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CHALLENGES OF ESG IMPLEMENTATION IN THE GERMAN CLOTHING MARKET

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Abstract
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Abstract (in British English):

Integrating environmental, social and governance (ESG) criteria into business practices has become a key issue for companies seeking long-term success and social responsibility. The clothing sector, a major player in the global economy, faces unique challenges in implementing ESG standards stemming from its complex supply chain, heavy reliance on resources, and environmental and social impact. This study focuses on the challenges of implementing ESG in the German apparel market and analyzes the specific obstacles faced by companies in this sector.

The German clothing market is characterized by a variety of players, including large brands, medium-sized companies, and small businesses. Each of these players has different resources, priorities and capacities to implement ESG policies. The study examines the impact of this diversity on the implementation of ESG criteria and identifies gaps and challenges that exist.

In addition to internal and external challenges, companies in the German clothing market are faced with the task of meeting consumer expectations and gaining the trust of stakeholders. Communicating ESG efforts and transparency in supply chains are critical to the success and credibility of companies.

The results of this study help deepen the understanding of the complexity of implementing ESG criteria in the German clothing market and provide companies, regulators and stakeholders with valuable insights and recommendations to promote sustainability in the industry.

Keywords
Keywords (in British English): Economics, ESG, German Clothing Market, Sustainability

1 Introduction

1.1 Initial situation and defining the theme complex

Implementing Environmental, Social, and Governance (ESG) practices in the German clothing market comes with significant challenges, particularly in terms of costs and supply chain restructuring.

In the face of climate change and environmental crises, the fashion industry has an imperative role to play. Sustainability and ethical issues are no longer optional, but rather indispensable for the industry's sustainable future as well as for environmental stewardship. The growing awareness among not only the consumers but also the workers within the fashion industry about pollution implications has been critical, as sustainability has been carefully inculcated in the fashion business (Shen, 2014). Companies are now in need of redesigning their business chains and creating formal sustainability programs in order to address key issues such as closed-loop supply chain management, social responsibility, and the economy.

1.2 Objective of the dissertation and classification of research of the topic

In this chapter is given an overview about the aims and the research of the dissertation. ESG factors are relevant for the German clothing market, but the current market situation lacks consensus on how, exactly, these ESG issues can affect it. Even though the significance of sustainability and ethical measures is largely acknowledged, the level of influence of these factors on consumer behavior, business operation, and the German clothing industry in general is still under-studied.

The primary research goal results arises from the situation on the German clothing marktet:

- This scientific work aims to illuminate the ESG implementation within the German clothing market, providing insights into their current and potential impact on industry practices and consumer choices. This results in the main research question which is: What are the challenges of ESG implementation in the German clothing market?

The factor „challenges“ can be a very wide handled term. Because of this it is here very important to enclose the term. This should be done with the following secondary research questions and the belonging hypotheses.

Furthermore surrender the following secondary research questions:

- What challenges exist during the process of implementing ESG factors in the German clothing market?
- How cost-intensive is the implementation of ESG factors, and how is this compensated?

- How meaningful is ESG implementation in the German clothing market?
- How could ESG factors have impact on the supply chain?

The research has a balanced structure made of qualitative and quantitative elements. The three main elements are interviews, questionnaires and secondary literature.

2 Literature review / Theoretical principles

2.1 Policy frameworks and regulatory initiatives

While voluntary efforts by individual brands are valuable, robust policy frameworks and regulatory initiatives are essential to transform the fashion industry on a systemic level. Governments play a critical role in establishing legislation, incentivizing sustainable practices, and holding companies accountable for the environmental and social impacts of their supply chains.

The European Union (EU) is a frontrunner in developing comprehensive sustainable textile policy. The recently unveiled EU Textile Strategy sets ambitious targets for circularity, waste reduction, and ethical production (European Commission, 2022). Key components include mandatory eco-design requirements for textiles, measures to combat textile waste, support for innovative recycling technologies, and greater transparency requirements. This type of comprehensive framework signals a significant shift in regulatory approaches to fashion.

Extended producer responsibility (EPR) policies hold a key to driving sustainability and waste reduction within the industry. EPR makes manufacturers responsible for the end-of-life management of their products, including their collection, recycling, or proper disposal. By internalizing these costs, EPR incentivizes companies to design for durability, repairability, and recyclability, while disincentivizing the production of low-quality, disposable clothing. France has implemented an EPR scheme for textiles, with other countries exploring similar models (European Commission, 2022). Wider adoption of EPR policies presents a powerful tool for shifting the industry toward a circular model.

International standards and certifications play a complementary role to government regulations. The development of rigorous, harmonized standards for sustainable textiles helps establish a common baseline and clear benchmarks for companies. Global initiatives like the Sustainable Apparel Coalition and the Textile Exchange, which offer tools for measuring environmental impact and promoting best practices, are important for driving industry-wide change (Sustainable Apparel Coalition, 2023; Textile Exchange, 2023).

Effective policy solutions require collaboration between governments, the fashion industry, and non-governmental organizations (NGOs). NGOs offer expertise on social and environmental impacts, help identify policy gaps, and maintain pressure on governments and businesses to uphold commitments. Multi-stakeholder initiatives like the Partnership for Sustainable Textiles demonstrate the potential for coordinated action when various actors work together towards a shared goal (Partnership for Sustainable Textiles, 2023).

Beyond specific textile regulations, broader policy tools like carbon taxes can impact the fashion industry. By pricing carbon emissions, governments can create financial incentives for brands to reduce their environmental footprint throughout their supply chains. Additionally, governments can offer tax breaks, subsidies, and grants to support companies investing in sustainable technologies, renewable energy, and circular business models.

The fashion industry's transition to sustainability requires ongoing policy innovation and evolution. Current legislative examples provide a foundation, but bolder action on EPR, carbon pricing, and international collaboration will be necessary to achieve the transformative change needed. Governments, alongside the industry and civil society, have a crucial role to play in shaping a future where sustainable fashion is not only possible but becomes the standard.

2.2 Challenges and policies

The dilemma of sustainable fashion design is acknowledged, with the rapid growth of the industry leading to profound negative impacts on social culture and the natural environment. The challenges in sustainable design correction include ethical divergence, loss of design value, and lack of educational resources. (Zhang, 2020) Policies aimed at improving the industry's sustainability record are emerging globally, such as the Australian Modern Slavery law, French legislation against textile surplus destruction, and the New York Fashion Sustainability and Social Accountability Act (Mizrachi & Tal, 2022).

In summary, the literature suggests a pressing need for the fashion industry to address its environmental and social impacts through sustainable practices, improved labor conditions, and robust governance mechanisms. The transition towards sustainability is complex and requires concerted efforts from industry stakeholders, policymakers, and consumers.

2.3 Sustainable fashion supply chain management

The fashion industry is increasingly adopting sustainable practices to address the environmental challenges it faces. Closed-loop supply chain (CLSC) management is a pivotal strategy in this transformation, aiming to maximize resource value and minimize waste. Researchers have developed various models and frameworks to enhance the sustainability of fashion supply chains through eco-material preparation, sustainable manufacturing, green distribution, green retailing, and ethical consumer practices.

A case study in the food sector provides insights into developing new CLSC models that extend to recovering resources from general outputs, such as waste from meat processing, to create a more sustainable model of CLSC (Sgarbossa and Russo, 2017). Similarly, the textile and clothing industry, known for its significant pollution and resource consumption, is exploring rent-based CLSC systems to improve the sustainability of fashion products. This system investigates supply chain processes, operations management issues, and sustainability promotion aspects to devise sustainable strategies (Hu et al., 2014).

In the realm of supplier selection, a novel two-stage fuzzy supplier selection and order allocation model has been proposed for sustainable CLSCs. This model uses the fuzzy best-worst method (BWM) and a multi-objective mixed-integer linear programming (MOMILP) model to minimize waste and environmental effects while maximizing job opportunities and sustainable supplier purchases (Nasr et al., 2020).

The assumption that CLSCs are inherently sustainable is critically examined in the context of the Electric and Electronic Equipment (EEE) supply chain. The study proposes extensions for existing CLSC optimization models to ensure that CLSCs are not only economically beneficial but also environmentally sustainable (Neto et al., 2007).

The economic sustainability of CLSCs is also a focus, with a holistic model developed for decision and policy analysis. This model examines the lifecycle of consumer electronics products and the systemic decision-making required for the economic viability of participants in the CLSC (Bhattacharjee & Cruz, 2015).

A UK clothing case study explores the development of CLSCs for environmental sustainability. It highlights the importance of strategic resources, shared vision, and principles between firms and suppliers to progress from reactive strategies to fully embedded CLSC responses (Ashby, 2018).

The role of CLSC as an agent of sustainable development is recognized, with literature reviews and case studies demonstrating its potential to mitigate the disproportion between growing populations and limited natural resources (Gan, 2015).

Planning for environmental and economic sustainability in CLSCs involves integrating operations costs and life cycle assessment (LCA) metrics to attain sustainability goals. The model proposed includes the collection, recovery, and remanufacturing of products (Das, 2020).

The introduction to a feature issue on CLSCs emphasizes the need for business-oriented management of CLSCs to maximize value recovery and calls for interdisciplinary, industry-driven research to validate model assumptions (Daniel et al., 2006)

Lastly, sustainability in fashion business operations is reviewed, with many fashions companies re-engineering their business processes and establishing formal sustainability programs. Critical topics such as CLSC management, corporate social responsibility, and economic sustainability are discussed, with future research areas proposed for sustainable operations management in the fashion business (Choi & Li, 2015).

In summary, the literature suggests that while CLSCs are a critical component of sustainable fashion supply chains, their successful implementation requires a holistic approach that considers economic, environmental, and social dimensions. The development of new models, strategic partnerships, and policy frameworks are essential to achieving sustainability in the fashion industry.

2.4 Implementation challenges

The fashion industry is currently facing significant challenges in adopting sustainable practices, primarily due to cost barriers and difficulties in changing existing supply chains. The environmental impact of the fashion industry is substantial, with issues such as high-water usage, pollution from chemical treatments, and the disposal of unsold stock through incineration or landfill deposits (Pal & Gander, 2018). Despite the emergence of sustainable business models that aim to narrow, slow, and close the loop of resources, these models struggle to scale and often conflict with the value propositions that fashion customers expect. Additionally, the supply chain changes required for these models to become standard are substantial and present significant obstacles (Pal & Gander, 2018).

Moreover, there is a perceived conflict between fashion and environmentalism, which hinders the popularization of sustainable fashion. A study involving South Korean consumers revealed that involvement in fashion does not necessarily correlate with the intention to purchase sustainable fashion products. This disconnect suggests that barriers exist which prevent the widespread adoption of sustainable fashion. To address these barriers, solutions must be found to bridge the gap between supply and demand for sustainable fashion, which is crucial for advancing the green movement within the industry, especially in Asian countries (Moon et al., 2015).

Furthermore, the clothing industry's design and product development processes are pivotal points for implementing sustainable strategies. However, the transition to a sustainable paradigm requires a reevaluation of costing strategies, collaboration within the supply chain, and decision-making tools. The industry's tendencies towards economies of scale, intense competition, and the concept of fashion itself must be scrutinized and reconciled to support a better quality of life and move towards sustainability (Armstrong & Lehew, 2011).

Tracing materials back to their origins across global networks in the clothing industry is a complex challenge due to the intricate and fragmented nature of the fashion supply chain. The industry is characterized by a global network of suppliers, manufacturers, and retailers, with multiple stages and countries involved in the production of each garment. This complexity makes it difficult to track products from raw materials to finished goods and ensure that they are produced responsibly (The Sustainable Fashion Forum, n.d.).

To address these challenges, new technologies like FibreTrace® MAPPED have emerged, leveraging blockchain technology to create an immutable record of all the steps in a product's supply chain. This platform allows for 20/20 visibility of the supply chain and simplifies reporting mechanisms for tracking progress (The Sustainable Fashion Forum, n.d.).

However, despite these technological advancements, there are still issues with greenwashing and the difficulty in verifying ESG claims. The lack of homogenous standards for environmental certifications and the cost of monitoring suppliers' practices have been identified as barriers to increasing supply chain transparency (Curtis, n.d.; The Sustainable Fashion Forum, n.d.).

Regulatory initiatives, such as the EU's Product Environmental Footprint (PEF) program, are being implemented to require companies to calculate and disclose the environmental impact of their products by tracing their origins through the supply chain (Forbes Tech Council, 2022). Additionally, the UK Competition and Markets Authority has introduced the Green Claims Code to address corporate greenwashing (Curtis, n.d.).

In summary, while the fashion industry is making progress towards greater transparency and sustainability, the complexities of the global supply chain and the need for stronger regulations and enforcement continue to pose challenges in verifying ESG claims and combating greenwashing.

2.5 Competitive landscape and cost implications

ESG (Environmental, Social, and Governance) has become a key factor in the business strategy of many companies that intend to succeed in the sustainable development approach and become sustainable competitors. The study below is a synthesis of the effect of adopting ESG standard operations in a business. The disclosure of ESG information increases the performance of the organization in terms of sustainability, with specific reference to environmental and employee factors. This performance is then positively translated into the economic performance, implying that with the right take on ESG strategies, companies will be able to generate competitive advantages by extending their sustainability parameters (Alsayegh et al., 2020). Consumers can be attracted to ESG entities and they may give the firms production cost advantages or the firms may be able to produce better quality products, leading to a market where firms with the initial advantages might dominate. Applying ESG rules alone does not ensure enhanced competitiveness; nevertheless, it might captivate investor attention and meet stock exchange listing requirements, which, perhaps, will be the indirect benefit to brand competitiveness (Zavyalova et al., 2023). Lastly, ESG implementation significantly affects customer trust and brand reputation, which in turn can fully mediate the relationship between ESG efforts and brand equity, indicating that ESG can be a strategic asset for building brand value. (Bond & Levit, 2023). Therefore, while ESG implementation does not inherently assure enhanced competitiveness, it contributes to a brand's competitive position by improving sustainability performance, attracting consumers, and building trust and reputation, which are critical for long-term brand equity. The strategic disclosure of ESG efforts and the pursuit of ESG principles, even without immediate competitive gains, can position a brand favorably in the eyes of consumers and investors, thereby supporting a brand's competitive stance in the market.

The price points for ethical and sustainable clothing compared to non-ESG clothing can vary significantly. Ethical and sustainable clothing often costs more due to several factors, including the use of more sustainable materials, higher labor costs, and the need for more extensive production processes. Sustainable materials, such as organic cotton, are more expensive to produce because they require a higher level of care, including the use of non-toxic fertilizers and the need for longer growing periods. Eco-friendly dyes and prints are also more time and cost-consuming,

as they often require a larger amount of the dye itself and a greater area of land for sourcing (Wanderlust, n.d.). Labor costs are also a significant factor in the pricing of sustainable clothing. Ethical clothing often pays workers a living wage, which can be higher than the wages paid in fast fashion factories. Additionally, many sustainable clothing brands prioritize working with local suppliers and manufacturers, which can also increase costs due to higher wages and production costs (Good on You, n.d.). Small batch production is another factor that contributes to the higher cost of sustainable clothing. Slow fashion brands often focus on craftsmanship and quality, which can lead to longer production times and higher costs per unit (Vogue India, n.d.). Despite these higher costs, many consumers are willing to pay a premium for sustainable and ethical clothing. The cost per wear of sustainable clothing can be lower than fast fashion items, as they are often of higher quality and designed to last longer (Good on You, n.d.). Additionally, as sustainable practices become more widespread and demand increases, the price tag for ethical clothing is decreasing (Good on You, n.d.). In conclusion, while sustainable and ethical clothing may initially cost more than non-ESG clothing, the long-term benefits, such as higher quality, lower environmental impact, and fair labor practices, can make the investment worthwhile for many consumers.

3 Methods

3.1 The hypothesis of the scientific work

The focus of this literature review and the research around it, directly informs the research questions. It will systematically examine existing research to identify problems in „Challenges of ESG implementation in the German clothing market.“

Here is the testable article that emerge, along with the considerations are described:

Challenges: The literature reveals that supply chain complexity and higher material costs are significant barriers to ESG adoption. The first hypothesis is: "An obstacle to ESG implementation in the German clothing market is among other things the cost and difficulty associated with supply chain restructuring."

The hypothesis in the scientific work covers the research in the area of ESG regarding „Challenges of ESG implementation in the German clothing market.“

3.2 Objective of investigation

The main objective of this thesis is to investigate the relevance of ESG (Environmental, Social, and Governance) factors in the German apparel market. In addition to the main research question already mentioned, the supplementary research questions and the hypotheses, however, several goals are pursued. These goals are primarily designed to develop an in-depth understanding

of the importance and impact of ESG criteria in this particular industry. Central research goals in this thesis are thus:

- Cost factors and cost structures
- Additional expenses related to certification, auditing and reporting
- Supply chain restructuring
- Challenges in aligning ESG expectations and practices with suppliers

The research in this article on the " Challenges of ESG implementation in the German clothing market " is therefore intensively aimed at drawing a comprehensive picture of the current situation, the challenges and the opportunities in this area. Studying these goals can certainly provide valuable insights that will help businesses, policymakers, and consumers make more sustainable and responsible choices.

3.3 Composition and range of the research

The composition and range of the research in this academic work is very copious. The research elements are mainly based on three pillars. These 3 pillars are based together and form the base of the research. The elements literature review, expert interviews and surveys are the totally three.

The primary focus is scientific literature. Their extensive scope within the sustainability and business fields will likely yield relevant studies on ESG within the fashion industry context. In addition, case studies are also of interest in relation to the literature.

To supplement academic research, targeted industry-specific sources will be included. These might comprise:

- Reputable Trade Publications: Sources like trade magazines often provide insights into current trends and challenges regarding ESG adoption specific to the clothing industry.
- Company Reports and Sustainability Statements: Analyzing the sustainability reports and ESG-related disclosures of major German clothing brands can offer practical insights into challenges and implementation strategies.

The complete research elements and the whole literature in this academic work has a very extensive set up and is carefully selected.

Expert interviews are a very important factor in this scientific work in terms of research, especially in terms of developed, quantitative findings. The results of expert interviews often provide deeper insights and often produce results that are very close to the market. Expert interviews thus offer the opportunity to gain deeper insights from experts for your research.

A total of 10 interviews were conducted for the research in this scientific work over a period of almost 6 months. The interviews took place anonymously on request and also in accordance with specifications. A detailed list of the interviews is as follows:

Interview:	Date:	Position:	Department:
1	30.11.2023	Quality manager	Clothing association
2	14.12.2023	CEO	Clothing company
3	16.01.2024	Head of management	Clothing company
4	09.02.2024	ESG manager	Clothing company
5	26.03.2024	COO	Clothing company
6	17.04.2024	Sales manager	Seal of quality company
7	19.04.2024	CEO	Supplier fashion industry
8	22.04.2024	ESG manager	Clothing company
9	25.04.2024	Manager	Production company China
10	02.05.2024	Manager	Production company India

Tabel 1: Overview of interview partners (own research & illustration, 2024)

The interviews were conducted in 2 different ways. Either in person or online. It was then online either via "Teams" or via "Zoom".

The first main instrument of the empirical investigation is the survey, which is based on a questionnaire. The search was carried out under special statistical items. The questionnaires are mainly quantitative questionnaires and are self-explanatory. In the research, it was also important that the empirical distribution is indicated.

This survey was aimed at companies in the German clothing market and represents a key factor in the empirical measurement. The survey was conducted from March 2024 to April 2024. The survey was aimed at a total of 225 companies. Inquiries were made by e-mail and post. I received a number of 31 questionnaires answered. In order to answer further questionnaires, I used my professional contacts and I also traveled to a trade fair in Frankfurt am Main, where I received another 76 answered questionnaires. This resulted in 107 qualified, answered questionnaires.

The aim was to obtain a representative number of answered questionnaires and, of course, to gain an open insight into the research topics on the part of the companies.

The questionnaire on the companies consisted of 23 different questions. In an introduction, the research topic was explained so that it was understandable for the participants.

The complete questionnaires of the survey of this analysis can be found in Chapter 11.

The second main empirical study is the survey, which is also based on a questionnaire, but this time concerns the customers of the German clothing market. The search should be carried out under special statistical items. The questions are mainly quantitative questions that are self-explanatory. In research, it is important that the empirical distribution is given. There is a statistical mass of 400 answered questionnaires. These participants were between 18 and 75 years old. The

survey was conducted online with the help of "clickworker.de".

This survey represents an essential factor of empirical measurement. The survey was also conducted from March 2024 to April 2024.

The questionnaire on the customers consisted of 15 different questions. In an introduction, the research topic was explained so that it was understandable for the participants, too.

The aim here was also to obtain a representative number of answered questionnaires and, of course, to gain an open insight into the research topics on the customer side. What do they think, how do they feel, and how do they react to ESG.

4 Results of the research

4.1 Cost factors and cost structures

Environmental, social, and governance (ESG) performance in the German clothing market encompasses a broad spectrum of costs (Fieber, 2017; Köksal et al., 2017). The adoption of sustainable materials such as organic cotton and recycled polyester typically increases production costs, as these materials are generally more expensive than conventional ones (Wenzhao & Hahn, 2021; Kazan et al., 2020). The COO of a clothing company confirms that the switch to recycled polyester was associated with increased production costs (Interview 5, 03/2024). Consequently, companies may incur higher costs, adversely affecting their profit margins in the competitive fashion market (Böhm, 2021). Moreover, the adoption of sustainable technologies and processes, including renewable energy and closed-loop production systems, requires significant upfront capital (Döringer, 2021; Weiss et al., 2020). Confirmed by a CEO of a clothing company, sustainable technologies and processes are challenging for cash flow, as high upfront capital is usually required (Interview 2, 12/2023). Initiating such research and development can escalate business costs and pose a greater challenge to SMEs compared to large corporations, which have more financial resources (Schönherr et al., 2017; Hielscher & Kappler, 2019). A strategy is necessary to mitigate the adverse effects of these additional costs. Eco-friendly operations in the German clothing industry are not only expensive but may also have significant implications for companies' finances (Wenzhao & Hahn, 2021). Therefore, implementing measures that prioritize high-impact initiatives (Schönherr et al., 2017) and adopting innovative collaborations with noise abatement efforts can contribute to cost-sharing and the creation of economies of scale with industry peers and stakeholders (Jastram & Schneider, 2018).

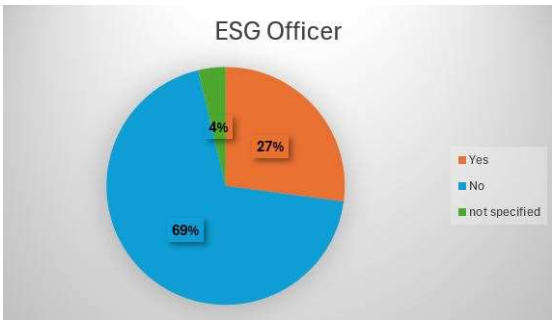

Figure 1: Percentage of ESG officers in the companies of the German clothing market (own research & illustration, 2024)

27% of the companies surveyed already have an ESG officer or ESG department, with 69% not yet having an official ESG officer or ESG department appointed.

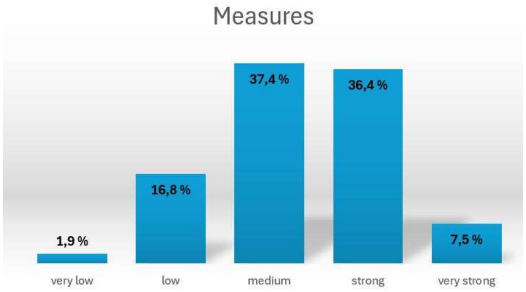

Figure 2: Importance of ESG measures in the German clothing market in percent (own research & illustration, 2024)

It is striking that ESG measures tend to be of great importance for companies in the German clothing market. Over 1/3 of respondents said that the importance of ESG measures is strong.

4.2 Increased costs of sustainable materials and technologies

Implementing Environmental, Social, and Governance (ESG) principles in the German clothing market, along with other environmental practices, presents a significant challenge due to the higher production costs associated with sustainable materials and technologies (Fieber, 2017; Köksal et al., 2017). Replacing conventional materials with eco-friendly alternatives such as organic cotton, recycled polyester, and bio-based fibres leads to increased production costs due to their higher prices (Wenzhao & Hahn, 2021). For instance, research by Kazan et al. (2020) indicated that natural cotton can cost up to 30% more than conventional cotton, and recycled polyester can be 10-20% more expensive than virgin polyester. These higher material costs may threaten companies' profit margins, particularly for fashion brands operating in a highly competitive and price-sensitive market (Böhm, 2021).

In addition to material costs, the implementation of sustainable technologies and processes, such as renewable energy, water-efficient dyeing, and closed-loop production systems, also requires substantial initial investments (Döringer, 2021). For example, a case study of a German outdoor clothing company indicated that adopting a closed-loop recycling method for needed plaster fabrics required an initial investment of €1.5 million, with a payback period of 5-7 years. However, such investments may be challenging for SMEs, which may lack sufficient financial resources or access to capital compared to larger enterprises (Hielscher & Kappler, 2019). While they can ensure long-term cost savings and efficiency gains (Schönherr et al., 2017), SMEs may face difficulties in accessing the necessary skills and resources. The necessary knowledge must be acquired. This is often associated with a lot of money and resource commitment (Interview 8 , 04/2024).

4.3 Additional expenses related to certification, auditing and reporting

Environmental, social, and governance standards have become increasingly important in the German clothing market, incorporating additional costs of certification, auditing, and reporting (Kühn et al., 2018). Getting such sustainability certifications as the Global Organic Textile Standard (GOTS) or the Bluesign system can be quite expensive and time-consuming for service providers; manufacturers need to undergo many audits and maintain high standards for the environment and society. The employee in the management of a quality seal company confirms that there is an increased demand for ausdits and certifications, as the companies notice that this is requested by the customer (Interview 6, 04/2024). As an example, the GOTS certification demands a minimum of 70% of the organic fibers used by companies in addition to having them conform to very strict standards about water treatment, chemicals used and workers' conditions (GOTS, 2021). In a study carried out by Pfeffer et al. (2021), the cost of a certificate of compliance was put at between €10,000 and €50,000, which would be if a German medium-sized clothing company wants to comply with the GOT standards. This also depends on the intricacy of the supply chain and the level of compliance.

Unlike wise, development and checking the sustainability reports enabled by the GRI or the DNK frameworks may be resource-demanding (Sommer et al., 2020). GRI standards, most rooted in German businesses, are a collection of well-known indicators covering all aspects of the economy, environment, and society (GRI, 2021). According to the Seitz et al. survey (2021), German firms' mean annual expenditure for GRI reporting ranges between €100.000 and €200.000. The larger entities may devote up €1.000.000 on average. These costs include, for instance, data gathering and analysis, data verification and probity review, and hiring of sustainability experts.

Certification, auditing, and reporting may represent additional costly undertakings, which directly affects SMEs since they generally lack the dedicated professional staff and budgets of bigger businesses (Döringer, 2021). Give the example of Müller and Wenzel (2020), who talked in their case study about the problems SMEs in Germany had when trying to be more ESG-

friendly. The company, which in the fiscal year generated € 50 million as turnover, did not have enough internal resources equally assigned to sustainability certificates and reports, as the additional staff and external consultants needed to be paid. Profitability decreases due to external consultants and hiring new employees for the topic of sustainability certifications. This is confirmed by a head of management of a clothing company (Interview 3, 01/2024).

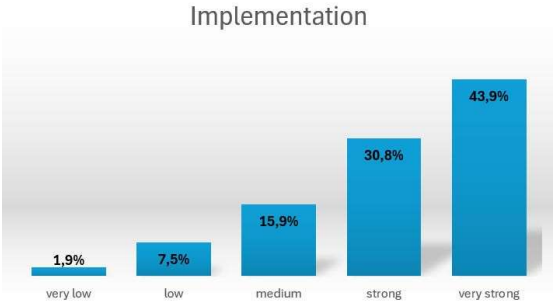

Figure 3: Complexity of ESG implementation for companies in the German clothing market in percent (own research & illustration, 2024)

For companies in the German clothing market, the implementation of ESG factors means a lot of effort. Over 70% stated that they were rated strongly to very strongly.

The analysis revealed that the business's investment in sustainability was worth 2–3% of its annual revenue. Thus, the company's profitability decreased while its competitiveness was reduced (Müller & Wenzel, 2020).

In this regard, German clothing companies must take a deliberately strategic and focused approach to sustainability standardization in certification and reporting (Jastram & Schneider, 2018). This presumes preferably determining certifications and frameworks that are of specific interest to their products, markets and stakeholders but also provide a tangible return on the investment (Sommer et al., 2020). Companies using digital technologies and automation to make the collection, analysis and reporting of data faster and more cost-effective is another way (Döringer, 2021). Furthermore, the participation of industry associations, standards organizations and other responsible agencies can facilitate the transfer of experience, capacity building and advocacy for developing more appropriate and comprehensive sustainability measures (Kühn et al., 2018). A clothing association confirms that it has to do a lot of educational work for member companies, as the expertise is often not available in the companies (Interview 1, 11/2023).

4.4 Supply chain restructuring

The clothing industry has become increasingly complex and international, with supply chains spanning multiple countries and continents, making it challenging for companies to implement environmental, social, and governance (ESG) concepts in their daily production (Turker & Altuntas, 2014). The garment supply chain heavily relies on countries with weak labor

regulations and norms, which can lead to inhumane conditions and human rights abuses (Köksal et al., 2017). Many German fashion firms have relocated their production processes to countries with low wages and minimal social protection, exploiting the working-class population (Schüßler et al., 2019). A manager of a manufacturing company in the clothing sector from India, which also produces for German companies, reports growth in orders from the German market. The requirements for orders are high and increasing (Interview 10, 05/2024).

The study found that major clothing brands and retailers are cancelling or postponing orders (including those already produced) as the COVID-19 pandemic forces store closures in Europe and the United States, risking the livelihoods of millions of garment workers in their supply chains (Business & Human Rights Resource Centre, 2024). Suppliers in garment-producing countries have faced an onslaught of order cancellations, reduced order volumes and extended payment terms, which have left many having to reduce operations or stop them altogether, unable to bear the financial burden. This has forced many suppliers to lay off or suspend millions of factory workers, often without pay and severance, pushing an already precarious group of workers to greater economic vulnerability (Business & Human Rights Resource Centre, 2024).

Figure 4: Need of restructuring supply chain as part of ESG implementation in companies of the German clothing market (own research & illustration, 2024)

Nearly half of respondents said their company's supply chain has been rethought and restructured. It is striking that 23% of the respondents, which represents almost 1/4, did not answer this specifically, which suggests that many companies are still going through a development process related to ESG.

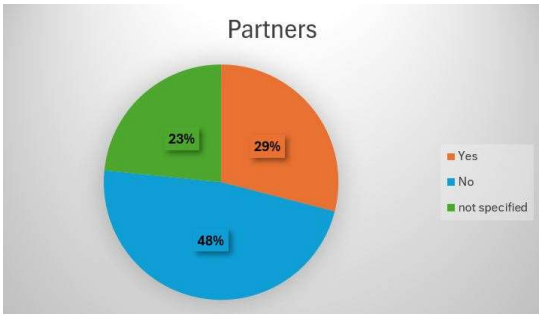

Figure 5: Necessity of new partners in supply chain because of ESG implementation in companies in the German clothing market (own research & illustration, 2024)

Strikingly, 29% of respondents saw the need to work with new partners in their supply chain. This also shows that ESG factors are driving change.

To address these issues, German clothing companies must take a more strategic and cooperative approach to supply management beyond the existing compliance model. This means building partnerships with suppliers, promoting transparency, and leveraging digital technologies like blockchain and artificial intelligence to monitor and track supply chains in real time. By taking these steps, German clothing companies can make their supply chains more resilient and responsible, contributing to sustainable development.

4.5 Efforts required for integrating ESG factors into supply chain management

The inclusion of ESG components in the Supply chain management of German garment companies has to be a result of several processes, such as Mapping the supplier network, implementing the codes of conduct system, providing training capacity building for the suppliers, and improving the level of transparency & traceability (Köksal et al., 2017).

The first undertaking of the structural analysis of supply chains is to recognize risks and opportunities corresponding to the Environmental-social-government (ESG) aspects (Niessen, 2017). The process includes looking non-stop to bring data concerning suppliers' location and products, processes and performance, and engaging with suppliers to discover their current practices and difficulties (Schönherr et al., 2017). According to Jastram and Schneider's (2018) study, companies engaged in the production of clothing in Germany that practised monitoring suppliers' activities and audits were better at knowing what was supposed to be done in the supply chain. They contributed towards several environmental, social, and governance policies.

Furthermore, compliance with the set codes of conduct and the use of monitoring systems ought to be among the key measures for integrating ESG factors in supply chain management (Köksal et al., 2017). The codes of conduct tend to define the minimum requirements and rules for suppliers based on internationally recognized standards of behaviour for both social and environmental performance (Hielscher & Kappler, 2019). Monitoring systems, including audits and grievance mechanisms, are designed to measure the complying standards and find the places for improvements (Miotto et al., 2021). The manager of a production company in the clothing

sector in China explains that the German companies that have production there carry out regular audits to check the specified standards (Interview 9, 04/2024). The written evidence in Graafland's (2020) research has proven that the German fashion company applying the supplier code of conduct and the audit system has enormously improved labour conditions and the environmental well-being of the suppliers in Bangladesh.

However, adopting codes of conduct and developing monitoring systems is not the same as actually influencing the creation of a supply chain that is sustainable and purposeful (Schönherr et al., 2017). Suppliers in underdeveloped countries may not know or lack the required skills, resources, and know-how to upgrade and improve their sustainability procedures (Fieber, 2017). On the other hand, training and capacity building for suppliers is a proper way to help them understand and live up to environmental sustainability standards. It is also a way to support their efforts for continuous improvement (Jastram & Schneider, 2018). According to Döringer's study of 2021, German fashion firms that believed in worker rights education and supply chain management by building supplier workshops achieved more stable and strategic relationships with their factories and better environmental, social and governance (ESG) results.

Though, offering adequate transparency and traceability in the supply chain is an important stipulation for integrating ESG factors and establishing stakeholder trust (Niessen, 2017). An ESG officer of a clothing company confirms that suppliers are regularly audited to create trust with customers, investors and other stakeholders (Interview 4, 04/2024). Regarding the transparency principle, businesses should disclose in their audited sustainability reports, among other aspects, their suppliers, products, processes, and the company's ESG policies, targets, and results (Kökşal et al., 2017). The traceability concept implies the possibility of determining the manufacturer of the goods, chasing their source and recording all the intermediates involved by using, for example, blockchain and digital tags. Böhm's German clothes manufacturers' study made the point that those firms that publicly disclosed their list of suppliers and sustainability reports and used traceability technologies could establish consumer trust, loyalty, and opportunities to mitigate and seize the ESG risks.

However, the difficulties in achieving transparency and traceability in the supply chain evolve mostly around gathering relevant data, verifying it, and sharing it (Graafland, 2020). In this way, companies could meet the supplier's resistance to disclosing information that may be considered sensitive or lack data management standards and systems necessary to ensure data quality and comparability (Schönherr et al., 2017). Through collaborative approaches and projects like the Open Apparel Registry and the Sustainable Apparel Coalition, we can resolve these challenges, which include common platforms, tools and benchmarks for transparent and traceable information (Jastram & Schneider, 2018).

As a result, German clothing companies are compelled to take this into grave consideration, as highlighted below:

- They need to draw a map of the suppliers, conduct screening to determine existing risks and implement a code of conduct and management system.

- They should provide training to improve the knowledge of their suppliers and empower them to understand the rules.
- They must disclose all due information on the company's website.

Such an attempt is an integral part of embracing and managing risks and opportunities, improving suppliers, and increasing trust among stakeholders. Providing financial backing to these fields and partnering with industry leads to establishing synergic and resilient chains in the long term, which adds rich value to the company in the future.

4.6 Challenges in aligning ESG expectations and practices with suppliers

Meeting the labor and environmental standards of the country and the cultural distance between different countries is an important challenge for German textile and clothing firms when they work with global suppliers (Köksal et al., 2017). According to German companies, suppliers in developing countries emphasize different values, practices, and norms in social and environmental aspects, which are likely to hinder communication with ESG standards (Niessen, 2017). The work of Schönherr et al. (2017) reveals that German fashion companies frequently face challenges when implementing and enforcing their sustainability standards with suppliers mostly located in Asia or Africa because of language barriers, power imbalances or lack of trust.

The cultural and spatial gaps may also lead to the non-participation of German firms in verifying and supervising suppliers and ensuring that they meet ESG standards (Miotto et al., 2021). The compliance-based model, normally audits and corrective measures, cannot provide actionable insights necessary for meeting the complex objectives faced by the suppliers (Hielscher & Kappler, 2019). Besides audits being a short-term indicator, which may not reflect the practices and conditions of suppliers and are subject to fraud and manipulation, other methods, such as computer modelling of land use, can be adapted to understand land use change and water demand better. Take, for example, a case study by Graafland (2020) on a German fashion retailer. The audit, which this company made only once a year, did not help to prevent labor violations and environmental non-compliance among its suppliers in Bangladesh. It resulted in the company's public image damage and supply chain disruption.

Furthermore, such measures as warnings, fines, and cancellation of the agreement can have other adverse consequences for the workers and their suppliers (Fieber, 2017). Manufacturers from less developed countries often decide that they should comply with the limits for the short-term or may pass on the expenses on the compliance to the worker or expand the time of work and increase the precarious character of the work, thus violating the principle of fairness. Research conducted by Böhm (2021) revealed that exporting perfectionist German clothing companies with zero tolerance for suppliers' ESG violations and punitive actions invariably resulted in women losing their jobs, factory closures, and hardship for workers, families and communities in developing countries.

One of the main concerns for German clothing firms is their need for more involvement in their production lines. They need to start doing joint work with these suppliers to reduce the burden (Köksal et al., 2017). This requires transitioning from a buying and selling level to a strategic, long-term, sustainable partnership whereby the partners create values for each other and continue improving the standards (Niessen, 2017). The investigation of systems engineering and environmental pressures in the production processes of the German clothing companies, according to Döringer (2021), shows a bidirectional relationship between the initiatives for supplier development programs that have training, technical assistance and financial incentives for suppliers and increase supplier's ability for stability and collaboration—as a result, performing better in environmental, social and economic operations with higher business results.

The collaborative practices will create a mode of supplier-employing companies working together to co-create and implement ESG-related solutions and strategies (Jastram & Schneider, 2018). Therefore, it means including suppliers in the design and planning process of ESG issues based on the suppliers' local contexts, needs and priorities and ensuring the provision of resources and assistance as they engage in driving change (Miotto et al., 2021). A study examining the implications of a German outdoor clothing manufacturer was conducted by Schönherr et al. (2017). Joint goal-setting and problem-solving with the supplier from Vietnam and knowledge sharing between the supplier and the firm led to notable performance improvements in working conditions, environmental management, and quality. The managing director of an international supplier company points out that good exchange and good communication with the respective companies from the German clothing market lead to improved working conditions and an increase in performance (Interview 7, 04/2024).

Capacity building conserves the respect of supply chain suppliers and workers, and they get a chance to take ownership of their ESG issues rather than leaving them to be enforced by external organizations (Hielscher & Kappler, 2019). This translates to funding a supplier's corporate social responsibility projects, providing capital management systems and proper governance structures, as well as market access and linkages (Graafland, 2020). According to the study by Döringer (2021), German corporations that helped suppliers establish ESG strategies, training and grievance procedures had more resilient and responsible supply chains. They were able to formulate more versatile and integrated processes in order to meet the requirements of the volatile and dynamic environment.

In summary, the challenge of assuring ESG alignment between the home country and the suppliers of German garment makers emerges due to social and spatial gaps and the need for more conventional enforcement-based models. The challenges companies face can be tackled using cooperative and development-oriented schemes that primarily involve partnership, co-creation, and empowerment of suppliers. Given the possible investment of German clothing firms in supplier development, engagement, and collective accountability, these production chains will become more sustainable and robust in meeting the stakeholders' objectives.

5 Discussion

The research questions and hypothesis in relation of the research results

One of the biggest challenges is the complexity and opacity of global supply chains, which is explored in more detail with the first hypothesis. German clothing companies often rely on a vast network of suppliers and subcontractors in different countries and regions with different ESG standards and performance. This makes it difficult for companies to monitor and control the environmental and social impact of their products from raw material extraction to final disposal. In addition, the lack of transparency and traceability in supply chains can lead to reputational risks and liability issues, as companies can be held accountable for their suppliers' misconduct.

Another significant obstacle is the cost and resource impact of ESG integration, as well as its recovery. This area is dealt with with the third research question and accordingly with the second hypothesis. Implementing sustainable materials, technologies, and processes can require significant upfront investment and ongoing costs, which can be challenging for businesses, especially SMEs. In addition, the adoption of ESG practices may involve additional costs related to certification, auditing, and reporting, which can strain companies' financial and human resources. These costs can be at a competitive disadvantage for sustainable businesses, as they may have to pass on the additional costs to consumers in the form of higher prices.

A related challenge is the trade-off between sustainability and other business goals such as profitability, speed, and innovation. The fast fashion model that dominates the German clothing market relies on fast product cycles, low prices, and economies of scale to meet changing consumer demands and maximize profits. However, this model is basically

unsustainable, as it leads to overconsumption, generates massive amounts of waste, and puts pressure on suppliers to cut corners on environmental and social standards. The transition from a fast fashion model to a sustainable fashion model requires a fundamental change in business strategy and operations, which can be risky and disruptive for companies.

Another obstacle is the lack of standardization and comparability in ESG measurement and reporting. While there are several sustainability frameworks and certifications, such as the Global Organic Textile Standard (GOTS) and the Sustainable Apparel Coalition's Higg Index, their adoption and implementation varies widely between companies and regions. This makes it difficult for stakeholders to assess and compare the ESG performance of different companies and hold them accountable for their claims and commitments. In addition, the lack of mandatory and harmonized reporting standards can lead to greenwashing and cherry-picking, as companies can selectively disclose or exaggerate their sustainability performance.

Finally, an overarching challenge is the need for collaboration and systemic change to address the root causes of the lack of sustainability in the fashion industry. Many of the ESG issues facing German clothing companies, such as climate change, biodiversity loss, and social inequality, are complex and interconnected and cannot be solved by individual companies alone. Achieving a sustainable and circular fashion industry requires a concerted effort by all

stakeholders, including policymakers, investors, consumers and civil society organisations, to create favourable conditions and create a level playing field for sustainability. This includes developing and implementing coherent and ambitious policies, market incentives and governance mechanisms that support and reward sustainable practices and innovation.

6. Conclusions

The conclusions of the results

The implementation of ESG (environmental, social and governance) criteria in the German clothing market poses significant challenges for companies that are both multi-layered and interconnected. This scientific article has examined the main challenges and analyzed their impact on the industry.

Regulations require companies to conduct comprehensive reviews throughout their supply chain. These requirements are necessary to ensure human rights and environmental standards. Nevertheless, they represent a significant burden, especially for small and medium-sized enterprises (SMEs), which often do not have the necessary resources to respond effectively to these requirements. The implementation of these regulatory requirements requires not only a financial investment, but also an adaptation of internal processes and closer cooperation with international suppliers who may be accustomed to less stringent standards.

One of the biggest challenges is ensuring transparency and traceability in the often complex and global supply chains of the clothing industry. Many providers operate in countries where ESG compliance is not actually enforced. The lack of standardization of reporting and certification processes makes it difficult for companies to ensure ESG compliance throughout the supply chain. Without the right technological solutions and international cooperation, ESG compliance verification remains an almost impossible task.

Adopting sustainable and ethical practices comes at a significant cost. For example, companies need to invest in environmentally friendly materials, improve working conditions, and implement comprehensive reporting and monitoring processes. The additional costs of implementing ESG criteria can harm competitiveness if consumers are not willing to pay higher prices for sustainable products.

Although awareness of sustainable fashion is growing in Germany, the willingness to pay higher prices remains limited. There is a disconnect between the desire for sustainable products and the willingness of consumers to pay. Companies are therefore faced with the difficult task of integrating sustainability without significantly increasing prices or jeopardizing their market position. Effective consumer education and marketing strategies are needed to communicate the benefits of sustainable fashion and encourage a greater willingness to pay.

Implementing advanced supply chain traceability technologies is essential, but it is also costly in terms of resources and costs. Many companies also lack the technical and financial skills to implement these technologies. Nevertheless, these technologies offer significant opportunities

to improve transparency and efficiency and could help reduce costs and ensure long-term ESG compliance.

The study showed that the challenges of implementing ESG factors in the German clothing market are multiple and intertwined. To overcome these challenges, coordinated efforts are needed from all stakeholders. Governments and international organizations must establish clear and uniform standards and help companies comply with them. Companies need to invest in sustainable practices and technologies and develop innovative solutions to reduce costs and increase transparency. Consumers also play an important role in buying more consciously and increasing the demand for sustainable products.

Future research should focus on developing practical solutions and frameworks to help companies implement ESG criteria. This could also include the development of new technologies, the promotion of international cooperation and the creation of incentive systems for sustainable action. It is crucial that many stakeholders work together to promote a sustainable and responsible garment industry that is both economically prosperous and environmentally and socially acceptable.

Overall, this scientific work shows that the implementation of ESG factors in the German clothing market is challenging, but also offers considerable opportunities.

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8 List of abbrevations

BWM	Best-Worst Method
CEO	Chief Executive Officer
CLSC	Closed-loop supply chain
COO	Chief Operating Officer
COVID-19	Coronoavirus Disease 2019
DNK	German Sustainability Code
EEE	Electric and Electronic Equipment
EPR	Extended Producer Responsibility
ESG	Environmental, Social, Governance
EU	European Union
GDPR	General Data Protection Regulation
GOT	Global Organic Textile
GOTS	Global Organic Textile Standard
GRI	Global Reporting Initiative
LCA	Life Cycle Assessment
MOMILP	Multi-Objective Mixed-Integer Linear Programming
NGO	Non-Governmental Organizations
PEF	Product Environmental Footprint
SME	small and medium-sized enterprises
UK	United Kingdom

9 List of figures

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11 Attachments

Company – questionnaire:
“Relevance of ESG factors in the German clothing market” by Jan Peter Danz

Environmental, social and governance (ESG) factors are a set of criteria used to evaluate a particular company in terms of its operations and ability to generate financial returns while adhering to sustainability and ethical principles it is instructed to serve. The “environmental” part evaluates a company in terms of the company's business activities on the environment. The „social“ section looks at how a company works to improve its relationships with employees, suppliers and customers. Finally, “governance” includes aspects of corporate management, external and internal audits and, where necessary, the protection of shareholder rights.
This survey complies with the legal requirements of the GDPR, all data is stored anonymously and it is not possible to identify you personally.

Date:

1. Is your company active on the German clothing market?
   ( ) Yes ( ) No ( ) Not specified

2. How many employees do you employ in your company?
   ( ) 1-200 ( ) 201-1000 ( ) more than 1000

3. What is the turnover of your company in EURO per year?
   ( ) 1-500.000 ( ) 500.001-10.000.000
   ( ) 10.000.001-50.000.000 ( ) over 50.000.000

4. Does your company/department have an ESG officer?
   ( ) Yes ( ) No ( ) Not specified

5. How important do you rate ESG measures for your company?

		( )	( )	( )	( )	( )	
not important	1	2	3	4	5	important	

6. How complex is ESG implementation for your company?

	( )	( )	( )	( )	( )	
not complex	1	2	3	4	5	complex

7. How intensive do you rate the costs of ESG implementation for your company?

	( )	( )	( )	( )	( )	
not intensive	1	2	3	4	5	intensive

8. Does your supply chain need to be restructured as part of ESG implementation?
   ( ) Yes ( ) No ( ) Not specified

9. As a result, are you working with new partners in your supply chain?
   ( ) Yes ( ) No ( ) Not specified

10. Do you think that implementing ESG will increase consumer confidence?
    ( ) Yes ( ) No ( ) Not specified

11. If so, are you using this to justify higher prices?

	( )	( )	( )	( )	( )	
not Intensive	1	2	3	4	5	intensive

12. To what extent do you believe that the costs of ESG implementation can be offset by greater using this to justify higher prices?

	( )	( )	( )	( )	( )	
not Intensive	1	2	3	4	5	intensive

13. Can this also lead to long-term positive effects?

	( )	( )	( )	( )	( )	
not intensive	1	2	3	4	5	intensive

14. In which sector do you classify your company?
    ( ) Fast Fashion sector ( ) Slow Fashion sector
    ( ) conservative clothing sector ( ) other clothing sector

15. Do you see ESG as a suitable tool to improve your business performance?
    ( ) Yes ( ) No ( ) Not specified

16. If so, how high do you see the potential in it?

	( )	( )	( )	( )	( )	
not high	1	2	3	4	5	high

17. How important are ESG scores for your company?

	( )	( )	( )	( )	( )	
not important	1	2	3	4	5	important

18. Are ESG scores a useful indicator of your company's sustainability performance?
    ( ) Yes ( ) No ( ) Not specified

19. Do you see advantages in the consumer market for your company with a positive ESG score?
    ( ) Yes ( ) No ( ) Not specified

20. Do you think ESG factors will become more economically important in the future?
    ( ) Yes ( ) No ( ) Not specified

21. If so, how intensive

	( )	( )	( )	( )	( )	
not intensive	1	2	3	4	5	intensive

22. Do you think that the ESG standards on the German clothing market will lead to the establishment of binding industry-wide sustainability standards?
    ( ) Yes ( ) No ( ) Not specified

23. If so, how intensive

( )	( )	( )	( )	( )	

not intensive 1 2 3 4 5 intensive

Customer - questionnaire:
"Relevance of ESG factors in the German clothing market" by Jan Peter Danz

Environmental, social and governance (ESG) factors are a set of criteria used to evaluate a particular company in terms of its operations and ability to generate financial returns while adhering to sustainability and ethical principles it is instructed to serve. The "environmental" part evaluates a company in terms of the company's business activities on the environment. The Social section looks at how a company works to improve its relationships with employees, suppliers and customers. Finally, "governance" includes aspects of corporate management, external and internal audits and, where necessary, the protection of shareholder rights.
This survey complies with the legal requirements of the GDPR, all data is stored anonymously and it is not possible to identify you personally.

Date:

1. How old are you?

I am _____ years old.

2. How much money do you spend on clothing each year?
   ( ) 0€-250€ ( ) 251€-500€ ( ) 501€-1.000€ ( ) 1.001€-1.500€
   ( ) 1501€-2000€ ( ) more than 2.000€

3. The abbreviation "ESG" stands for Environmental, Social and Governance and describes a comprehensive set of rules for evaluating the sustainable and ethical practices of companies. How familiar are you with this topic?

	( )	( )	( )	( )	( )	
not familiar	1	2	3	4	5	familiar

4. The environmental criterion refers to the environmental impact of companies and their contribution to environmental protection. How important is this to you when buying clothes?

		( )	( )	( )	( )	( )	
not important	1	2	3	4	5	important

5. The social criterion evaluates how a company acts towards its employees, suppliers, customers and the public. How important is this to you when buying clothes?

		( )	( )	( )	( )	( )	
not important	1	2	3	4	5	important

6. Governance refers to sustainable corporate management. These include, for example, topics such as company values or management and control processes. How important is this to you when buying clothes?

		( )	( )	( )	( )	( )	
not important	1	2	3	4	5	important

7. An ESG score uses a scale value to assess the ability and intensity of companies to act successfully in the area of ESG. How important would it be to you to find a company with a positive ESG score when buying clothing?

		( )	( )	( )	( )	( )	
not important	1	2	3	4	5	important

8. Do you see the assessment of companies on the German clothing market using ESG scores as a useful indicator of sustainability?

		( )	( )	( )	( )	( )	
not useful	1	2	3	4	5	useful

9. Does the implementation of ESG factors influence your purchasing behavior in the fast fashion sector?

( ) Yes ( ) No ( ) Not specified

10. If so, how intensive?

	( )	( )	( )	( )	( )	
not intensive	1	2	3	4	5	instensive

11. Does the implementation of ESG factors influence your purchasing behavior in the slow fashion sector?

( ) Yes ( ) No ( ) Not specified

12. If so, how strong?

	( )	( )	( )	( )	( )	
not strong	1	2	3	4	5	strong

13. Do you think that ESG factors will play a more important role in the German clothing market in the long term?

( ) Yes ( ) No ( ) Not specified

14. Do you think that the ESG standards on the German clothing market will lead to the establishment of binding industry-wide sustainability standards?

( ) Yes ( ) No ( ) Not specified

15. If so, how intensive?

	( )	( )	( )	( )	( )	
not intensive	1	2	3	4	5	intensive