Based Targets initiative
- GOTS - Global Organic Textile Standard
- SA8000 - Social Accountability International Standard
- SEDEX - Supplier Ethical Data Exchange

- KPIs - Key Performance Indicators
- ISO - International Organization for Standardizati

# 1 Introduction

The United Nations (2030) has an agenda for Sustainable Development. This agenda lists 17 Sustainable Development Goals (SDGs) for peace and prosperity for people and the planet (United Nations 2024). Sustainability has become critical to both organizations relevancy and their competitive status. According to Rafi (2022), sustainability is important to 90% of executives but only 60% of companies have sustainability strategies. Koller et al. (2019) state that Sustainability strategies enable organizations to make long-term investments. Implementing sustainability has multiple challenges. These challenges include weak commitment from the board, lack of accountability along with sustainability teams that do not have the authority to make changes (Koller et al. 2019). It is also noted that when no-one in an organization is specifically designated, no one is accountable although all are responsible (Nitkin and Brooks 1998). Another key challenge is to prove an organization is committed to implementing sustainability. This requires qualitative and or quantitative measuring of development towards the desired objectives (Turner 2006). One way of measuring these developments is through auditing.

Auditing involves conclusions based on performance measurement of specific audit criteria. These criteria can be based on either limited evaluation or professional opinion and can include “regulations, management standards, performance standards, performance indicators, principles, guidelines, or corporate directives” (Coyne 2006). A Sustainability audit is often based on a systematic evaluation process measuring the triple bottom line approach (social, environmental, and economic performance) (Coyne 2006). It includes verifying the status of a specific set of criteria based on assessing an organization’s progress in sustainable development (Coyne 2006). The benefit of auditing is helping organizations identify their sustainability actions and meet their sustainability goals. Coyne (2006) states that it would be important to establish a universal certification system for sustainability auditors and assurance providers that would ensure the consistency and credibility of assurance efforts in the future. According to Coyne (2006), there is a need for an audit process that can determine the impacts of sustainability programs.

Auditing can be claimed to be a useful tool for enhancing sustainability through evaluating processes and detecting errors and inconsistencies along with improving the overall quality and accuracy of a firm's processes. While finding the tools to overcome barriers to sustainable supply chain management, it is important to critically evaluate the existing tools to sustainability, for example, sustainability auditing. There is a critical discourse on auditing among scholars, which is presented later in the literature review. The barriers to sustainability and sustainability auditing should also be further discussed to shift the industry into a more sustainable direction. For example, the complexity and transparency issues in supply chains create challenges and even barriers to corporate sustainability.

The textile and fashion industry is one of the world's most polluting industries at the moment: 8% of the global greenhouse gas emissions result from the production, operations, usage, and end-of-use of products in the fashion industry (McKinsey 2021), the most intensive parts of the supply chain being the production of textiles and raw material processing. According to the United Nations Environment Programme (2019), the fashion industry is the second biggest consumer of water. Waste disposal and material usage are some of the other examples of the notable environmental and social impacts of the supply chains in this industry. In order to mitigate these negative impacts, focusing on implementing and monitoring sustainability in the global textile industry and its supply chains is crucial. VTT Technical Research Centre of Finland (2021) claims Finland to be a forerunner in sustainability and knowledge-based management in the textile industry. The Finnish textile industry has excellent conditions for reforming the industry in the global network.

Sustainable global supply chains require standardization and collaboration. The complexity of the supply chain and the visibility beyond first-tier suppliers create challenges in sustainability. There is a critique towards sustainability audits as the lack of standards can lead to questions about greenwashing, which is a common discourse around the fast

fashion industry. Li et al. (2014) state that especially collaboration with responsible partners in the fast fashion industry is important to create a sustainable supply chain.

There are many difficulties in maintaining sustainability in the globalized network and the complex global supply chains in this industry. Recognizing present environmental effects enables an organization to implement sustainable measures into action. One way to prove that the company implements sustainability principles in its operations is to obtain a sustainability certificate through auditing.

This research aims to answer the question:

- *What are the ways to manage barriers to auditing sustainability in the fashion industry's global supply chains?*

The study's objectives are to understand the concept and process of sustainability auditing and to evaluate effectiveness of sustainability auditing. Next, literature review elaborates on each of this objective.

# 2 Sustainable development in the fashion industry

The literature review consists of the relevant literature on auditing concerning supply chains and sustainability. The aim is to conduct an analysis of the literature on sustainability audits in global supply chains in the fashion industry and to analyze the current level of knowledge, pinpoint the main barriers, and comprehend the auditing techniques and instruments that are already in use. The first section focuses on managing sustainability in the textile and fashion industry and its supply chain, by evaluating concepts of product lifecycle and corporate social responsibility. The second section provides a review of the relevant literature on auditing in global supply chains in the context of the fashion industry and presents the key benefits, challenges and barriers found in auditing. Both sections start with explaining the concepts of the theme, reviewing this in the context of global supply chains, and finally focusing on industry-specific activities, processes, and challenges. This literature review provides a framework for sustainability auditing and provides viewpoints on its efficiency and the barriers related to it while evaluating its efficiency critically in the context of fashion industry.

## 2.1 Managing sustainability in the fashion industry

One way for measuring and reporting Corporate Sustainability is the Triple Bottom Line (TBL) approach (Elkington 1997). Triple bottom line acts as a framework for sustainability work in three dimensions: Environmental, social, and economic. The model's aim is to emphasize the interdependence between these dimensions and to consider the impacts of the company's actions in other areas than the economic aspect. TBL can be considered a tool for strategic decision making.

Triple bottom line approach is also visible in the Corporate Social Responsibility (CSR) context. Porter and Kramer (2006) suggest that implementing corporate social responsibility can create additional competitive advantage as well as creating value for the society. Carroll (1991) presents a 4-part framework for understanding corporate social responsibility (Figure 1.). The framework consists of economic (responsibility to be

profitable), legal (responsibility to follow the law and regulations), ethical (responsibility to "do what is right"), and philanthropic (responsibility to be socially responsible and contribute to the well-being of society) responsibilities. The study argues that a company should fulfill all these levels to be considered socially responsible. The pyramid suggests that even though fulfilling the responsibilities in the bottom (economic and legal) is essential for the success of the company, the ethical and philanthropic responsibilities do create additional competitive advantage.

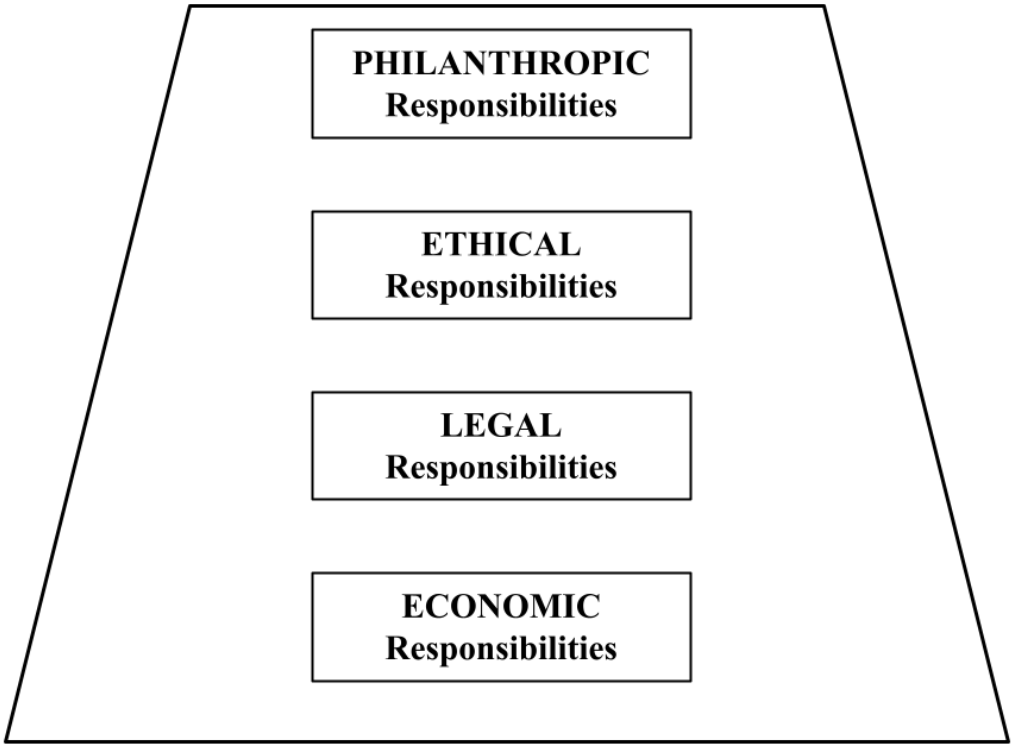


**Figure 1 Pyramid of Corporate Social Responsibility (Modified from source: Carroll 1991)**

According to the McKinsey (2021) “Fashion on climate” report, there are multiple opportunities for the fashion industry to promote sustainability and reduce emissions. This requires collaboration within the industry. Governments and other regulators also play a big role in the shift towards more sustainable textile and fashion industry. The report suggests some actions that can be, for example, implemented to strategies: Sustainable design, Circular business models, Low-carbon logistics, Renewable energy, Carbon offsetting and Collaboration and partners (McKinsey 2021). As is presented in the McKinsey report, it is essential to address the need for circular business models within the fashion and textile industry, especially in the context of fast fashion. Joy et al. (2012) describe fast fashion as low-cost collections that aim to mimic current luxury fashion trends. Even though sustainability is one of today’s rising trends, there are incoherencies in consumer behavior. Joy et al. (2012) found in their research that although the younger generation supports the idea of sustainability, such ethics are not applied to their consumer behavior. The rising consumer awareness of sustainability is a significant driver for demand in the industry, and in response to this trend, the bigger retailers in the industry (H&M, Zara for example) have started investing in sustainability (Todechini et al. 2017).

Li et al. (2014) identified seven competitive sustainable qualities for fast fashion supply chains: time (T), cost (C), quality (Q), service (S), environment (E), resource (R), and people (P). The sustainability management of a fast fashion supply chain depends on the seven criteria being well coordinated. Challenges in sustainability can be addressed by evaluating these qualities and choosing eco-friendly materials along with collaborating with stakeholders, NGOs, governments, and, choosing responsible business partners (Li et al. 2014). Li et al. (2014) also discuss the relationship between financial performance and Corporate Social Responsibility and suggest that CSR can help in fast fashion supply chain governance and improve financial performance. Managing sustainability in the textile and fashion industry requires an understanding of global supply chains, for which the framework is presented in the next chapter.

### 2.1.1 Managing sustainability in global supply chains

Supply chain management (SCM) can be described as all activities involved in the movement and transformation of goods from the extraction of raw materials to the end user, as well as the related information flows (Handfield and Nichols 1999). Both information and materials move up and down the supply chain. According to a study by Turker and Altuntas (2014), businesses in the fashion industry place a high priority on suppliers following their code of conduct. By monitoring and auditing production processes, especially in developing nations, businesses could enhance their supply chain efficiency and create sustainability standards in their supply chain (Turker, Altuntas 2014). Interest in the sustainability of supply chains has risen in recent years. The control of information, material, capital flows, and collaboration within the supply chain that takes the three dimensions of sustainable development (economic, environmental, and social) into consideration is the definition of sustainable supply chain management according to Seuring and Muller (2008). Seuring and Muller (2008) present two strategies for conceptualizing sustainable supply chain management: supply chain management for sustainable products and supplier management for risks and performance. According to Barratt (2004), collaboration within a sustainable supply chain requires resources and commitment, intra-organizational support, and the lack of corporate focus on the supply chain.

Kim and Davis (2016) identified the key challenges in global supply chain sustainability as the lack of ability to gather information about the origin of raw materials used in production and the complexity of the supply chain. Thus, the size of the supplier base creates complexity in the supply chain, especially when managing sustainability. Burritt and Schaltegger (2014) also researched some challenges in sustainability in production and supply chains, such as complexity, uncertainty, and interlinked processes. These challenges demand expanded perspectives and interdisciplinary management approaches. Burritt and Schaltegger (2014) also propose that a lack of accounting tools for measuring and reporting sustainability is one of the main challenges in sustainable production and supply chains. Koberg and Longoni (2019) state that global supply chains are complex,

and the limited visibility of the supply base creates significant challenges in managing sustainability in Global supply chains.

One way to examine the sustainability of a global supply chain is to look at the global value chain (GVC). Value chains include processes of distribution of production processes globally across different countries (Antràs, Chor 2022) whereas supply chain management (SCM) can be described as all activities involved in the movement and transformation of goods from the extraction of raw materials to the end user, as well as the related information flows (Handfield and Nichols 1999). Managing the global value chain requires managing multiple actions regarding governance, including strategic decision-making, effective communication, supplier relationships, and risk management, according to Antràs and Chor (2022). The challenges in monitoring the sustainability of a GVC lie in the fact that they often extend through multiple countries and industries, making it difficult for local legislation to regulate standards throughout the value chain (Stringer, Michailova 2018). According to Stringer and Michailova (2018) the leading firms within a value chain have significant power over resource allocation across the supply chain and the global value chain. For example, outsourcing the value chain activities in locations where monitoring capacity is especially weak, creates challenges for global value chain governance. According to Gerreffi and Fernandez-Stark (2016) Global Value Chain Management, or GVCM, is the strategic coordination and control of multiple operations in cooperation with one or more organizations. These operations consist of everything from R&D to production, transportation, marketing, and finally customer service. The goal of global value chain management is to maximize productivity, cut costs, and provide value (Gereffi, Fernandez-Stark 2016).

Gereffi et al. (2005) claim the three variables determine how global value chains are governed. These variables are the complexity of transactions, the ability to codify transactions, and the capabilities of the supply base. The presented variables can create challenges for example in coordination, communication, standardization and alignment of capabilities within value chains. The theory presented by Gereffi et al. (2005) provides

five types of global value chain governance which are hierarchy, captive, relational, modular, and market. These types of global value chain governance can vary in explicit coordination and power asymmetry from high to low levels. According to a report published by the United Nations (2012), it is often required for suppliers to adhere to a social/environmental standard (auditing) by companies in global value chains.

### 2.1.2 Managing sustainability in the fashion industry's global supply chains

Evaluating sustainability of an organization and its supply chains can be done by evaluating sustainability in global supply chains and assessing the complexity and visibility in the supply chain, for example, Corporate Social Responsibility as a framework. There are two types of companies in the textile industry based on their approach to sustainability (Oelze, 2017). The first type prioritizes survival and is resistant towards sustainability practices and does the minimum regarding regulatory compliance. The second type is motivated to improve their sustainability practices. According to Freise and Seuring (2015), stakeholder pressure and collaboration with stakeholders are important for implementing such practices. Oelze (2017) also emphasizes stakeholder pressure as one of the main drivers for sustainability in the textile industry supply chains. These stakeholders include NGOs, local governments, and the media. Also, the growing awareness of customers regarding sustainability creates pressure to implement sustainability while keeping products affordable in a highly competitive environment (Oelze 2017).

However, implementing sustainable supply chain management (SSCM) is also challenging. Oelze (2017) identify barriers to sustainable SSCM (see Figure 2): Internal barriers (lack of structure and processes along with cost and resources) and External barriers (Regulation, competitive pressure, lack of intrinsic motivation and lack of knowledge). For example, regulation and competitive pressure are also some of the most essential factors in Carrolls (1991) Pyramid of corporate social responsibility.

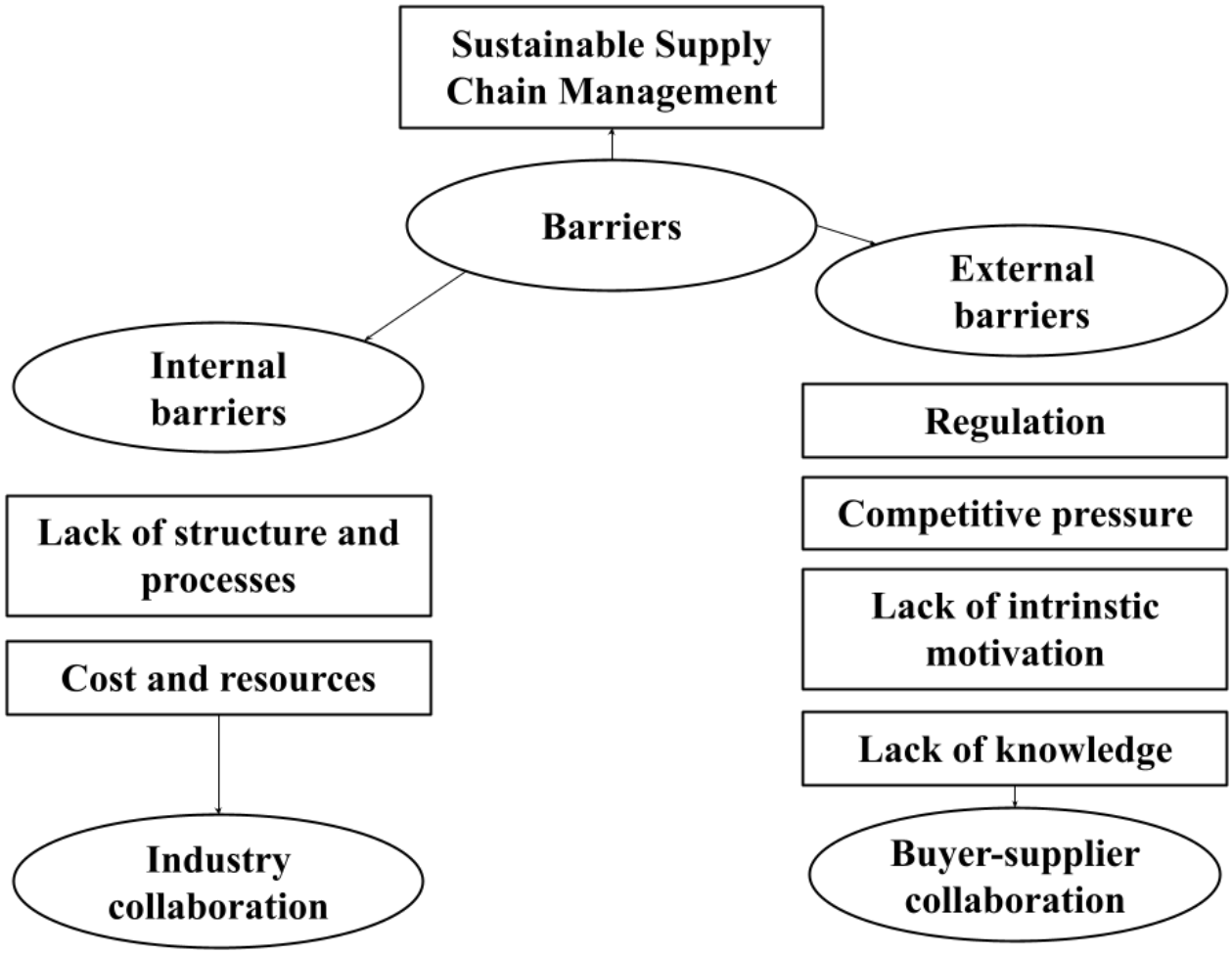


**Figure 2 Collaboration to diminish barriers to SSCM (Modified from source: Oelze 2017)**

Though acknowledging the external barriers and knowledge management is important, acknowledging the internal barriers is crucial for the implementation of sustainability in the textile and fashion industry (Oelze 2017). Presented in Figure 2, the internal barriers include lack of structure and processes, and cost and resources. According to Oelze (2017), the lack of structure and processes can create complications in implementing sustainable supply chain management. Oelze (2017) also states that companies acknowledge that implementing SSCM involves costs in personnel along with financial costs. Auditing also creates costs which can affect the willingness to apply for certification which requires commitment and support from management (Oelze 2017). However,

companies do realize that auditing can help identify unnecessary processes which can help with cost controlling (Oelze 2017).

Another challenge in sustainable supply chain management is the lack of visibility, especially regarding the raw materials and the overall product life cycle. In figure 2, the challenges regarding visibility would fall under Lack of knowledge. According to Oelze (2017) becoming more sustainable requires for both the buyer and the supplier to have the necessary knowledge regarding the supply chain. The product life cycle of is determined by the length of time from a product first being introduced to when it is removed from the market. Aitken et al. (2003) discuss the impact of the product life cycle on supply chain strategy in their research. They found that the creation of a supply chain strategy should be based on the characteristics of the product life cycle. In order to manage the social and environmental risks in supply chains of the fashion and textile industry, there is a need to integrate sustainability into supply chain management practices (Freise, Seuring 2015). Although audit programs are claimed to reduce the risk of sourcing from suppliers with poor practices, Lebaron et al. (2017) question their effectivity for governance in global supply chains.

# 3 Auditing Sustainability in the fashion industry

## 3.1 Auditing sustainability

Auditing is an important tool for detecting errors and inconsistencies along with improving the overall quality and accuracy of a firm's processes (Min et al.2006). According to Coyne (2006) sustainability audit should provide independent and nonbiased assessment of sustainability processes. In practice, the audit program follows typically the following steps (Coyne 2006):

1. Defining the objective and scope.
2. Defining the organization.
3. Selecting the representative business units.
4. Selecting the protocols.
5. Defining the pre-audit activities.
6. Establishing procedures for reporting.
7. Establishing procedures for post-audit actions.
8. Defining quality assurance processes.

Coyne (2006) states that the sustainability audit process is based on the triple bottom line approach: social, environmental, and economic. While this list describes the process of sustainability auditing the auditing practices themselves can vary. The sustainability audit practices can be evaluated by evaluating the "frequency, focus, organization of the audit team, internal communication, and external reporting" (Nitkin and Brooks 1998). According to Nitkin and Brooks (1998) the level of sustainable development monitoring and reporting can be divided into three stages: initial (early stages of implementation of sustainability), transitory (maturing phase), and sophisticated (sustainability is well integrated into organizational processes). In the context of auditing, this division made by Nitkin and Brooks (1998) classifies companies with only internal auditing teams as "initial" and external or both as "sophisticated".

In order to understand the organization's sustainability practices as a whole, one needs to assess all aspects of production, including environmental policies, transportation of raw materials, fabrication of products, distribution, waste recovery, and related operations along with life cycle costs. Furthermore, reporting practices and stakeholder engagement also have a crucial role in sustainability practices. Boiral et al. (2019) criticize the reliability of sustainability reports along with the accountability of reporting practices and stakeholder engagement. Boiral et al. (2019) identify limitations observed by assurance providers. These limitations are issues related to reliability and accuracy, along with insufficiency or absence of information. Recommendations for improvement are proposed in areas such as: “stakeholder engagement, control and internal verification, data collection, scope of reports, identification of material issues, clarification of objectives and strategy, and standard compliance” (Boiral et al. 2019). Also, Morimoto et al. (2005) discuss the importance of stakeholders and leadership along with transparency. Building trust requires engaging stakeholders in dialogue (Gao, Zhang 2006). Gao and Zhang (2006) highlight the role of social auditing in corporate and environmental performance. Social auditing can also contribute to improving sustainability performance.

One of the key challenges in sustainability auditing lies in leadership and the attitudes towards sustainability accounting along with understanding the benefits of auditing. Nitkin and Brooks (1998) suggest that the following factors would affect the willingness for sustainability auditing:

- Governmental regulations and sanctions
- Interest group reactions
- The desire to be certified.
- Attempts to market environmental advantage and profit from it.

The motivation for conducting sustainability audits can include identifying areas for improvement and demonstrating commitment to sustainability: the need for assessment of progress of sustainable development, meeting stakeholder expectations, enhancing credibility and transparency along with complying with regulations and government

requirements (Coyne 2006). Organizations can perform a third-party audit to validate sustainability claims and demonstrate commitment to sustainable development. Management commitment to sustainability is important in sustainable supply chains. Todeschini et al. (2017) state that startups in the fashion industry tend to be more sustainable as founders are more committed to sustainability. Todechini et al. (2017) also suggest that stakeholder commitment is crucial for sustainability, and open innovation collaboration with these startups could prove beneficial from a sustainability standpoint to the industry.

### 3.1.1 Auditing sustainability in global supply chains

Kortelainen (2008) states that auditing is a useful tool for managing the supply chain by identifying areas for improvement. More current research by LeBaron et al. (2017) however challenges the notion that audits are effective tools for supply chain management. According to LeBaron et al. (2017), audits are seen as ineffective tools in improving standards in the global supply chains. This is because companies have significant power over the audit process: scope, timing, and implementation. LeBaron et al. (2017) suggest that despite their shortcomings, audits are gaining a more legitimate status in promoting corporate accountability and are seen as diagnostic tools rather than mechanisms for making improvements.

Fraser et al. (2020) found that the challenge in supplier sustainability in the context of audits is a lack of standardization and collaboration. As different industries have their sustainability audit standards and the suppliers often have overlapping audit requests, it is difficult to compare supplier performance (Fraser et al. 2020). A collaborative approach to standards and auditing sustainability would ensure quality in the context of responsibility and accountability (Fraser et al. 2020, Khalid et al. 2020). This also would answer the LeBaron et al. (2017) concern about the actual efficiency of audits. Khalid et al. (2020) state that supply chain complexity is one of the key barriers to auditing sustainability; companies often have multiple different supply chains for different products and the visibility beyond the first-tier supplier can be very limited. Companies can face

reputational damage for collaborating with non-compliant suppliers (Khalid et al. 2020). Stakeholders rely on audits to ensure transparency but Khalid et al. (2020) also stated there is critique in the discourse on audits for being merely a tool for greenwashing. Daghfous and Zoubi (2017) also share the concern about the complexity of supply chains as barriers to sustainability and suggest knowledge management processes should be integrated into supply chain management and that conducting knowledge audits could help identify gaps between the two. Byer-supplier collaboration as well as knowledge management is also listed as external barriers to sustainable supply chain management by Oelze (2017) (Figure 2.).

Conducting an audit on a global scale requires the auditors to know the local culture, legislation, and overall business environment (Kortelainen 2008). There are several challenges in auditing global supply chains according to Short et al. (2016). These include the reliance on private social auditors to provide information on suppliers' conduct, transaction costs (the possibility of reporting fewer violations), and the experience and gender composition of audit teams. Short et al. (2016) found that all-male audit teams reported fewer violations. Concerning this study, the interviews conducted by Short et al. (2016) suggest that women dominate the workforce in the export-intensive industries, such as the fashion and textile industry, and that future research could explore how auditors' decisions are influenced by the gender composition of both the audit team and the audited organization.

The mentioned challenges highlight the need for governance structures in the global supply chains. Hussin et al. (2019) also researched demographic factors that influence auditors' skepticism and found that for example age and gender can influence auditors' skepticism. The research suggests that neither working experience nor gender affects auditors' skepticism. The findings between Hussin et al. (2019) and Short et al. (2016) seem conflicted as Short et al. suggest that all-male audit teams are less skeptical. In this context, professional skepticism refers to the ability to be more critical in the process and help assess the risk of fraud in auditing processes. Although Short et al. (2016)

claimed that women dominate the workforce in the export-intensive industries, such as the fashion and textile industry in a report conducted by PWC (2019) it is stated that though women are the majority as employees in apparel stores (73%) and as students in leading fashion schools (78%), only 12,5% of CEOs and 26% of board members are women in the industry. Hussin et al. (2019) also state that the relationship between auditors' demographic factors and skepticism should be researched more. Al-Jaifi et al. (2023) researched the Board diversity effects on environmental performance and found that age diversity of the board has a positive influence on environmental performance whereas it was found that boards with more experienced members were less likely to take risks that involve environmental activities. Gender diversity has a positive effect on environmental performance and women are more likely to engage in environmental activities (Al-Jaifi et al. 2023).

### 3.1.2 Auditing sustainability in global supply chains in the fashion industry

There are multiple different third-party sustainability certificates a company can apply for. These labels evaluate for example sustainability efforts by assessing different aspects of production, processes, material use, end product, and the supply chain (Fashion United 2024). As stated before, the motivation for conducting sustainability audits can include identifying areas for improvement and demonstrating a commitment to sustainability: the need for assessment of progress of sustainable development, meeting stakeholder expectations, enhancing credibility and transparency along with complying with regulations and government requirements (Coyne 2006). Challenges in transparency often link to product life cycles, especially in the fashion and textile industry. As earlier discussed, CSR can provide a competitive advantage as well as create value. Uyar et al. (2023) suggest that when there is no CSR committee, an audit committee can play a crucial role in CSR reporting. Thus, it could be argued that auditing could be an important tool in corporate responsibility and sustainability. According to Egels-Zandén and Lindholm (2015), audits ability to improve worker rights in the industry on an overall level remains marginal; Audits are unable to sustain improvements. It was also suggested that future research could focus on comparing compliance over time.

Boström et al. (2015) researched the limitations of auditing in ensuring compliance with sustainable and responsible supply chain governance and found that compliance gaps may remain even though auditing systems are in place. In the auditing process, it was found that the interpretation of the company code of ethics was influenced by negotiation (Boström et al. 2015). The study reviewed the results of Fair Wear Foundation research *Do codes of conduct improve worker rights in supply chains?* (Egels-Zandén, Lindholm 2015). Boiral and Gendron (2011) describe current auditing procedures as "rational myths" and claim that discourse on auditing is often disconnected from actual audit and organizational practice (Figure 3). Figure 3 illustrates the rational myth claims of auditing (Boiral and Gendron 2011). It highlights the discrepancies between the actual audit process and the symbolic image of the rationality of auditing that answers the external pressure for sustainability accountability. According to Boiral and Gendron (2011), these myths are reinforced by, for example, lack of regulation. In response to these external pressures (social pressure and the socially constructed legitimacy of certification) for certification, organizations can adopt sustainability standards superficially, creating the so-called "rational myth of certification" (Boiral, Gendron 2011).

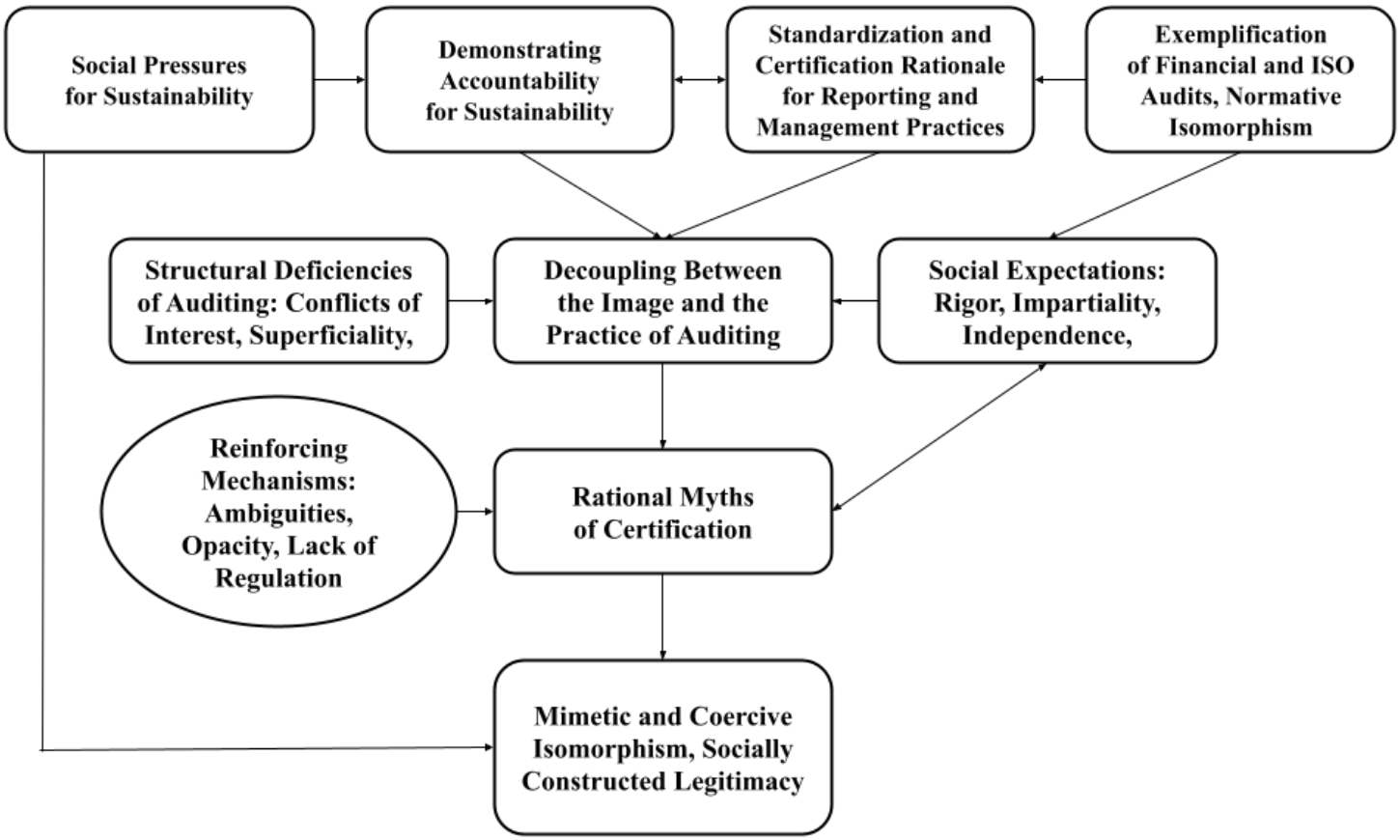


**Figure 3 Rational myths underlying sustainability certification (Modified from source: Boiral and Gendron 2011)**

Based on this, there is a need for better understanding of the limitations of accountability for sustainability. LeBaron et al. 2017 also claim auditing is an illusion rather than a reality of effective global supply chain governance. Furthermore, Junior et al. (2014) stated in their research that although sustainability reporting has increased, the number of assured reports has not, indicating little change in the perceived value of sustainability assurance processes. Though the reports of audit fraud are increasing, and audit fatigue (distraction from a growing frequency of audits) is claimed to be a reality, society is increasingly dependent on the premise that audits are objective, transparent, independent, and generalizable (Khalid et al. 2020). It could be claimed that sustainability claims

are misleading and auditing as a tool is not sufficient in answering sustainability challenges.

Sustainable global supply chains require standardization and collaboration and the complexity of the supply chain and the visibility beyond first-tier suppliers create challenges in sustainability. There is a critique towards sustainability audits as the lack of standards can lead to questions about greenwashing, which is a common discourse around the fast fashion industry. As gender representation is unique in the fashion industry, it would be valid to review the effect on barriers to sustainability of demographic factors in this industry in the context of sustainability audits in the global supply chains. Based on this literary review it could be claimed that it also affects corporate sustainability whether the auditing team is internal or external (Nitkin and Brooks 1998). Auditing can be claimed to be a useful tool for enhancing sustainability through evaluating processes and detecting errors and inconsistencies along with improving the overall quality and accuracy of a firm's processes. While finding the tools to overcome barriers to sustainable supply chain management, it is important to critically evaluate the existing tools to sustainability, for example, sustainability auditing.

## 3.2 Concluding literature review

There are 4 main barriers to sustainability found in this literary review:

1. **The complexity of supply chains:** The fashion industry supply chains are complex, and the visibility beyond first-tier suppliers is limited, which can create a lack in effectiveness in sustainability auditing.
2. **Internal Barriers vs. External Pressure:** While there is external pressure (regulations and stakeholder expectations) to be sustainable it can be claimed there are internal barriers such as a lack of structure and resources in sustainability activities. Corporate leadership and commitment to sustainability are crucial in implementing sustainability.

3. **Auditing limitations:** Although auditing is portrayed as an effective tool for enhancing sustainability practices, various scholars have criticized its effectiveness, objectivity, and whether auditing is a mechanism for improving sustainability or merely a diagnostic tool. The demographic factors of the audit teams can also be claimed to have an impact on the audit. The gender demography of the workforce in the fashion industry is unique, which can affect the demographic factors of the team.
4. **Lack of standardization:** The lack of standardization can be claimed to lead to inconsistencies and inefficiencies. As different industries have their own sustainability audit standards and the suppliers often have overlapping audit requests, it is difficult to compare supplier performance.

These barriers and the presented literature are the framework for this study and the empirical process.

# 4 Research Methods

This chapter provides a framework for the research methods used in the thesis. The following chapter presents the design of the research along with the methodology for data collection and data analysis, finally assessing the quality of the study.

## 4.1 Design of the research

This study analyses sustainability auditing by a Multiple case study design. The research of this thesis is a qualitative analysis of secondary data available on the case companies. In order to gather a realistic view of sustainability auditing and the transparency of reporting, this study focuses on publicly available secondary data. This extensive case study aims to create a conclusion on Finnish fashion industry sustainability auditing, and this is why this research focuses on three case firms rather than assessing only one case company, creating a more generalizable research outcome (Eriksson, Kovalainen 2016 p.133). As mentioned in the literary review, there are challenges in transparency when it comes to sustainability, so this research will be based solely on secondary data, to evaluate the transparency of the available data on sustainability auditing.

## 4.2 Data collection

The research is multiple case-study research. The companies assessed in this study are Finnish fashion companies that have profiled themselves as sustainable. In order to create a realistic picture of the Finnish fashion industry, the study investigates companies of different sizes, based on the number of employees. The secondary sources used in this thesis are the sustainability reports from three growing companies in Finnish fashion listed by Finnish Textile & Fashion (2019) (Table 1). Data is collected from sustainability reports of the following companies:

- Marimekko
- Makia (MannaGroup)
- Papu

**Table 1 Top Growing Finnish fashion and lifestyle Companies (Adapted from source Finnish Textile & Fashion 2019)**

| **Company** | **Turnover (Million) €** | **Growth 3 v** |
|---|---|---|
| **Marimekko** | **112** | **17%** |
| Reima | 124 | 66% |
| Dimex | 16 | 140% |
| Domino Workwear | 13 | 115% |
| Nosh | 10 | 115% |
| **Makia** | **8** | **170%** |
| Balmuir | 9 | 106% |
| Pure Waste & Costo | 2,1 & 1,4 | 354% & 278% |
| **Papu** | **3** | **305%** |
| Billebeino | 2 | 745% |

In the secondary data analysis, this study analyzes the latest sustainability reports along with strategic plans such as code of conduct and other information on sustainability in their website, especially focusing on available information on auditing sustainability and how these audits tie in with the sustainability claims of the case company.

This study reviews the annual sustainability/responsibility reports from the year 2022 from 3 different companies in Finnish fashion industry. The main materials were:

- Marimekko Sustainability Review 2022 (57 pages)
- Makia, Manna Group Sustainability Report 2022 (58 pages)
- Papu Design SUSTAINABILITY PEEK 2022 (18 pages)

In addition to this, the websites of the case companies were reviewed. From a third-party perspective, the research includes sustainability ranks published by an NGO, EETTI in the years 2019 and 2021. The two-year time gap was chosen in order to provide an outlook on the case companies' progress from the viewpoint of an objective third-party organization.

## 4.3 Case selection

A Finnish non-governmental organization that focuses on sustainable and responsible production and consumption, EETTI, has conducted studies of Finnish design brands' sustainability transparency (Lumme et al 2019, Lumme, Tikka 2021). The reports 2019 and 2021 were chosen for this study as the time gap can portray progress well. The study ranked the firms in a scale from A to E, A meaning a product is worth buying and E for not to buy in the context of sustainability. The grade was awarded to a company based on the following criteria: sustainability, environmental, labor and social actions (Lumme et al. 2019). Auditing is also mentioned in the introduction to the EETTI Rank a Brand study. Lumme et al. (2019) states that the social responsibility standard Amorfi BSCI (that over half of the evaluated companies have) does not meet the requirement for civil society membership of the inclusive accountability system and that NGOs have highlighted the BSCI auditing practices shortcomings. Thus, in the EETTI rank, a company cannot get points for this certificate.

EETTI ranked the case companies as follows (Lumme et al. 2019, Lumme, Tikka 2021):

- B (19-24): The direction of the sustainability of the firm is right
    - **Papu (22)**
        - "*Papu got the best score in the evaluation. Papu publishes the production countries and the first and second-stage factory lists. The company's products are made from organic cotton In Finland, Estonia, Lithuania and Portugal, which are all classified as low-risk countries. During the evaluation, Papu updated his responsibility report with a lot of information, thanks to which the score*

*increased from zero to 22 points. Papu encourages the recycling of clothes, but for now does not publish information about its carbon footprint or the electricity it uses*." (Lumme et al. 2019)

- In 2021 Papu was again one of the highest ranked companies in A-category (Lumme, Tikka 2021).

- D (6-11): First steps have been taken
  - **Marimekko (7)**
    - "*66 percent of Marimekko's production is low-risk countries and the company also gets a point for long-term business relationships with subcontractors. More than half (53%) of the cotton Marimekko uses is BCI certified, but the company does not tell the proportion of responsible raw materials in all materials. Marimekko updated its list of factories during the evaluation and encourages recycling of clothes."* (Lumme et al. 2019)
    - In the 2021 rank Marimekko scored again in the middle with no major changes (Lumme, Tikka 2021).
- E (0-5): Do not buy
  - **Makia (0)**
    - *"Makia's clothes are produced in both high-risk countries and low-risk European countries, but the company does not disclose country-specific production shares. Makia claims they use recycled raw materials, but exact information about the amounts is not given."* (Lumme et al. 2019).
    - Makia was one of the rising companies in the 2021 rank, scoring the same amount of points in environment as Marimekko (Lumme, Tikka 2021)

The EETTI report was published in 2019 and many of the companies have evolved in sustainability context since then as 2021 report shows in the case of Makia. The following

chapters review the most recent sustainability reports from the case companies along with other evaluation of secondary data available.

## 4.4 Data analysis

In order to create a rigorous qualitative data analysis, the research methodology framework is organized as follows (Gioia et al. 2013): By data coding, creating a set of 1st order terms and organizing them, followed by organizing 2nd (theory-centric) themes, assembling these terms and themes into a data structure, transforming static data structure into a more dynamic form and finally, refining articulation of emergent relationships and concepts.

**Table 2 Coding the themes of the research.**

| **RQ: What are the ways to manage barriers to auditing sustainability in the fashion industry's global supply chains?** | |
|---|---|
| **Theme: The complexity of supply chains** | Codes: supply chain transparency, product life cycle |
| **Theme: Internal Barriers vs. External Pressure** | Codes: stakeholders, regulations, lack of structure, lack of resources, Leadership, commitment |
| **Theme: Auditing limitations** | Codes: certifications, standards, third-party audit, code of conduct, internal audit team |
| **Theme: Lack of standardization** | Codes: supplier performance, supplier compliance, standardization, quality of supplier sustainability certification |

The themes chosen, are the key barriers presented in the conclusions of the literary review. According to Quintão et al. (2020), by evaluating studies involving multiple cases,

a qualitative analysis should be done by replication rather than sampling. This means replicating the same examination using the same methods in different cases. By assessing these themes and codes in the secondary data available by replicating the same methods on the different studies, this study aims to provide a detailed understanding of the barriers to auditing sustainability in the fashion industry's global supply chains.

## 4.5 Quality of research

To assess the quality of research, the validity and reliability of the research should be evaluated. According to Quintão et al. (2020) and Yin (2011), a multiple-case research should consider several criteria, such as internal and external validity, and reliability. Assessing internal validity requires establishing relationships between the measures and the topic of the study, whereas external validity can be established by evaluating different case firms, which are firms of different sizes in the same industry (Quintão et al. 2020). As mentioned above, according to Quintão et al. (2020) data collection and analysis by the same methods can ensure the reliability of the study.

Using secondary data has its advantages and disadvantages. On the other hand, it can create data that is more generalizable but on the other hand, as the data is formed to serve a certain purpose, it can differ from the desired objectives (research question) (Saunders 2007). Considering this research, secondary data provides an objective outlook on the case firms' sustainability, creating a generalizable assessment of barriers to sustainability auditing in the Finnish fashion industry. Another downside to using secondary data could be that the information available is limited and some of the questions might leave unanswered.

The data used in this research were the sustainability reports of the chosen case companies along with other available information on the case companies' sustainability. Here the reliability of the study can be critically viewed as the data used for the qualitative analysis is created by the case company itself. This study aims to also utilize third-party

data on these companies to ensure reliability. The validity of the study is ensured by using the most recent sustainability reports from the case companies.

# 5 Findings

## 5.1 Auditing sustainability in Finnish textile firms

### 5.1.1 Papu sustainability auditing

Papu is a Finnish fashion brand that was established in 2014 and has the least employees out of the case companies. Papu was the first ranked firm in sustainability (Lumme et al. 2019, Lumme, Tikka 2021). All of the materials used in Papu products have some sort of sustainability certificate according to their sustainability report (Papu 2022).

**Table 3 Sustainability barriers in Papu**

| **RQ: What are the ways to manage barriers to auditing sustainability in the fashion industry's global supply chains?** | | **Papu (2022)**<br>8 employees, Established 2014 (Kauppalehti 2024c). |
|---|---|---|
| **Theme: The complexity of supply chains** | Codes: supply chain transparency, product life cycle | Fabric suppliers: (no percentage available) Portugal, Turkey, Italy.<br>Yarn suppliers: Italy, France, Germany<br>Fibers used:<br>• 7,6% Organic cotton<br>• 15,5% Lyocell<br>• 8,7% Ecovero viscose<br>• 4,8% Merino wool 4,5% Wool<br>• 3% Elastane<br>• 2,2% Cotton<br>• 2% Linen<br>• 1,3% Sulapac material<br>• 0,7% Modal<br>• 0,6% Recycled polyamid |

| | | |
|---|---|---|
| | | • 0,6% Polyamid<br>• 0,5% Cashmere wool<br>• 0,3% Polyester<br>• 0,04% Silver<br>Invested in product lifespan: *"That is the reason we aim to share information about how you can be part of elongating your Papu product."* |
| **Theme: Internal Barriers vs. External Pressure** | Codes: stakeholders, regulations, lack of structure, lack of resources, Leadership, commitment | No available information on the organization or leadership. |
| **Theme: Auditing limitations** | Codes: certifications, standards, third-party audit, code of conduct, internal audit team | Labels and tags: PECF and FSC certificated.<br>Packaging materials: FSC-certified<br>OEKO-TEX® 100 Class 1 standard required for all products |
| **Theme: Lack of standardization** | Codes: supplier performance, supplier compliance, standardization, quality of supplier | OVER 50% OF FABRIC SUPPLIERS HAVE THE GLOBAL ORGANIC TEXTILE STANDARD (GOTS) SERTIFICATION.<br>*"Each of our supplier has to comply with our Code of Conduct, which defines the minimum requirements considering our clothing supply chain - In the 2022 we haven´t got any* |

| | | |
|---|---|---|
| | sustainability certification | *concerns about misconducts in our supply chain."*<br>*"The main fabric suppliers are all situated in the low-risk countries such as Portugal, Baltic countries and Chech Rebublic (Amfori BSCI 2021), but Turkey is classified as a risk country."* |

Papu reports the production countries and the first and second-stage factory lists (Lumme et al. 2019) which overcomes one of the key barriers to corporate sustainability. Papu is part of the carbon-neutral textile industry 2035 commitment (Finnish textile and fashion 2024). Although Papu was the leading sustainable company in the EETTI ranking, for example other stakeholder cooperation is not extensively reported (Papu 2022). The Papu Board gender distribution is 60% men, 40% women, which can be claimed to be diverse (Asiakastieto.fi 2024a).

### 5.1.2 Marimekko sustainability auditing

Marimekko is a Finnish fashion brand that has 462 employees and was established in 1978 (Kauppalehti 2024a). Marimekko (2024a) states in their sustainability strategy that "*they are committed to reducing the greenhouse gas emissions and water use from the textile materials that they purchase as well as the greenhouse gas emissions from their operations and logistics*". Marimekko (2024a) is also "*committed to the Science Based Targets initiative (SBTi) to align greenhouse gas emissions-related targets with the UN Paris Climate Agreement*". Marimekko aims to base their value chain on the principles of circular economy in long term (Marimekko 2024a). Marimekko also has a so-called whistleblowing channel for reporting suspicions of misconduct; anything that is not in line with applicable laws, Marimekko's core values, Code of Conduct, or other policies (Marimekko 2024b). The following table categorizes the barriers to sustainability auditing based on Marimekko sustainability report 2022. Marimekko has aqquired the

following certificates: Amorfi BSCI, OEKO-TEX 100, Leather working group (Marimekko 2024c) and Responsible Animal Fiber (Marimekko 2024c).

**Table 4 Sustainability barriers in Marimekko**

| **RQ: What are the ways to manage barriers to auditing sustainability in the fashion industry's global supply chains?** | | **Marimekko (2022)**<br>462 employees. Established 1978 (Kaup-palehti a 2024). |
|---|---|---|
| **Theme: The complexity of supply chains** | Codes: supply chain transparency, product life cycle | Prolonging the product lifetime: *"We actively inform consumers about the proper care for products through the care guide on Marimekko's website, care booklet on prod-ucts, and social media."*<br>Transparency of the supply chain is reported as followed: Origin of products, share of sales: Thailand 19%, China 20%, Portugal 19%, Estonia 12%, Lithuania 8%, Finland 7%, Tur-key 5%, Hungary 4%, Romania 1%, India 1% .<br>Packaging: recycled materials or materials that have a certificate from the FSC or PEFC<br>The share of unbleached materials: 29 per-cent (22).<br>The share of OEKO-TEX certified materials decreased to 70 percent (73):(new fabric qualities containing recycled fibers: not yet covered by certification.) |

| | | |
|---|---|---|
| **Theme: Internal Barriers vs. External Pressure** | Codes: stakeholders, regulations, lack of structure, lack of resources, Leadership, commitment | Available whistleblowing channel for internal and external stakeholders and other feedback on their operations (customer feedback from both consumers and our wholesale customers, suggestions from employees, inquiries from investors, supply-chain partners, representatives of other stakeholder groups, and through both traditional and social media.).<br>"*During 2022, we continued to further develop leadership and management skills across the organization. These efforts were especially focused on change management, coaching, and self-leadership.*" |
| **Theme: Auditing limitations** | Codes: certifications, standards, third-party audit, code of conduct, internal audit team | *"We covered 100 percent of purchases from outside the EU by social audits."*<br>*"75 percent (78) of our non-EU product purchases were covered by amfori BSCI audits and 100 percent (100) were covered by amfori BSCI audits or other, similar social compliance audits, such as SA8000 or Sedex."*<br>Certificates:<br>• Amorfi BSCI<br>• OEKO-TEX 100<br>• Leather working group (Marimekko 2024c)<br>• Responsible Animal Fiber (Marimekko 2024c) |

| | | |
|---|---|---|
| | | *"Marimekko Corporation has not found it necessary to establish a separate internal audit function. Where necessary, the Board may purchase internal audit services from an external service provider."* Marimekko reports to have an Audit and Remuneration Committee that is responsible for monitoring the efficiency of internal control and risk management. (Marimekko 2024d) |
| **Theme: Lack of standardization** | Codes: supplier performance, supplier compliance, standardization, quality of supplier sustainability certification | Marimekko has a Supplier code of conduct *"To ensure compliance with both legal and our own, stricter requirements, we have environmental and chemical management principles in place both for our in-house printing factory and our partner suppliers."* Monitoring compliance by third-party audits and site visits by their personnel. Mandatory third-party audits for suppliers operating outside the EU, in higher risk countries (BSCI as minimum requirement). In 2022 Marimekko continued to extend audits beyond tier 1 suppliers. |

The transparency in the supply chain is reported in the Marimekko report mainly in the first-tier supplier network. Marimekko reports its first-tier suppliers and claims they have extensive demands for suppliers on sustainability. Marimekko's audited suppliers are mainly 1-tier suppliers, and they aim to extend audits beyond tier-1 suppliers. Marimekko also states prolonging the product life cycle is important and that they inform consumers about product care in their care guide. In addition to this Marimekko has

increased the share of recycled materials in the year 2022 (Marimekko 2022). In addition to this Marimekko's packaging materials are FSC or PEFC certified. Due to new fabric qualities that are yet to be covered by certification, the share of OEKO-TEX materials decreased from the previous year, this presents visibility and openness from the case company which is one of the listed barriers to sustainability. Collaboration with for example the amfori BSCI organization can be seen to promote sustainability and overcome sustainability barriers. Compliance can be ensured through implementing BCSI and for example SA8000.

Responding to external pressure can be contributed by developing leadership and engaging with stakeholders and being part of organizations and initiatives such as UN Global Compact (Marimekko 2022). Marimekko aims to ensure openness in dialogue with stakeholders by for example having a whistleblowing channel for stakeholders. In addition to this Marimekko has continued to develop leadership and management skills across the organization with the Maripeople performance management model. The Maripeople performance management model includes leadership KPIs that showed that, In 2022, the result for the question "My manager supported me to succeed in my role" had increased from 4.1 to 4.3 in a scale of 1–5 (Strongly disagree; Strongly agree). Leadership is an important factor in corporate social responsibility (Morimoto et al. 2005). The Marimekko auditing teams are mainly external (Marimekko 2024d). Nitkin and Brooks (1998) classify companies with external auditing teams (or both internal and external) as "sophisticated". Thus, it can be claimed that auditing in Marimekko is sophisticated. The share of women in Marimekko leadership in 2022 were 33% in the Board of Directors and 90% in the Management Group. While the age demographic is not available the gender distribution seems enabling to environmental progress (Al-Jaifi et al. 2023). As the biggest firm out of the case companies, Marimekko had the most available secondary data to analyze.

### 5.1.3 Makia sustainability auditing

Makia was one of the companies that had a poor evaluation in the EETTI review (Lumme et al. 2019). After this, Makia has made enhancements in their sustainability actions, as the 2021 EETTI report shows (Lumme, Tikka 2021), such as a PR stunt where Makia published a clothing line with no products and emptied their store in Helsinki (Mellakka 2020). Makia is a part of Manna group and the sustainability data is retrieved from the Manna Group report. Makia is a clothing company founded in 2001 that is a daughter company of Manna, which has 326 employees (Kauppalehti 2024b). Makia is a member of amfori BCSI.

**Table 5 Sustainability barriers in Makia**

| **RQ: What are the ways to manage barriers to auditing sustainability in the fashion industry's global supply chains?** | | **Makia (Manna&Co 2022)**<br>326 employees (Kauppalehti 2024b) Established 2001. |
|---|---|---|
| **Theme: The complexity of supply chains** | Codes: supply chain transparency, product life cycle | Only first-tier-suppliers available: Turkey 59%, China 13%, Finland 6%, Portugal 4%, India 1%<br>Sustainable material usage increased from 49% to 56%. For example: "recycled raw materials, ecological natural fibers (linen, hemp), sustainable cotton (GOTS, Better Cotton*, Fair Trade), sustainably regenerated fibers (e.g. lyocell), new fiber innovations materials (e.g. wood-based)" (Manna&Co 2022)<br>The majority of Makias purchased materials were: Recycled polyester (29.3%) and Organic cotton (52,2%) |

| | | |
|---|---|---|
| **Theme: Internal Barriers vs. External Pressure** | Codes: stakeholders, regulations, lack of structure, lack of resources, Leadership, commitment | Available whistleblowing channel.<br>*"We systematically collect feedback and utilize it to improve our ways of working. We meet with our stakeholders face-to-face as well as through digital channels. We aim to offer suitable communication channel to all stakeholders. We aim to engage our external stakeholders in our materiality analysis process in 2023 to ensure that we have understood their hopes and concerns and incorporated them into our everyday business operations."* |
| **Theme: Auditing limitations** | Codes: certifications, standards, third-party audit, code of conduct, internal audit team | Manna has an updated Supplier Code of Conduct, which is based on the principles of amfori BSCI.: "*We aim that all our direct spend suppliers have signed our Supplier Code of Conduct by 2025."*<br>Mannas General Meeting decides on the appointment of auditors. |
| **Theme: Lack of standardization** | Codes: supplier performance, supplier compliance, standardization, quality of supplier sustainability certification | None of the Makia suppliers that were audited (BSCI) were identified as being at risk of not respecting the right to freedom of association and collective bargaining, child labour or forced labour.<br>Makia: 4 assessed suppliers in 2022<br>• *Some of the significant (amfori BSCI score D) negative social impacts identified in the audits included decent working hours, social management systems and implementation, health* |

| | | |
|---|---|---|
| | | *and safety. Three Makia suppliers were identified as having these negative social impacts.*<br>Manna audits their partners operating in risky countries through a third party, mostly amfori BSCI but also SA8000 and SEDEX. |

Although Makia only has first-tier suppliers available the list of materials and 1-tier suppliers is available and transparent. While Marimekko ensured in their report that all their first-tier suppliers are audited, Makia states in their report that they aim that all their direct spend suppliers have signed their Supplier Code of Conduct by 2025. Mannas Supplier Code of Conduct is based on the principles of amfori BSCI. Manna audits their partners operating in risky countries through a third party, mostly amfori BSCI but also SA8000 and SEDEX. The report is transparent on the supplier compliance and, it is reported that three out of four assessed suppliers were identified to have negative impacts. 81% of Makias manufacturing comprises environmentally preferred materials (EPM) (Makia 2024).

As well as Marimekko, Makia also has a whistleblowing channel. It would be interesting to see what kind of feedback the companies receive, and which stakeholder reports the most. Manna founded “Culture Hub” in 2022, representing employees from different parts of the organization to discuss leadership and culture in the company. The gender and age distribution in Manna leadership is as follows:

**Board of Directors:**

- Men: 100%
- Women: 0%
- Under 30 years old: 0%
- 30–50 years old: 20%

- Over 50 years old: 80%

**Leadership team:**

- Men: 75%
- Women: 25%
- Under 30 years old: 0%
- 30–50 years old: 75%
- Over 50 years old: 25% (Manna Group 2022)

The majority of Manna leaders are over 50-year-old men. Manna was also the only one of the case companies to provide information about the age distribution of their leadership.

## 5.2 Comparative case analysis

The complexity of supply chains remains one of the biggest barriers to sustainability in the fashion industry. Though the case companies reviewed in this study provide information of the first-tier suppliers, there is still challenges in transparency as suppliers past the first tier are not known or informed publicly about. The sustainability labels and audits are most visible in supplier compliance, and this is extensively reported in the sustainability reports. Supplier compliance is one of the barriers concerning the lack of standardization. The barriers with the least information in the reports were internal vs. external barriers and auditing limitations. These barriers have the most to do with organizational culture, management, and other internal processes. The lack of information on these barriers might either be due to a lack of experienced relevance concerning sustainability reporting or an unwillingness to report.

As a multiple-case study based on the available secondary data, the information is quite limited. As the available public information is limited, it could be argued based on this study that the industry lacks transparency and visibility when it comes to sustainability. This study concluded the sustainability actions of the case firms based on public information and can be compared to the consumers' viewpoint of sustainability in the

companies in question. Thus, a consumer would get the basic information about sustainability but would still not be able to gather information about the transparency of the global supply chain as the available information in most of these cases is limited to the first-tier supplier.

The available public information on sustainability audits is very limited in these companies. The case firms informed about some of the certificates in their sustainability reports, but nothing of the processes or the effects of obtaining the certificate. Though the case companies can be stated to be able to overcome barriers to sustainability auditing, the presented questions on criticism against audits their effectiveness, objectivity, and whether auditing is a mechanism for improving sustainability or merely a diagnostic does not have strong evidence in this study. It can be stated that although, the bigger case companies did have sustainability certificates, it did not guarantee success in sustainability rankings.

If the processes of auditing were clearer, stakeholders or consumers would be able to make sure the certificate is more than just a label and that a company with a certain certificate would be able to offer added value in sustainability. The similarities in the reviewed reports make it difficult to create distinctions based on secondary data, when there have been found differences in sustainability actions in past years in, for example, the EETTI reviews.

# 6 Discussion

The fashion industry supply chains are complex, and the visibility beyond first-tier suppliers is limited, which can create a lack of effectiveness in sustainability auditing. The lack of ability to gather information about the origins of raw materials, visibility in the supply chain, and complexity are the main barriers to sustainability (Kim and Davis 2016, Burrit and Schaltegger 2014, Koberg and Longoni 2019, Khalid et al. 2020). Buyer-Supplier collaboration is essential to diminish barriers to sustainability. Most of the case companies' supply chain visibility in sustainability reporting extends only to first-tier suppliers, but there are objectives to extend visibility beyond them. The bigger case companies had reported the percentage of supplier countries, whereas from Papu report they were not visible. Product lifecycle is promoted in the case companies by informing the customers on product care.

While there is external pressure (regulations and stakeholder expectations) to be sustainable it can be claimed there are internal barriers such as a lack of structure and resources in sustainability activities. Corporate leadership and commitment to sustainability are crucial in implementing sustainability. Companies can face reputational damage for collaborating with non-compliant suppliers (Khalid et al. 2020). Stakeholders rely on audits to ensure transparency but Khalid et al. (2020) also stated there is critique in the discourse on audits for being merely a tool for greenwashing. The most common certificates among the case companies were BSCI, SEDEX, and SA8000. The extent of the reports varied according to the company size: Marimekko and Makia (Manna) reported quite extensively while the smaller company, Papu, did not have as much information available as secondary data.

One note of the sustainability reports of the case companies is that they focus mainly on the audits and certificates of the supplier firms and not the case company's own. Based on these reports, the certificates seem like insurance for sustainable supply chains rather than a promise for sustainability throughout the company and all its processes, which

include other things aside from the supply chain. Would not the audit processes and upholding of these certificates then be visible in these reports? Although auditing is portrayed as an effective tool for enhancing sustainability practices, various scholars have criticized its effectiveness, objectivity, and whether auditing is a mechanism for improving sustainability or merely a diagnostic tool. Many similarities in certifications can be seen in the reports. Although the acquired and the supplier certificates are mentioned the efficiency of these certificates is not clearly visible.

The demographic factors of the audit teams can also be claimed to have an impact on the audit. The gender demography of the workforce in the fashion industry is unique, which can affect the demographic factors of the audit teams. The gender/age distribution of the audit teams or any information on the audit processes was not available from the secondary data. The case companies have a variety of different certifications concerning working conditions and sustainability. There is little to no information available concerning sustainability audits as secondary data except for Marimekko, which has an Audit and Remuneration Committee. The lack of available data makes evaluating auditing practices, processes, and auditing teams impossible. According to the demographic of the general leadership in Manna Group is less likely to promote environmental progress as stated by Al-Jaifi et al. (2023) as a majority of men in leadership makes these groups less diverse when more diverse leader groups are more likely to be involved in environmental activities. The share of women in Marimekko leadership in 2022 was 33% in the Board of Directors and 90% in the Management Group. The Papu Board gender distribution is 60% men, 40% women, which can be claimed to be diverse. The Al-Jaifi (2023) claim about diversity enhancing sustainability can be seen here when compared to the Lumme et al. (2019) rank: Papu with the most diverse teams ranked highest of the three case companies whereas Makia ranked the lowest and has the least diverse management. The Manna Board is also homogenous by age. There was no information about age in the other case companies.

Collaboration with responsible partners in the fast fashion industry is important to create a sustainable supply chain (Li et al. 2014). The lack of standardization can be claimed to lead to inconsistencies and inefficiencies. As different industries have their sustainability audit standards and the suppliers often have overlapping audit requests, it is difficult to compare supplier performance. The case companies reportedly require their first-tier supplier to have some certification, such as BSCI. The compliance of the case companies' suppliers have been reported which shows an example of visibility. The case companies have extensive requirements for standardization and compliance for their suppliers which is an efficient way to diminish barriers to sustainability. Boström et al. (2015) found that compliance gaps may remain even though auditing systems are in place. One of the Boström et al. (2015) compliance gaps include difficulty in ensuring on-the-ground compliance with sustainability principles. This kind of on-the-ground compliance is difficult to prove based on secondary data.

# 7 Conclusions

Although Finland is claimed to be a forerunner in sustainability and knowledge-based management in the textile industry with excellent conditions for reforming the textile industry as part of the global network (VTT Technical Research Centre of Finland 2021), there is still work to be done to achieve sustainability in this industry. As one of the most polluting industries in the current world, there is increasing pressure to implement sustainability in the fashion and textile industry. Especially as the requirements for reporting are becoming more and more substantive, it is not possible to hide behind greenwashing anymore. In addition to meeting the bare minimum of sustainability, sustainability certifications could have the possibility to prove a more ambitious attitude toward sustainability. The only challenge is to prove that audits are an efficient promise of sustainability.

This study reviewed the sustainability reports of three Finnish fashion firms from the viewpoint of four barriers to sustainability auditing and aimed to answer the question: What are the ways to manage barriers to auditing sustainability in the fashion industry's global supply chains? The barriers found in the literary review were: The complexity of supply chains, Internal Barriers vs. External Pressure, Auditing limitations, and Lack of standardization. This study found that the sustainability actions of these Finnish firms give a good example to the industry though there is still work to be done regarding transparency, reporting, and supply chain visibility past the first-tier suppliers. One way of enhancing transparency is to report on the supply chain more extensively.

## 7.1 Theoretical contributions

In global supply chains, complexity is one of the main challenges. The guarantee of a sustainable supply chain cannot be ensured if the visibility of the supply chain is limited to the first-tier supplier. Compliance with sustainability is important in the supply chain. All case companies require some kind of certification from their suppliers. This leaves a question about visibility in the supply chain: If certification is required from the supplier, wouldn't the information on the supplier supply chain be available? Especially as one of

the most polluting industries, the companies in the fashion industry should focus on developing the transparency of the supply chains. As Li et al. (2014) stated, especially collaboration with responsible partners in the fast fashion industry is important to create a sustainable supply chain. The efforts to make sure the supply chain is sustainable are evident in these case companies. Most of the companies required certifications from their suppliers. As there is a critique of these certifications and the efficiency of auditing, there is room for questioning the actual sustainability of these supply chains.

The Al-Jaifi (2023) claim about diversity enhancing sustainability can be seen here when compared to the Lumme et al. (2019) rank: Papu with the most diverse teams ranked highest of the three case companies whereas Makia ranked the lowest and has the least diverse management. The Manna Board is also homogenous by age. There was no information about age in the other case companies. Since the probability of promoting sustainability is tied to the diversity of the company's management, it could prove beneficial for companies to provide this information in their sustainability reports more extensively.

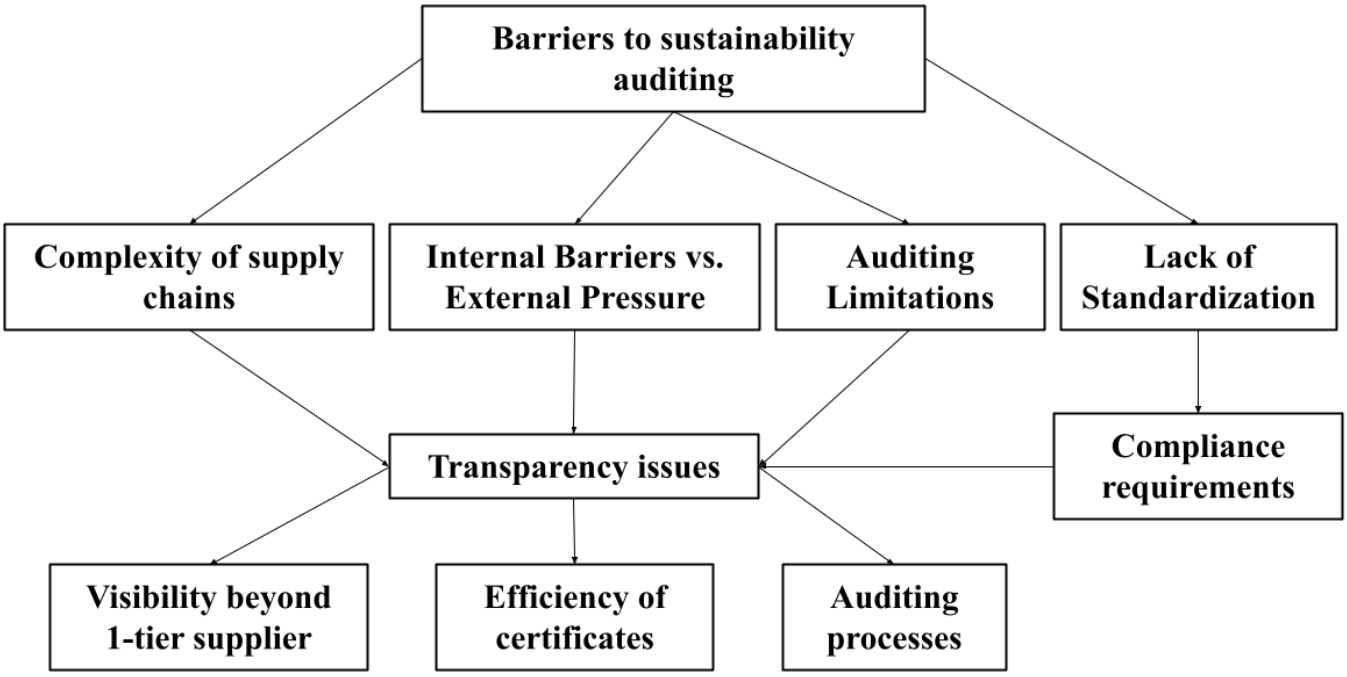


**Figure 4 Findings on barriers to sustainability auditing (Author's own elaboration)**

In the figure 4, the findings on barriers to sustainability auditing compared with existing knowledge are presented. The main barriers are the complexity of supply chains, Internal barriers vs. external pressure, auditing limitations, and lack of standardization. The lack of standardization is visible in the supplier relations and the compliance requirements that a company makes. The compliance requirements then form a barrier if transparency in sustainability cannot be ensured. The first three main barriers also depend on transparency issues. In order to overcome the barriers to sustainability auditing, the supply chain should be visible past the first-tier supplier, and both the actual efficiency and the processes of sustainability audits should be more transparent to stakeholders and consumers.

## 7.2 Practical implications

Based on this research the efficiency of sustainability auditing depends on overcoming the mentioned barriers to sustainability auditing. If managers wish, they should focus on transparency issues in sustainability. This could be done by for example reviewing and developing the sustainability reporting practices of the company regarding its supply chain and auditing practices. By doing this, companies could achieve better transparency in sustainability.

As an answer to the criticism against auditing and whether it is merely greenwashing, companies could report on the auditing processes more openly and what obtaining a sustainability certificate means in practice. In addition to this, the expectations from suppliers could be elaborated better.

## 7.3 Limitations and further research

One factor that also should be taken into consideration is that Finland may have a positive country of origin effect. This means that in the global market, people have stereotypes about products from certain countries (Al-Sulaiti, Baker 1998). As Finnish products can often be claimed to be a forerunner in sustainability: does this create a blind spot for Finnish greenwashing? Sustainability reporting also becomes even more crucial after the rules of corporate sustainability reporting were made even more demanding in the new Directive (EU) 2022/2464. The new CSRD aims to create more open access to sustainability information for both larger companies as well as SMEs.

Though the choice to use secondary data provides an outlook to the available public information and the transparency of sustainability actions, further research could be based on more in-depth material for example interviews or surveys within a company. This would provide a more detailed view of barriers to sustainability auditing and the processes in the context of auditing. The correlation between sustainability audits and the homogeneity and demographics of the auditing teams would be worth researching

more, as Hussin et al. (2019) suggested. This information was not available as secondary data. Sustainability is a standing theme in research now and in the future and the guarantee of sustainability for example in the context of auditing and the efficiency of sustainability certificates should be further researched. The efficiency of sustainability audits could also be researched more in the context of bigger global fashion firms.

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