

**Master thesis – Radboud University**

# The status quo of supply chain transparency

A content analysis of large fast fashion firms participating in  
the Dutch Agreement on Sustainable Garments and textiles

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## 1. Introduction

“Planetary systems are under threat. Fashion and clothing products and activities contribute to the destruction of these systems. They also contribute to the increasing disconnection between humans and Earth.” (Union of Concerned Researchers in Fashion, 2019). These are the first sentences of the manifesto of concerned researchers in fashion. They call for more unified and more critical research to reduce the negative impact of the fashion industry. Because the fashion industry has been under critique for many years. Recent studies have found that the fashion industry is one of the most environmental and harmful industries of the world and accounts for 10% of all global carbon emissions per year (Niinimäki., Peters, Dahlbo, Perry, Rissanen & Gwilt, 2020). This research focusses on fast fashion firms. These firms are characterized by a highly competitive structure due to shortened lead-times, peak points in customer demands, and fast inventory turnover (Barnes & Lea-Greenwood, 2006). Previous studies have stated that fast fashion firms have disregarded ethical, social, and environmental issues in order to maintain this high demanding level of efficiency and responsiveness (Turker & Altuntas, 2014). Furthermore, the fast fashion industry is characterized by its dispersed, vertically disintegrated supply chains, due to the globalization of the last decades (Niinimäki et al., 2020). “The global shift of textile and garment production to lower-labour-cost countries led to a substantial decline of production in many developed countries, in some cases to the point of extinction, with concomitant increased complexity and reduced transparency through the supply chain.” (Niinimäki et al., 2020, p. 190). Thus, currently the fast fashion industry is characterized by its complexity and dispersion and has received a lot of critique on its environmental and ethical impact. Because of these acquisitions of unethical practices, combined with the complexity within the supply chain, the fast fashion industry seemed like a relevant and interesting topic to study. Therefore, fast fashion firms will be the research subject to this study.

In order to counter the negative side-effects that are currently associated with fast fashion supply chains, governance is needed to provide predictability and supply chain transparency in these complex processes (Bartley, 2017). Supply chain transparency can be a tool to reduce these negative side effects of the fast-fashion supply chains, namely because it can help assess the effectiveness of sustainability commitments made by firms by creating clarity in the complex supply chain practices they are involved in (Gold & Heikkurinen, 2018). Furthermore, supply chain transparency rebalances the asymmetry between who has access to information and who does not (Gardner et al., 2019). This is particularly important to external stakeholders because through transparency, power transfers from the company to its stakeholders (Egels-Zandén, Hulthén & Wulff, 2015). And because transparency allows to hold firms accountable for their actions, supply chain transparency

can lead to more responsible organizational behavior (Gold & Heikkurinen, 2018). This study used the comprehensive definition of Egels-Zandén et al. (2015, p. 5) to describe supply chain transparency; “supply chain transparency comprises corporate disclosure of: i) the names of the suppliers involved in producing the firm’s products (i.e., traceability), ii) information about the sustainability conditions at these suppliers, and iii) the buying firms’ purchasing practices.”

As mentioned before, the complexity and dispersion of supply chains in the fast fashion industry demands for some form of governance to enforce supply chain transparency. Due to the absence of effective national and intergovernmental regulation for environmental and social problems, another form of governance has emerged (Bernstein & Cashore, 2017). The last couple of years has shown a steep increase in interest and implementation of various forms of private regulation and market-driven governance (Vestergaard, Murphy, Morsing & Langevang, 2019). One of such forms of private regulation is the multi stakeholder initiative (MSI), which can be defined as: “initiatives where non-governmental organizations (NGOs) and for-profit organizations play an active role in the design and implementation of standards and a variety of reporting, auditing, monitoring, verification and certification systems” (Utting, 2002, p. 65).

One recent example of such MSIs is the Dutch Agreement on sustainable Garments and Textiles (AGT). This initiative, organized by various NGOs, the Dutch government, trade organizations, trade unions and multiple businesses in the industry of garments and textiles, activates firms to focus more on sustainable supply chain governance and supply chain transparency (SER, 2016). The AGT aims to have that 80 percent of all companies in the Dutch garment and textile industry have signed the agreement by the year of 2021 (SER, 2016). At the start of the agreement, approximately 50 percent of companies within the Dutch industry already became participants (SER, 2016). Since a large part of the sector complies with the terms of the agreement, the AGT has the capacity to change the garments and textile industry in the Netherlands. One of the main requirements the AGT asks its members to comply to is supply chain transparency. Thus, by signing the AGT, the firms explicitly state that they want to become more transparent and are at the same time required by the AGT to publicly communicate about their supply chain practices, starting two years after the signing of the agreement (SER, 2016).

This may be perceived as a promising development. However, supply chain transparency in the way that it is currently executed by firms is perceived as insufficient (Egels-Zandén et Al., 2015). Gardner et Al., (2019) found a major lack of coverage of different aspects of supply chain information in the existing transparency initiatives they assessed. They described the shortfall on information disclosure on smallholders and investors, information on the distribution of economic

benefits, and information about the effectiveness of the reported actions to improve sustainability. They call for support for the process of developing “a positive, transformative transparency for supply chain sustainability governance” and argue that the research community should have a big role in this process (Gardner et al., 2019, p. 175). Therefore, more knowledge on the current biases and shortcomings of disclosed information is required (Mol, 2010). Moreover, Egels-Zandén et al., (2015) state that more research should examine how organizations in different settings, industries and sizes deal with transparency.

This study aims to respond to the call for knowledge regarding the flaws and biases of current supply chain transparency by providing insight in the status quo of supply chain transparency of large fast fashion firms in the context of a starting MSI. Therefore, the research question is formulated as follows: *What aspects of supply chain transparency are disclosed by the largest fast fashion firms that are participating in the Dutch AGT since 2016?* To answer this question, a content analysis of the public communication of the large fast-fashion firms that are participants of the AGT was conducted to analyze which aspects of supply chain transparency these firms disclose, using the theoretical framework derived from Gardner et al., (2019). Previous research has analyzed the status quo of sustainable supply chain management and sustainability reporting in fast fashion (e.g. Turker & Altuntas, 2014; Campopiano, & De Massis, 2015) as well as the implementation process of transparency (e.g. Doorey, 2011; Egels-Zandén et al., 2015). Furthermore, studies on the status quo of transparency have been conducted in many sectors other than the garment industry (e.g. Gardner et al., 2019) in the form of quantitative content analysis (Ma, Lee & Goerlitz, 2016) or on certain parts of transparency, like workplace human rights reporting (Islam & Jain, 2013). However, to the best of the researcher’s knowledge, no prior studies have researched the disclosure of information of large Dutch fast fashion firms, in the context of a starting MSI. Due to the fact that the firms in the sample participate in the AGT and therefore explicitly stated that they want to become more transparent, this study provides unique insight in the status quo of reporting on the different aspects of transparency in this specific context.

The research has both theoretical as well as practical relevance. Theoretically, it adds insights into the status quo of supply chain transparency of Dutch fast fashion firms. While not comparative in its nature, the use of an established framework provides the ground for a cross-country comparison between Dutch fast fashion firms, firms from other countries e.g. the US (Ma et al., 2016). Furthermore, the findings can be used to compare to supply chain transparency in other sectors (Gardner et al., 2019). Lastly, the findings could be used to compare the progress in supply chain transparency over time, as the MSI evolves and exists longer, whether this influences the quality of supply chain transparency. Practically, the analyzed firms can learn from the outcomes of the study

by gaining insight into the possible gaps in their reporting. The outcomes can also serve as an example for other fashion firms who are dealing with supply chain transparency. Furthermore, this research can be relevant for the organization of the Dutch AGT and other MSI's because it can help them understand better what can be useful as guidelines for public reporting. Lastly, NGO's and interest groups can use the insight of the status quo on reporting, helping them to critically assess the supply chain transparency of fast fashion firms.

The study proceeds as follows: the theoretical background will describe supply chain transparency in light of the existing literature on the topic, hereafter the method section will explain the research design and chosen approach for the study. Furthermore the result section provides a systematic overview of the findings on supply chain transparency of the firms on each aspect of the theoretical framework derived from Gardner et al. (2019) Lastly the conclusion will answer the research question where after the discussion contains the interpretation of the findings in light of the existing literature and a discussion of the limitations and grounds for further research.

## 2. Theoretical background

This chapter explains the theoretical background of sustainable supply chain transparency by providing the definition of transparency. Furthermore, it describes the relationship between firm size and transparency. Thereafter an overview is given of the critique in the scholarly debate and the criteria for a transformative effect of transparency are listed and a summary of similar studies is given. Finally the theoretical framework that is used within this study is explained.

### 2.1 Supply chain transparency

The concept of supply chain transparency has a lot of different definitions due to the proliferation of research in this field. Gardner et al. (2019) explain supply chain transparency as a state which makes information available to certain actors (Gardner et al., 2019). There is a distinction to be made in the terms of transparency that explain to which actors the information is made available. Mol (2015) defines four types of transparency: management transparency, which refers to the disclosing of information within or between companies; regulatory transparency, which includes disclosing information to public authorities; consumer transparency, which is the provision of information regarding sustainable claims on the production processes on product information and lastly public information, which provides information to the wider public regarding direct sustainability information on the production processes and commodity characteristics within the supply chain. Others define transparency as solely traceability of products, concise information about the social and environmental circumstances of the production sites or explain transparency as clarity about financial transactions between buyers and suppliers (Egels-Zandén et al., 2015). However, since this research is aimed at public transparency, the comprehensive definition of Egels-Zandén et al. (2015, p. 5) covers the different explanations mentioned before. As described in the introduction Egels-Zandén et al. (2015) describe supply chain transparency as the combination of three aspects of corporate disclosure, namely traceability of the suppliers of the firms' products, information about the sustainability conditions at these suppliers in the supply chain and lastly the purchasing policies and practices of the buying firm itself. This holistic definition will be thus used for the term 'supply chain transparency' in this research.

The disclosure of information about sustainability in supply chains to the public is often executed in the form of corporate sustainable responsibility (CSR) reporting. "CSR reporting is one of the most effective tools for communicating CSR; it encompasses both codes of conduct and online reporting (predominantly CSR reports)." (Lock & Seele, 2016, p. 5). CSR reporting refers to the voluntary or mandatory activity of dissemination of information in annual, stand-alone or accounting reports (Campopiano & De Massis, 2015). Firms take a lot of effort to disclose

information on their sustainability practices in order to gain legitimacy by providing information on the firms practices that positively influences the perception of relevant stakeholders (Campopiano & De Massis, 2015). CSR reporting has proven to be successful in providing legitimacy; multiple studies have shown that CSR reporting can increase the competitive advantage of firms, and help them generate more capital (Hooghiemstra, 2000). However, because of the globalization of the current market, transparency is not only about internal firm information or the sustainability practices, but extends these boundaries into information about the supply networks (Egels-Zandén et al., 2015). Supply chain transparency, thus, goes beyond CSR reporting. Doorey (2011) argues that managers are hesitant to implement supply chain transparency. Even though Doorey (2011) proved that it is easy to get access to information like production locations, managers claim that their supply chain information is of great proprietary value are still reluctant to give up their private corporate information.

## 2.2 Transparency and firm size

A large body of literature has been formed over the years on the firm characteristics or contextual factors that influence CSR reporting behavior (Campopiano & De Massis, 2015). “The factors that potentially affect the level, quality and quantity of CSR reporting can be grouped into three categories: (i) corporate characteristics, e.g. size and industry; (ii) contextual factors such as country of origin, time, media or stakeholder pressure and (iii) internal factors, e.g. CEO appointment or a social reporting committee” (Campopiano & De Massis, 2015, p. 513). However, the results of the studies on the influence of these factors are not always conclusive. Since this study assesses large fast fashion firms, the size of the firms could be relevant for the generalizability of the findings. In contradiction to Campopiano & De Massis (2015), Lock and Seele (2016) state that ‘quality of CSR reports is not impacted by firm size. However, however, several other studies claim the opposite, one example is the study of Morhardt (2010, p. 447), who found that “disclosure on CSR increases with firm size”, and that “larger companies are often found to so a better job”. Furthermore, Mol (2015) confirms that multiple studies have shown that large firms are better equipped to deal with the complicated procedures, auditing processes and reporting that transparency requires (Mol, 2015). Therefore, the sample of this study, consisting of large fashion firms, is expected to have the means to be qualitatively transparent.

## 2.3 Critical debate on the transformative power of transparency

Since supply chain transparency practices are spreading around the globe, the proliferation of research about this topic made transparency one of the key topics in the field (Mol, 2015). Scholars differentiate in their opinions about the effectivity of supply chain transparency, and different studies come with varying findings (Egels-Zandén et al., 2015). Various studies have linked

transparency to positive characteristics for the firms, like trust, legitimacy and accountability (Egels-Zanden et al., 2015). The most important trait of supply chain transparency as described in the literature is as Mol (2015) summarizes: “transparency is believed to empower the weak and hold the more powerful accountable through reducing information asymmetries, enabling more equal participation around political controversies and enhancing accountability. Second transparency politics and practices are scrutinized against substantive criteria related to improved sustainability or more effective environmental governance. Transparency is then interpreted as environmental governance by disclosure, where disclosing is a governance act that has substantial outcomes in terms of environmental improvement.” (p. 154). Furthermore, supply chain transparency, when enforced with the right incentive system and external stakeholder pressure, can help improve the labour standards at the suppliers sites in the supply chains (Locke, Amengual, & Mangla, 2009).

However, recently supply chain transparency has received a lot of criticism from the research community. For instance, it has been argued that without strict standards, firms have a lot of leeway in what and how they report on their sustainability actions (Lock & Seele, 2016). Gupta, Boas & Oosterveer (2020) also argue that not everything can be made transparent and therefore decisions have to be made on what information to focus on, what information will be left out. Another reason for skepticism about supply chain transparency is because when private schemes, like certification, labeling and business-to-business (B2B) traceability schemes, are controlled by non-state actors such as NGOs and private companies, the information provided is not neutral, but is framed in particular ways and therefore potentially contested (Gupta et al., 2020). Therefore, firms are often accused of ‘greenwashing’ or presenting information that is only partially complete or biased (Mason, 2020).

Others criticize firms for their increasing reliance on assessments process, including and monitoring, reporting and verification in sustainable supply chain transparency. Gupta et al, (2020) state that constant monitoring is no means to an end because it creates more work pressure on suppliers and more control on the work floor, which can cause can cause the labor conditions at suppliers to deteriorate rather than improve. Furthermore, Coombs and Holladay, (2013) strongly criticize transparency in the way it is practiced by most firms. In their paper they describe three strategies that firms use in order to withhold sensitive information, or confuse the reader. The first ‘communication myth’ they describe is that just because information is disclosed, it does not mean that it is also understood by the receiver. Coombs and Holladay, (2013) describe that firms sometimes effectively try to complicate information, by making it too difficult to understand.

Secondly, some firms try to create an overload of information to prevent proper assessment of the content. Thirdly, 'presented facts' are not always neutral. Objective statements can also be used to legitimize particular perspectives while obscuring the interests of the information providers.

#### 2.4 Criteria for transparency to have a transformative effect

Beyond the fact that what and how firms report may be insufficient, others go further and point out that even if information is transparently communicated to the public, disclosing information alone is not sufficient for creating changes in sustainability practices (Nye & Hargreaves, 2010). They state: "the meaning of pro-environmental behavior is constructed and defined through interaction and translated into action in different settings" (Nye & Hargreaves 2010, p. 139). This statement is confirmed by Spaargaren, Weenink, & Lamers, (2016) who argue that for transparency to have a transformative effect, information should be fed back into the daily practices. Coombs and Holladay (2013) agree and suggest in order to create a transformative effect resulting from transparency, one should perceive transparency not as a quality that a firm can possess but as a process where stakeholders actively get involved. " True transparency is reflected in the ability of stakeholders to identify relevant content areas for disclosure, search for information about those areas, evaluate if it sufficiently meets their informational needs, request additional information when it fails to meet their needs, and assess the overall responsiveness of the organization" (Coombs and Holladay, 2013, p. 219). In order to involve stakeholders, the disclosed information should be understandable and usable for the relevant actors (Gupta et al., 2020). Another factor of great importance for gaining credibility and involving stakeholders on transparency practices is trust from the stakeholders in the information that is being disclosed by the firms (Lock and Seele, 2016 ; Möllering, 2005).

#### 2.5 Credibility for Dutch firms

This study focusses on the supply chain transparency of large Dutch fast fashion firms. However, Maignan and Ralston (2002) found that Dutch people do not perceive firms as trustworthy easily which makes. Due to the big role that the government has played in social welfare in the past, Dutch people are cynical about the added moral worth of businesses (Maignan and Ralston, 2002). "Public opinion there is likely to be skeptical about the true motivations underpinning businesses' involvement in social affairs" (Maignan and Ralston, 2002, p. 510). Therefore, Dutch firms involved in supply chain transparency have to gain trust for their supply chain transparency to be perceived as credible. A study of Lock and Seele (2016) found that the truth of the content, sincerity and the specification of stakeholders are essential for the credibility of transparency. Furthermore, standardization of the format and the content of the public transparency were found to be the most defining factors for gaining credibility. (Lock and Seele, 2016). Thus, for Dutch fast it seems even

more important to gain credibility as a result of the cynical nature of the Dutch public. Since the content of public communication is found to be a defining factor for gaining credibility and involving stakeholders in creating a transformative effect, this study researches the status quo of supply chain transparency by studying the content of the public communication of large fast fashion firms, by assessing the aspects that are being disclosed.

## 2.6 Previous research on supply chain transparency

Over the years, many studies have researched supply chain transparency, some studied subjects very similar to this study. Islam & Jain (2013), studied human rights disclosure by 18 Australian apparel and retail companies through content analysis of their public communication. They developed disclosure categories based on several international human rights guidelines and assessed the reporting of the firms. The results of their study showed that less than 50% of the disclosure categories were reported by, by the firms that were studied.

Furthermore, a similar study to this was conducted by Ma et al. (2016) who researched the adherence of firms to the California Transparency in Supply chains Act, which required apparel firms in California to disclose information on their activities to end human trafficking and slavery in their supply chains. They found that half of the companies did not adhere to the requirements, and did not report anything on their activities regarding human trafficking or slavery. However, the latter study differs somewhat more from this study because in this study the firms voluntarily chose to commit to the Dutch AGT.

Another study focused more on the content of the public transparency of firms, namely Turker & Altuntas, (2014) who studied the status quo of sustainable supply chain management in the fast fashion industry through the analysis of the reports of nine European companies that all used the Global Reporting Initiative (GRI) guidelines for reporting. They found that the analyzed firms paid significant attention to reporting on their activities, furthermore the firms reported that they developed their own codes of conduct and that their suppliers have to comply with it. Furthermore, the analyzed firms focused a lot on monitoring and assessment processes to review the progress of their suppliers.

Moreover, Gardner et al., (2019) conducted research about the current status and the future of supply chain transparency in agricultural commodity supply chains by developing a holistic framework of the different dimensions of supply chain transparency. In their research they assessed 26 information platforms and MSI's and found distinct gaps in their supply chain transparency. The largest gaps of information were to be found in the disclosing of names and information on the less prominent actors in the supply chain, like smallholders and investors, information on the

distribution of economic benefits through transactions and information about the effectiveness of actions to improve sustainability.

Summarizing, previous research has brought to light that firms in the (fast) fashion industry do not report according to the standards of supply chain transparency on human right reporting and do not report CO<sub>2</sub>, that fast fashion firms that report voluntarily report according to the GRI standards tend to emphasize their improvement activities and compliance procedures in reporting, lastly MSI's in the agricultural commodity supply chains show major gaps in their supply chain transparency on several dimensions.

This research aims to provide insight in the status quo of supply chain sustainability of large fast fashion firms. The previously mentioned studies are similar but gaps of knowledge remain about supply chain transparency in the fast fashion industry in general, and especially in the context of large fast fashion firms that voluntarily committed to become more transparent. This context implicates that firms have to gain trust to create credibility of Dutch critical opinion towards organizational transparency, the size of the firms ensures that they have the resources to be transparent and the voluntary membership of the Dutch AGT could implicate that they are willing to become more transparent. In order to identify relevant content areas to assess the supply chain transparency, the framework on supply chain transparency derived from Gardner et al., (2019) is used as a theoretical framework.

## 2.7 Theoretical framework: implementing supply chain transparency

The framework of Gardner et al. (2019) is based on the holistic definition of supply chain transparency of Egels-Zandén et al. (2015) which was mentioned before, and gives a complete overview of the different dimensions involved in supply chain transparency, aimed at sustainability governance. The framework describes a recurrent cyclical process of six dimensions of the assessment and intervention of sustainability efforts and its disclosure. The first dimension is traceability information on the role and nature of relations with the different actors involved in the supply chain. Traceability information includes the names and addresses of direct and indirectly involved actors within the supply chain such as suppliers, manufacturers, intermediaries, but also the farms where the commodities are purchased from. Furthermore, traceability information also includes information on the history of these working relations and contracts and agreements and power balance between the different actors. The second dimension relates to the transaction information of investments and purchasing practices of the actors in the supply chain. Transaction information refers to the transactions of commodity purchases, which are the raw materials such as wool or cotton, the sales of inputs of commodities, and the investment decisions and ownership information of the firm. The third dimension relates to the risks and impacts associated with the

multiple supply chain stages, regarding social and environmental issues. The fourth dimension describes the different policies and commitments to sustainable improvement of the actors involved. The fifth dimension regards information about the activities conducted by the organization or the supply chain actors involved in order to improve the social and environmental impact of the supply chain practices. And, finally, the sixth dimension describes information about the effectiveness of the interventions aimed at improving sustainability and social objectives, both of the firm and its supply chain actors (Gardner et al., 2019).

Since the framework provides an holistic approach of all the dimensions involved in sustainable supply chain transparency implementation, it is very useful to use as an actual framework for the analysis of the aspects of transparency that the selected firms in the study report on. “Taken together, these different classes of supply chain information can help actors navigate the complexity of global supply chains, identify and assess options to mitigate and reverse the impacts of unsustainable practices, and monitor and report on progress against long-term goals.” (Gardner et al., 2019, p. 174). Therefore, this study will use the framework of Gardner et al., (2019), to analyze which aspects of supply chain transparency are being disclosed by the firms in the sample.

## 3 Methodology

This study systematically analyzes the status quo of supply chain transparency of large fast fashion firms that are participants of the Dutch AGT. This chapter elaborates on the research design, including the choice of method, the sample selection, the approach for data-collection and data analysis, as well as elaborates on the research ethics and limitations of the study. Lastly, the epistemological reflection of the researcher will be addressed.

### 3.1 Research design

This study draws on the theoretical framework from Gardner et al. (2019), using a content analysis to understand the status quo of supply chain transparency of large fast fashion firms. “Content analysis is a research technique for making replicable and valid inferences from texts (or other meaningful matter) to the context of their use” (Krippendorff, 2018, p. 24). Since the aim of the research is to gain knowledge on what aspects of transparency are disclosed and how they are described in the public communication of large fast fashion firms, content analysis provides the tools to interpret the disclosed information in their context. Furthermore, content analysis allows for both qualitative and quantitative analysis, which facilitates the researcher to conduct a complete analysis of assessing both whether information is present as well as making sense of the content.

### 3.2 Sample selection

This study focusses on the supply chain transparency of large fast fashion firms that are signatories to the Dutch AGT. The specific focus on firms participating in the Dutch AGT is chosen because by signing the agreement the firms committed to becoming more transparent. Therefore, these firms are more likely to disclose more because it was a voluntary choice. The sample that is chosen out of the firms participating in the Agreement on sustainable garments and textiles is based on three criteria. The first criteria was that the firms signed the agreement in 2016. The reason for this criteria is that the agreement states that after 2 years, firms have to communicate to the public about their sustainability approach. Thus, the firms that joined in 2016 had to report in 2019, and should have some information about their processes. Secondly the choice was to specifically focus on the largest firms, i.e. those with more than 500 employees. The assessment was based on the number of employees because many companies do not disclose their annual turnover publicly. Previous studies have shown that large firms are better equipped to deal with the complicated procedures, auditing processes and reporting that transparency requires (Mol, 2015). Focusing on the largest firms of the AGT offers a greater likelihood of identifying reporting on all categories of the framework of Gardner et al. (2019). By choosing a sample of all large firms, more general statements can be made after the conclusion about large firms in the specific context of the fast fashion industry while

participating in the Dutch AGT. The third selection criteria was that the firms are operating as fast fashion firms. These firms are characterized by a highly competitive structure due to shortened lead-times, peak points in customer demands and fast inventory turnover (Barnes & Lea-Greenwood, 2006). Since previous studies found that firms in the fast fashion industry have disregarded various ethical, social and environmental issues (Turker & Altuntas, 2014), it seems particularly interesting to study the supply chain of firms in this sector. The final selection based on the criteria as explained above has resulted in a selection of the eight largest fast fashion firms that are participants of the Dutch AGT since 2016, which are; Wibra, WE fashion, G-star Raw, HEMA, C&A, de Bijenkorf, Hunkemöller and the Sting.

### 3.3 Data collection

Data was collected in the form of documents and texts retrieved from the websites of the selected firms. The AGT does prescribe some criteria for public communication, but they want it to be part of the firms' communication style, so there is no prescribed format. That is why the information that will be analyzed for this research will be retrieved from multiple sources from the firms' website. Firms vary in their public communication forms; some covered it as chapters of annual reports, others as short alias of information on the website and others as very detailed, elaborated sustainability and policy reports. The goal is to analyze all the written communication on sustainability in supply chains that the firms provide on their own websites, including the shared documents. However, in some cases the website information was only a summary of the documents provided by the same firms. In those cases the website information was only read but when it was determined that no new information was shared, the website information was not explicitly analyzed. Furthermore, graphs were also analyzed but the video's, pictures and images were not included in the analysis. In some cases, progress reports on sustainability from several years were published. In those cases the decision was made to only include the report from 2018. One exception here was made at G-star Raw, this organization only had the report of 2019 available. As a matter of fact, G-star Raw has published over 30 case descriptions and policy documents since 2012. In this situation the choice was made to only analyze the documents that were still valid in 2018 and to only include the most recent versions of the policy documents. The communication in the English language has been used as the basis for the analysis. If there was no English version available, the Dutch text was analyzed. The quotes in the results section are translated into English when necessary.

An overview of the firms that were included in the sample along with the number of employees that

work for them and the documents that were analyzed is given in table 1. The number of employees is specifically added to the table to indicate the size of the firms.

**Table 1: Data overview: firms, number of employees and documents analyzed**

<i>Organization</i>	<i>Number of Employees</i>	<i>Documents</i>	<i>Pages</i>
<u>Wibra</u>	2700	Website information Wibra	12
		<i>Total number of pages</i>	<u>12</u>
<u>HEMA</u>	11.000 - 17.000	Sustainability Report 2018	29
		HEMA Modern Slavery Statement 2016/2017	2
		HEMA GRI-table sustainability report 2018	8
		<i>Total number of pages</i>	<u>39</u>
<u>De Bijenkorf</u>	3000	Website information de Bijenkorf	14
		Part A of de Bijenkorf Supplier conditions General Purchase conditions of Magazijn de Bijenkorf B.V.	15
		Part B of the Bijenkorf Supplier conditions Supplier Guidelines & Standards Own stock and Consignment 2019	9
		Part C of the Bijenkorf Ethical Trading Requirements 2019	23
		<i>Total number of pages</i>	<u>61</u>
<u>The Sting</u>	2600	The Sting MVO beleid	13
		<i>Total number of pages</i>	<u>13</u>
<u>WE fashion</u>	1000 - 5000	Sustainability report 2018 WE	29
		WE sustainable materials commitment	1
		WE fashion child labour policy	4
		WE fashion code of conduct for suppliers	7
		WE code of ethics	7
		WE fashion Factory List	8
		WE restricted substances list	5
		WE animal welfare policy	1
		WE fashion forced labour policy	3
		<i>Total number of pages</i>	<u>65</u>
<u>C&amp;A</u>	35.000	C&A Global Sustainability Report 2018	246
		C&A Code of Conduct for the supply of merchandise 2015	11
		C&A The apparel and footwear supply chain transparency pledge	1
		C&A Supporting Guidelines for the C&A Code of Conduct for the Supply of Merchandise 2015	41
		C&A employee code of ethics 2015	10
		<i>Total number of pages</i>	<u>309</u>

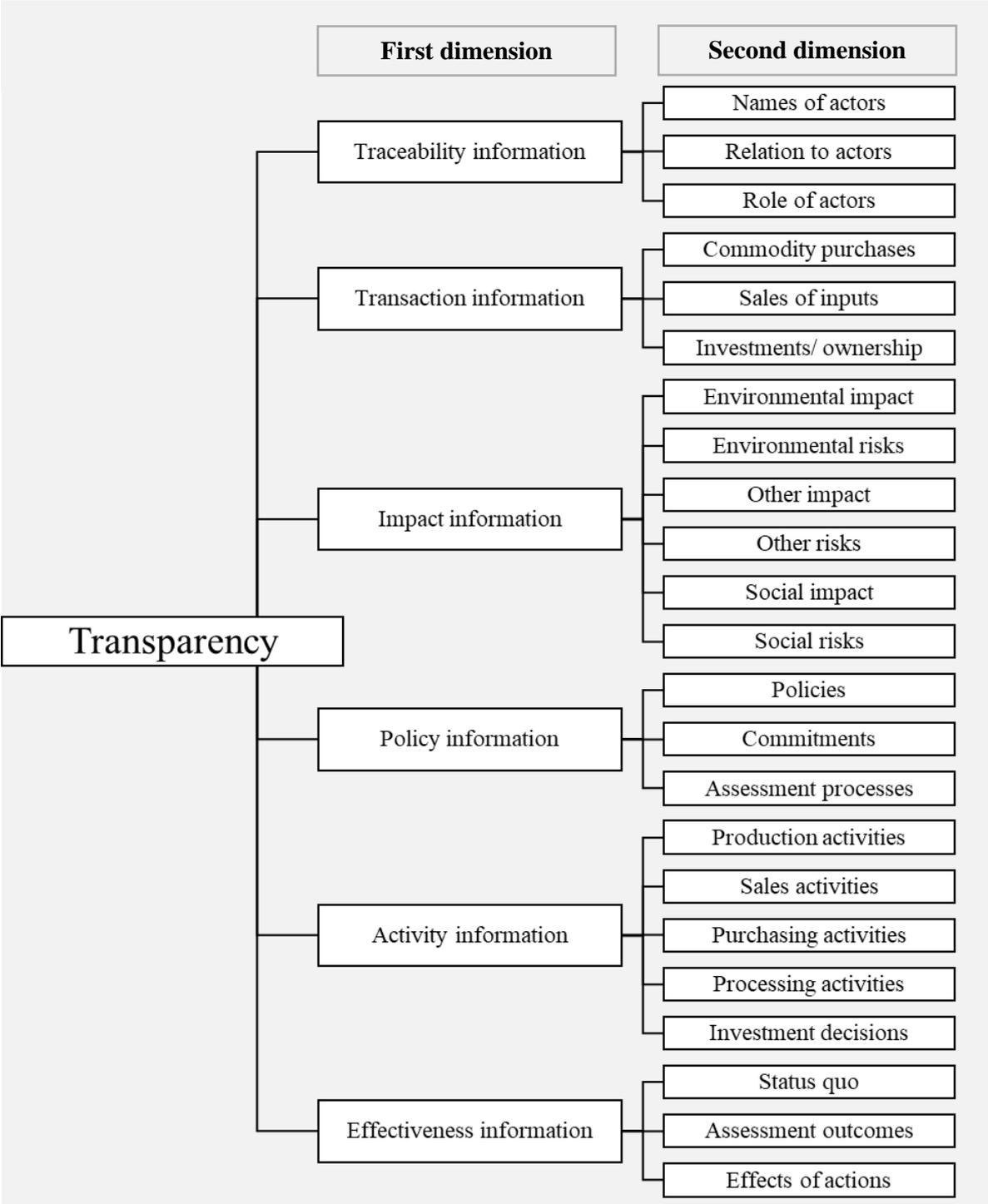
<i>Organization</i>	<i>Number of Employees</i>	<i>Documents</i>	<i>Pages</i>
<u>G-star Raw</u>	6000	G-star Raw Sustainability report 2019	32
		G-star Raw Restricted Substances List for garments 2018 – version 1.5	42
		Modern Slavery Act Statement	3
		G-Star Supplier Code of conduct March 2014	12
		G-star Raw Greenpeace Detox Solution Commitment 29 January 2013	4
		G-star Raw Detox report 2019	9
		G-star Raw Materials Policy & Animal Welfare Policy	3
		G-star Raw Social and Labour Guideline version 2.0 January 2019	37
		GSTAR Sustainable Supply Chain Handbook version 2019/2020	32
		Environmental Guideline version 3.0 G-star Raw C.V.	40
		<i>Total number of pages</i>	<u>214</u>
<u>Hunkemöller</u>	6500	Sustainability Report 2017/2018	53
		The Hunkemöller Ethical Code of Conduct	9
		<i>Total number of pages</i>	<u>62</u>
<b><u>Total</u></b>		<b><i>Total number of pages of all documents</i></b>	<b><u>775</u></b>

### 3.4 Data analysis

The data has been analyzed in the form of deductive content analysis of the reports and information on sustainability and supply chain governance of the firms. “By deriving categories from established theories of the contexts of their analyses, researchers can avoid simplistic formulations and tap into a wealth of available conceptualizations.” (Krippendorff, 2018, p. 352). Therefore, the framework of Gardner et al., (2019) on the different dimensions that are involved in supply chain transparency, has been used as a theoretical framework and its aspects are treated as a guideline for the first and second order dimensions and in the coding process. Furthermore, the Gardner et al., (2019) framework did not provide any concrete information for second order dimensions on effectiveness information, therefore this category was completely inductively coded, adding the dimensions status quo, assessment outcomes and effects of actions.

The software that has been used to conduct the analysis is Atlas.ti. This is a tool that helps to arrange large amounts information in a systemic way (ATLAS.ti Scientific Software Development GmbH, n.d.). The coding scheme based on the framework of Gardner et al., (2019) is presented in figure 1. Moreover, the complete codebook with stipulative definitions can be found in appendix 1.

**Figure 1: Coding scheme supply chain transparency**



Within the coding process, the choice was made to not include all information provided by the firms. For instance, HEMA and Bijenkorf both reported on the sustainability efforts of their restaurants and food sales, but this did not seem fitting in the analysis of supply chain transparency of fast fashion firms. Thus, that information was left out of the coding and analysis. After the coding, different forms of analysis have been conducted. The first analysis was the analysis of whether or not fast fashion firms disclosed the certain category/subcategory (dichotomous variable).

Hereafter, an analyses of the number of occurrences of each code was conducted. Finally, the content of the categories was analyzed and presented in the results section.

### 3.5 Research ethics and limitations

In order to share the considerations in the research design and ethical awareness, the following paragraph describes the research ethics and limitations of the study. This study does only make use of data that is publicly published by the firms. Therefore, the researcher did not ask for consent to analyze the data, since permission for reading is implied by disclosing the information on the corporate websites. To increase transparency on the findings reported in this study, the quotes that are mentioned in the results section are adequately referring to the document and page of the source that the quote was retrieved from. Furthermore, some information was only available in Dutch, in order to prevent translating bias by the personal interpretation of the researcher, google translate has been used consistently as an objective application to translate all the Dutch quotes into English when they are mentioned in the results chapter. In order to ensure measurement reliability, the reporting categories were derived from the framework of Gardner and colleagues (2019). Hereafter, stipulative definitions and were developed during the coding process to create categories that are collectively exhaustive of all the aspects of supply chain transparency and to ensure that the categories were mutually exclusive. However, this research also has several limitations. In order to ensure intra-coder reliability, all the coded documents were re-analyzed after the first round of coding. Thereafter discrepancies between the coding of different texts were resolved. However, since the researcher was conducting this study alone, achieving inter-coder reliability was unfortunately not possible. Furthermore, this study has analysed a relatively small sample of eight large fast fashion firms, in the specific context of the start of an MSI in the Netherlands. The findings are therefore also bounded to that context of these cases and offer limited generalizability.

### 3.6 Epistemological reflection

The research has been documented in a transparent and honest manner. The researcher wanted to stay as objective as possible, but must, however acknowledge that no one is completely without (pre) assumptions. In order to justify the decisions that were made during the coding and analysis process, a research journal was kept to write down the considerations and rationales of the choices that were made. Since the researcher has a preference for a neo-positivist research approach this study was challenging due to the fact that this research design also required some form of personal interpretation of the data, which is not strictly objective and thus subject to human flaws and personal unconscious beliefs that can feed into the analysis and results. Therefore, the choice was made not to display the number of times that a category was coded, because that is too sensitive to

the researcher's own interpretation in coding. Thus, the decision was made to only state whether some dimension was reported on in the public communication of the firms. Furthermore, in writing down the results, it was tried to only state facts and be true to the employees of the firms that worked the reports or website information, so that they cannot challenge any statements that were made because it is all objectively measurable, and can be found in their own sources. Even though the chosen research design was valid for the research question it would have suited the personal preferences of the researcher more to keep the research purely quantitative and analyse through word counts, lengths of the reports and availability of concrete numbers and graphs. Concluding, this study also provided the researcher valuable lessons on their epistemological and research preferences.

## 4 Results

This research has analyzed the documents, CRS reports and corporate website information regarding supply chain transparency of the eight largest fast fashion companies participating the Dutch AGT. Building on the framework of Gardner and colleagues (2019), six broad categories of transparency were evaluated, incorporating 25 disclosure items. The categories were: traceability, transaction information, impact information, policies and commitments, activity information and effectiveness information. In the following, first the results on whether large fast fashion firms disclose information on these categories or not is presented for each dimension. Second, and based on this first step, a comparison is made on the overall status quo of supply chain transparency of the eight fast fashion firms in the sample. The results show that, while all being large fast fashion firms and all being part of the Dutch AGT, firms differ markedly in the status quo of their supply chain transparency.

### 4.1 Traceability

*“Traceability information provides transparency around associations among actors and between actors and places.” (Gardner et al., 2019, p. 165)*

Traceability information is about disclosing the different actors involved, their role within the process and the nature and rigidity of the connection between actors (Gardner et al., 2019). In the analysis the focus lied on the information that the fast fashion firms disclose about the names, addresses and company information about the supply chain actors, the information they described about the contracts and relationships with the supply chain actors and the mentioning of the activities and role of the actor within the supply chain. Stakeholders such as NGO’s, interest groups or charities were not taken into account in this dimension.

**Table 2: Traceability information**

<i>Organization</i>	Names of suppliers	Number of suppliers	Production countries	Relationship	Role of actors
Wibra			V	V	
HEMA			V	V	
De Bijenkorf			V	V	
The Sting			V	V	
WE fashion	V	V	V	V	V
C&A	V	V	V	V	V
G-star Raw	V	V	V	V	V
Hunkemöller		V	V	V	

 V : disclosed, empty: not disclosed

As shown in table 2, not all firms disclosed information on every subcategories of traceability information. Three fast fashion provided information on all traceability subdimensions while the other five firms only reported about their (main) production countries and described the relationships with their suppliers through the explanation of required compliance from suppliers to the codes of conduct of the firms.

#### *4.1.1 Names of actors in the supply chain and production countries*

When analyzing the public communication of the firms, it was found that only three of the eight companies disclosed all the names of their suppliers, including addresses. G-star Raw and WE fashion additionally disclosed the category of the supplier, i.e. whether the supplier is producing apparel or accessories, and mention the number of employees of the production location, described as < 1000 or 1001 to 5000. C&A specifically mentioned that they disclosed both their first and second tier suppliers. Furthermore, C&A also has a supplier map on their website where the kind of garment can be traced back to the supplier. *“We disclose 100% of our tier-1 and tier-2 suppliers across all four regions. The names and addresses of the factories of our 722 suppliers are plotted on a supplier map.”* (C&A Sustainability Report 2018, p. 1). HEMA does mention their suppliers but writes about them in their report: *“We have also updated our production location list, which is aggregated and communicated by the IMVO Agreement on Sustainable Garments and Textile.”* (HEMA Sustainability Report, 2018, P.18). So they do not communicate the names of suppliers by themselves. However, further on they do mention that they are working to create an overview of their second-tier suppliers as well. Other companies do not disclose the names or addresses of their production locations. Moreover, all companies do mention the countries they (mostly) produce in by listing them. Additionally, Hunkemöller also provided a table with the number of production facilities per country. Two of the eight firms only disclose the main countries they produce in, these are HEMA and Wibra; *“Our main production countries are China, Bangladesh and Turkey”* (Website information Wibra, n.d.).

#### *4.1.2 Number of actors in the supply chain*

Three of the eight firms that were evaluated, disclose their specific way of sourcing. For instance, Wibra mentions *“Wibra works in the Far East with a limited number of permanent intermediaries. These agents form our eyes and ears in the production countries on a daily basis. While we are in constant contact with our agents, they do the same with our producers”* (Website information Wibra, n.d.). In contradiction, G-star Raw and the Sting report to have their own sourcing units which means that they place their orders directly at the manufacturer. More companies, six of the eight, reported something about the number of suppliers they do business with. WE fashion and Hunkemöller only mention the number of suppliers. The Sting, C&A and Wibra acknowledge that they work with an unspecified large number of suppliers, and are trying to bring that number down in order to create real relationships. C&A writes that they already started with this process: *“Over the last two years, we have reduced our supply base by 39% and we continue limiting our number of suppliers, as appropriate and possible.”* (C&A

SustainabilityReport 2018 , p. 115). Besides reducing the number of suppliers, five firms also report to try to focus on long-term collaborations with the same suppliers. WE fashion states: *“Our goods come from suppliers that have been producing for us 61% for more than five years. We have an excellent relationship with these suppliers, where the cooperation in some cases goes back up to 45 years. The intention with every new supplier is to start a long-lasting relationship where quality, respect and partnership are the key ingredients”* (We Fashion Sustainability report, 2018, p. 17).

#### *4.1.3 Relationship and role of actors*

All firms are clear about the way of collaboration with suppliers. The supplier needs to sign and agree to the firms' code of conduct. Moreover, WE fashion, Hunkemöller and de Bijenkorf also mention the need for collaboration with the suppliers. *“A responsible sustainable production is an important condition for us to cooperate with our suppliers. As a retailer with less than 1% of our own production, this is our biggest challenge, because in practice it often proves difficult to gain full insight into the chain of third parties. That is why we are in constant dialogue with our brands about their sustainability approach and focus”* (Website information de Bijenkorf, n.d.). Furthermore, a few firms mentioned the definitions of first, second and third tier suppliers.

## 4.2 Transaction information

“Transaction information helps identify which actors are the main beneficiaries of a given supply chain – and hence who may share responsibility for any sustainability concerns.” (Gardner, 2019, p. 165).

Transaction information was divided into four different subdimensions. The first subdimension is general transaction information which was used to place transaction information that could not be placed into any other category. The second category was commodity purchase information, about transactions of the purchasing of commodities. The third category covers the transaction information that was revealed regarding the sales of inputs of the commodity production process. The analysis, as shown in table 3, revealed that the researched firms did not disclose a lot about these transaction processes and if they revealed information, it was most of the times not very concrete. However, investment and ownership information received relatively more attention than other subdimensions of transaction information.

**Table 3: Transaction information**

<i>Organization</i>	General transaction information	Commodity purchases	Sales of inputs of commodity	Investment information	Ownership information
<i>Wibra</i>					
<i>HEMA</i>	V	V		V	
<i>De Bijenkorf</i>	V			V	
<i>The Sting</i>					V
<i>WE fashion</i>				V	V
<i>C&amp;A</i>	V	V		V	V
<i>G-star Raw</i>		V			
<i>Hunkemöller</i>			V		

 V : disclosed, empty: not disclosed

### 4.2.1 General transaction information

Most firms do not disclose any financial performance information in their public communication. C&A is the one company that specifically mentions that they do not do this even though it is one of the GRI reporting standards that the organization committed to: “As a privately-held company, we do not report on economic performance. We strive to report on all other standard disclosures as specified in the GRI Standards.” (C&A Sustainability Report 2018, p. 47). However, later on they do report on the sales revenue of the online platform, launched in China; specifically, that the sales revenue fourfold increased after three years. HEMA is the only company that communicates real numbers; “In 2018, we achieved a net turnover of €1,269 million This turnover can be divided over the main categories: 38% hardware products 36% clothing & underwear 24% food & drinks 3% services.” (HEMA Sustainability Report, 2018, p. 5). Furthermore, de Bijenkorf mentions that 99 percent of their

turnover stems from sales of brands which are not their own. The other firms do not mention anything about profits, turnover or other financial results.

#### 4.2.2 Commodity purchases

Commodity purchases and sales of their inputs were also not covered broadly within the different reports. C&A discloses that they are the world's largest buyer of organic cotton. But next to that, only two companies reported something about transaction information of commodity purchases. G-star Raw writes: "*G-Star RAW does have direct contact with these suppliers for development, but there is no financial stream between G-Star RAW and its second tier suppliers. The exception is when there is a surplus of an order; G-Star RAW will buy the overstock from the second tier supplier in special circumstances.*" (G-star Raw Sustainable Supply Chain Handbook, 2019, p. 14). Hunkemöller reports on their commodity sales transactions: "*We generally use fixed prices in our procurement arrangements with our suppliers, for the duration of the supply contract. Contracts related to the core product lines are re-negotiated every 2 to 3 years. Most main suppliers have duty-free routes.*" (Hunkemöller Sustainability Report, 2018, p. 6).

#### 4.2.3 Investment and ownership information

Investment information was not very broadly discussed. The only thing that four of the eight firms mentioned was their donations. WE fashion and C&A provided a list of all the charities they donated to. Furthermore, C&A and HEMA disclosed how much they had donated to some charities, and the Bijenkorf only briefly notes that they donated part of their profits of a campaign to a bee related charity.

#### 4.2.4 Ownership information

Three companies report on their ownership, by stating that they are part of a larger holding, as C&A writes; "*Today, the C&A retail business is part of the COFRA Group, headquartered in Zug, Switzerland*" (C&A Sustainability Report 2018, p. 2). Furthermore, The Sting and WE fashion name their subsidiaries and affiliated companies and Wibra discloses that the firm is family-owned. Moreover, four of the eight firms have founded their own foundations, and mention this in their public communication. Within the subcategory of ownership information, half of the companies disclosed the number of employees they employ, all of those companies also mentioned the male/female ratio. Additionally, C&A also mentioned the total number of employees, including the apparel workers, in their supply chain, which is more than 1 million people. Furthermore, five of the eight companies mentioned the numbers of stores they own.

### 4.3 Impact information

“Impact information provides transparency around the sustainability of individual supply chain stages, and thus sets a baseline for assessing the performance of the actors involved.” (Gardner et al., 2019 p. 165).

Impact information reports on the social and environmental impact and risks that firms encounter throughout the different stages within their supply chain. The analysis is based on the following categories: environmental impact information and environmental risk information regarding impact or risks on the (global) environment or animals, other impact information regarding general impact information that did not fit any specific category regarding for other impact factors, other risks which describes the risks that could not fit any specific category, and social impact and social risks, regarding the influence on human lives or communities. The analysis, as given in table 4, shows that most firms mentioned some risks or impact they made as an organization. However, there were major differences in how much it was mentioned and how specific the firms described their own impact in the situations.

**Table 4: Impact information**

<i>Organization</i>	Environmental impact	Environmental risk	Other impacts	Other risks	Social impact	Social risks
<i>Wibra</i>		V	V	V		V
<i>HEMA</i>	V		V	V	V	
<i>De Bijenkorf</i>	V	V	V			V
<i>The Sting</i>	V					
<i>WE fashion</i>	V		V	V	V	V
<i>C&amp;A</i>	V	V	V	V	V	V
<i>G-star Raw</i>	V	V	V	V	V	V
<i>Hunkemöller</i>	V	V	V	V	V	V

✚ V : disclosed, empty: not disclosed

#### 4.3.1 Environmental impact

The first dimension, the environmental impact was the most mentioned within this category. Only one firm (Wibra) did not report on its environmental impact. The other companies all at least mention that they do have some sort of an impact on the environment, and that they aim to reduce it. Five of those companies also name specific areas where they want to reduce their impact. One example is WE fashion that states: “Fashion has a negative impact on the environment. As a brand we should contribute to improvements by reducing the use of water, chemicals and energy in production, especially during dyeing and finishing” (WE fashion Sustainability report, 2018, p. 32).

#### 4.3.2 Environmental risks

Five of the eight firms report on environmental risks, however, each of them mentions different risks. Wibra elaborated on the fabrics they use, and how each type of fabric has its own environmental risks one example is what they write about cotton *“Cotton, with a percentage of almost 57% of the total, is our most used material. There are various environmental risks associated with intensive cotton cultivation. For example, the fields are treated with a lot of pesticides and fertilizers. Moreover, a lot of water is used in the production of cotton, which inter alia disrupts the ecosystem in many areas.”* (Website information Wibra, n.d.). G-star Raw disclosed the environmental risks of each stage within the supply chain, e.g. *“Fabric manufacturing is resource-intensive and water pollution is an ongoing risk. These risks are less pronounced in the garment manufacturing phase”* (G-star Raw Sustainability report, 2019, p. 25). C&A states that there’s an urgent need to protect the rainforests and make circular production the norm, and Hunkemöller states that it aims to reduce harmful chemicals in their production process. Lastly, de Bijenkorf provided a list of their most important environmental risks on their website: *“climate change, sustainable raw materials, insight into the chain, sustainable packaging, efficient storage, reduce waste (plastic, cardboard, food), transparency and honest communication.”* (Website information de Bijenkorf, n.d).

#### 4.3.3 Other impact information

Other impact information that the firms provide mostly refers to the acknowledgement of their impact in both environmental and social welfare within the supply chain. Furthermore, C&A described extensively how water scarcity and the massive amounts of waste are big problems caused by the garment industry. Both C&A and WE fashion write that they strategically assess in which parts of the supply chain they can make the most positive impact.

#### 4.3.4 Other risks

Coded within the category of ‘Other risks’ are various topics. Three firms mention the risks of animal welfare in using animal-based materials. WE fashion and HEMA recognize the risks of doing business with foreign countries and recall the need for a thorough risk-assessment. Within the dimension of ‘other risks’, C&A is the only company that mentions a recent development in the world: *“Rohingya crisis in Myanmar and Bangladesh: As the refugees of the northern Rakhine State of Myanmar fled from their homes, C&A evaluated its sourcing strategy in Myanmar. We engaged other brands and the Government of Myanmar on the issue. We continue to source from Myanmar, but are carefully monitoring the situation to determine whether changes in our strategy should be made. At the same time, C&A Foundation is increasing its support to the growing refugee population in Bangladesh.”* (C&A Sustainability Report 2018, p. 37) Furthermore, G-star Raw provided a visual representation of their risk assessment, specified per stage within the production process where they define the scope of the risk and the severity and likelihood of the risk happening.

#### 4.3.5 Social impact

The firms differ in what they write about their social impact. Both C&A as Hunkemöller state that they seek to make a positive impact on women's lives. Hunkemöller for instance states: *“Gender equality is one of the fundamental human rights and for Hunkemöller female empowerment is a must to ensure global development and economic growth. The majority of our employees, customers and the textile workers who produce our garments are female, and it therefore comes naturally as a focus area.”* (Hunkemöller Sustainability Report, 2018, p. 39). Next to that, C&A also acknowledges its large size and therefore its significant responsibility to make a social impact. They mention to have a different approach in different circumstances: *“Each of the five countries we work in faces distinct challenges. In Bangladesh, for example, we focus on risk management for women, children, and garment workers, while in Mexico and China we focus on school safety.”* (C&A Sustainability Report 2018, p. 224). WE fashion emphasizes the impact they make by mapping all their suppliers to ensure good working conditions. Furthermore, HEMA mentions a completely off topic social impact goal, namely to help children with illiteracy. Child labor was also pointed out as something to make a social impact on, by WE fashion and Hunkemöller, other firms, such as G-star Raw, Wibra and Bijenkorf described child labor as a social risk.

#### 4.3.6 Social risks

Furthermore, within the category of social risks the main focus is on the working environment. For instance, forced labor has been called a risk by four firms, just as the risk of underpayment – salary below minimum wage, which is named by three firms. WE fashion points out that because of the complexity of the supply chain, these issues are difficult to understand and effectively address. C&A also makes this argument and names the examples of *“situations where factory management may intentionally misrepresent actual working hours to avoid business impacts”* and *“a general lack of wage law enforcement by local governments, requiring the brands to do most of the checking”* (C&A Sustainability Report 2018, p. 130), furthermore they state that some countries have restricted collective bargaining by law as part of the complexity. C&A also extensively describes other workplace related risks like the risks of fire and building safety and the lack of the needed expertise on these topics, the risks of last-minute changes in design which causes a higher work-pressure, and the risk of undisclosed production which does not allow for assessment on alignment to the code of conduct of C&A. Additionally to all the above mentioned risks G-star Raw listed specific risks for the countries they produce in, like the emphasis on gender-based violence against women and harassment at the workplace in India, and concerns about the “re-education” of Uyghurs, and signs of forced labor in China. Wibra also pointed out this specific concern of forced labor in China. Moreover, Wibra reports a uniquely mentioned risk, namely the risks of illness of workers, due to the use of harmful pesticides. Hunkemöller specifically names the risks of garment workers working overtime regarding the limits of their own code of conduct. And lastly de Bijenkorf only listed the most mentioned risks without further explanation:

*“The following factors are our most important risks: Social and animal welfare: child and forced labor, human rights, women's rights and discrimination, healthy and safe working environment, health and safety of workers, animal welfare” (Website information de Bijenkorf , n.d).*

#### 4. 4 Policy and commitment information

“Policy information provides transparency on any differences in the levels and strengths of policies adopted by different actors, including sustainability commitments” (Gardner et al., 2019 p. 165).

Policy information relates to the policies, commitments and assessment processes that firms implemented in order to increase sustainability in their operations. Policies refer to the rules, regulations and policy documents that exist within the organization. Commitments refer to the commitments and collaborations that firms made regarding sustainability. And assessment process describe the processes by which the progress in performance is assessed. With regards to policy and commitment information, all eight firms reported quite extensively, with four firms reporting on all aspects and the other four missing not more than one of the aspects.

**Table 5: Policy information**

Organization	Policies		commitment information		assessment procedures	
	mentioned	explained	mentioned	explained	mentioned	explained
Wibra	V	V	V	V	V	
HEMA	V		V	V	V	V
De Bijenkorf	V	V	V	V	V	V
The Sting	V	V	V	V	V	
WE fashion	V	V	V	V	V	V
C&A	V	V	V	V	V	V
G-star Raw	V	V	V	V	V	V
Hunkemöller	V		V	V	V	V

✚ V : disclosed, empty: not disclosed

##### 4.4.1 Policies

The category of policies is the most coded dimension in the analysis. Within this category more than 400 pieces of text regarding policies were identified, which illustrates that the most firms spend a large part of their reports on describing their aims, objectives and policies regarding sustainability improvement throughout the supply chain. All firms have a code of conduct. “The code provides a uniform set of expectations for suppliers on legal compliance, labour practices, and environmental performance, supported by a comprehensive set of guidelines” (C&A Sustainability Report 2018, p. 13). Some firms only mention the presence of the code of conduct, but others have also uploaded the code of conduct and other policy documents online for the public. An overview over the different policy documents disclosed by the firms is provided in table 6.

A few general topics of policies can be identified. The first topic that all firms have policy on is the use of raw materials. Every organization named clear objectives about using more sustainable materials,

mostly cotton, in the coming years. Other topics that were broadly covered are fair wages, child labor, forced labor, discrimination, animal welfare and chemical management. Seven of the eight firms, all but HEMA, report clear objectives and policies on these items. HEMA only briefly mentioned the general topics as point of focus for their sustainability strategy, but did not describe their concrete policies. There are some differences in the depth of policies of the other firm; some firms only mention that child labor and forced labor are zero tolerance issues and, as the Sting mentioned that the organization “*will cooperate directly with the manufacturer and other stakeholders in these cases to resolve the issues found as soon as possible*” (The Sting MVO beleid, p. 7). While WE fashion has an elaborate plan for short- medium- and long-term measures to be taken in the instance that child labor or forced labor is discovered.

**Table 6: Overview of the policy documents disclosed by firms**

<i>Organization</i>	<i>Policy documents</i>
<i>Wibra</i>	-
<i>HEMA</i>	HEMA Modern Slavery Statement 2016/ 2017 HEMA GRI-table sustainability report 2018
<i>De Bijenkorf</i>	Part A of de Bijenkorf Supplier conditions General Purchase conditions of Magazijn de Bijenkorf B.V. Part B of the Bijenkorf Supplier conditions Supplier Guidelines & Standards Own stock and Consignment 2019 Part C of the Bijenkorf Ethical Trading Requirements 2019
<i>The Sting</i>	-
<i>WE fashion</i>	WE fashion - sustainable materials commitment 2016 en WE fashion child labour policy WE fashion code of conduct for suppliers WE code of ethics WE fashion Factory List WE fashion restricted substances list WE fashion animal welfare policy WE fashion forced labour policy
<i>C&amp;A</i>	C&A Code of Conduct for the supply of merchandise 2015 C&A Supporting Guidelines for the C&A Code of Conduct for the Supply of Merchandise 2015 C&A Employee code of ethics 2015 C&A The apparel and footwear supply chain transparency pledge
<i>G-star Raw</i>	G-star Raw Restricted Substances List for garments 2018 – version 1.5 Modern Slavery Act Statement G-star Supplier Code of conduct 2014 G-star Raw Greenpeace Detox Solution Commitment 29 January 2013 G-star Raw Detox report 2019 G-star Raw Materials Policy & Animal Welfare Policy G-star Raw Social and Labour Guideline version 2.0 January 2019 GSTAR Sustainable Supply Chain Handbook version 2019/2020 Environmental Guideline version 3.0 G-star Raw C.V.
<i>Hunkemöller</i>	The Hunkemöller Ethical Code of Conduct

Another difference in thoroughness in the policies can be found in the reporting on hazardous chemicals. All seven firms but HEMA reported on their policies or objectives but four of the firms also disclosed their restricted substances list. Another topic that many firms reported on is environmental policies. Many firms, all except for the Sting expressed various policies regarding environmental sustainability. The subjects ranged from circular producing to saving energy and efficient packaging and shipment processes. A third composition of seven firms, all but Hunkemöller reported about their workplace health and safety procedures. Lastly the policies on contact and rules of doing business with suppliers, and the rights and processes for unions and grievance mechanisms were disclosed by the majority of the firms.

#### 4.4.2 Commitment information

Commitment information describes the commitments that the firms made in order to improve sustainability within their supply chain. All eight firms describe the various sustainability MSI's and social initiatives that they committed to. What initiatives the firms are part of differs as does the number of initiatives the firms are part of. The firms also briefly describe the purpose of these initiatives in their public communication. The most named MSI's and standards are given in table 7. Most firms also describe many other initiatives and pledges that they are a member of.

**Table 7: Organizational commitments**

	<i>Wibra</i>	<i>WE fashion</i>	<i>The Sting</i>	<i>Hunkemöller</i>	<i>HEMA</i>	<i>G-Star Raw</i>	<i>De Bijenkorf</i>	<i>C&amp;A</i>
<i>AGT</i>	V	V	V	V	V	V	V	V
<i>BSCI (Amfori)</i>	V	V	V	V	V			
<i>Bangladesh accord</i>	V	V		V	V	V		
<i>Bangladesh transition accord</i>	V	V		V	V			
<i>UN sustainable development goals</i>	V	V		V			V	
<i>OECD guidelines</i>	V	V			V	V		V
<i>ILO guidelines</i>	V	V			V			V
<i>Bettor cotton initiative (BCI)</i>		V				V		V
<i>Modint</i>				V	V			
<i>Other initiatives</i>		V	V	V	V	V	V	V

 V : reported signatory of the MSI, empty: not disclosed

#### 4.4.3 Assessment processes

The assessment processes include multiple aspects, the number of audits, the process of assessing, the aspects that are being assessed, the use of external standards or certificates and the assessment of a third-party. First, all firms mention the external standards or certificates they use for their assessment. Some only mention the membership of BSCI while others have elaborate lists of standards they approve of. Most firms cover the whole assessment process in their reports. Only Wibra implies that they do not have an elaborate process in place yet: *“In addition to the purchasing conversations that our buyers have with our supplier, more company visits will be scheduled. This will help us to get as realistic a picture as possible of the situation on the ground”* (Website information Wibra, n.d.). The Sting describes that they outsourced the assessment of compliance with their code of conduct to external audit companies. However, it is noteworthy that the Sting does not explain the aspects that are being assessed, in fact only five of the eight firms specifically mention the subjects of the assessments.

Furthermore, four of the eight firms described the number of audits they have in place. The same four firms, which are HEMA, C&A, Hunkemöller, and WE fashion also explained whether or not they make use of a third party assessments. G-star Raw makes the disclaimer that the data in their report is not verified by a third party, unless explicitly stated. Hunkemöller mentions that the information presented in their report is only partly externally assured. However, they do not mention which part. C&A mentions *“Always use credible, peer-reviewed third-party standards to manage the integrity of our claims.”* ( C&A Sustainability Report 2018, p. 62) as one of their 2020 goals. And HEMA writes *““H and an external party conducted factory inspections (our preferred term is ‘audits’) at our production sites”*( HEMA Sustainability Report, 2018, p. 19). Later on, after some stated outcomes in the report, HEMA also mentions that those outcomes are verified by ‘independent inspectors’.

## 4.5 Activity information

“Activity information provides transparency on the type and extent of new actions that actors are taking to change their behaviour” (Gardner et al., 2019, p. 165).

Activity information relates to the information that firms provide regarding the actions that are taken by them or supply chain actors in order to meet their sustainability objectives as explained in their policies or commitments. Within this category, five subcategories are analyzed. The first category is production activities and relates to all the activities on the workforce, particularly focused on worker well-being. The second category, sales activities describes all activities relating to the practices in the stores and the selling process of the products. Thirdly, purchasing activities describe the activities in the buying process of commodities. The fourth category is processing activities, these include the processing of commodities, transport and waste handling. Finally, the fifth subcategory is investment decisions and relate to what the firms disclose about the decisions and considerations on how they spend their money. Results show that most firms do report on their activities. Half of the firms reported completely on all categories of the activity information while the other half reported on at least three of the five categories.

**Table 8: Activity information**

<i>Organization</i>	production activities	Sales activities	Purchasing activities	processing activities	investment decisions
<i>Wibra</i>	V	V	V		
<i>HEMA</i>	V	V	V	V	V
		V	V	V	V
<i>The Sting</i>	V		V	V	V
<i>WE fashion</i>	V	V	V	V	V
<i>C&amp;A</i>	V	V	V	V	V
<i>G-star Raw</i>	V			V	V
<i>Hunkemöller</i>	V	V	V	V	V

✚ V : disclosed, empty: not disclosed

### 4.5.1 Production activities

Production activities are discussed by seven of the eight firms. De Bijenkorf is the only organization that did not mention any production activities. HEMA only mentioned “In 2019, we are planning a suppliers’ day, during which we will challenge suppliers to help come up with sustainable solutions for H.” (HEMA Sustainability Report, 2018, p. 9). The rest of the firms covered various topics in their public communication. One of these topics is training, this was extensively discussed by five of the eight companies. Hunkemöller for example, listed five different types of training such as classroom workshops, online workshops, training supply chain mapping, trainings on workplace safety and skill

development trainings. Furthermore, Hunkemöller mentioned the number of attendees of each training. G-star Raw also reported extensively about their training activities. They disclose their protocol for all the aspects and associated steps that employees must be trained on related to environmental issues and workplace safety. However, training is also the only aspect of production activities that G-star Raw reported on. The other five companies also stated their approach to the improvement activities that resulted from the audits they carried out. Wibra described this as: *“Through monitoring, training, capacity building and lobbying / collaboration activities, efforts are made to ensure the right to form a union and safe working conditions, and to exclude forced and child labor”* (Website information Wibra, n.d.).

Furthermore, activities aimed at developing better policy were mentioned by WE fashion and Hunkemöller. One of such activities that Hunkemöller describes is: *“Developing a roadmap towards living wages in the supply chain”* (Hunkemöller Sustainability Report, 2018, p. 25). The last topic that multiple firms mentioned regarding production activities is local activities, based on the need of the institutional context. C&A had a few examples of such activities in their report and WE fashion also described a few such as: *“In 2016 and 2018 the Sustainability Manager visited the majority of factories in Cambodia and sat down with the independent Cambodian union CLC, and discussed the topic of Freedom of Association. In the coming years we will work on further improvements together with our Cambodian suppliers and their factories”* (WE fashion Sustainability report, 2018, p. 22).

#### 4.5.2 Sales activities

The second category in activity information is sales activities. This topic is less reported about. Minimizing waste in the sales phase is mentioned by multiple companies in different ways. C&A and Hunkemöller both report to have implemented a take-back program. Additionally, Hunkemöller reports: *“In order to create clearance capacity, Hunkemöller sells old stock through its designer and hybrid outlets”* (Hunkemöller Sustainability Report, 2018, p. 8). Furthermore WE fashion mentions *“There are various internal processes for minimising product waste, such as donating samples and damaged clothes to Sam's Kledingactie and selling samples during the sample sale”* (WE fashion Sustainability report, 2018, p. 42). WE fashion also emphasizes their activities in selling plastic bags, they try to use the smallest bag and charge 10 cents for it. Furthermore, in order to save a lot of packaging plastic, Wibra reports that they are experimenting with presenting their pajama's on hangers instead of in folded in a plastic package.

C&A reports mostly about the results of the sales of their sustainable products. They mention several sustainable products they developed like the Cradle to Cradle Certified™ jeans: *“Building on the success of our certified T-shirts, in 2018 we launched a collection of Gold level Cradle to Cradle Certified™ jeans. In so doing, C&A became the world's first retailer to offer Men's and Women's jeans*

*made completely from sustainable materials – from fibre to buttons to hem – which can be recycled at end of use. In Europe, the jeans have been offered at an affordable price of €29 as part of the family company’s commitment to making sustainability the new normal. The jeans are also available in all C&A stores in Mexico and in Brazil, where the Ladies’ jeans are priced at R\$109 (approximately €25) and Men’s at R\$119.99 (approximately €27)”* (C&A Sustainability Report 2018, p. 103). Furthermore, they also mention how many of certain sustainable products they sold in different parts of the world. HEMA also mentioned a more sustainable product development: *“In part due to suggestions from customers, the plastic confetti in our confetti popper has been changed to paper confetti”* (HEMA Sustainability Report, 2018, p. 10).

As a last topic within sales activities, three companies mentioned campaigns and marketing activities they executed the last year. De Bijenkorf writes; *“We want to give brands that pursue a responsible sustainability strategy extra attention to our customers. Despite the fact that it will take several years to gain a good insight into all our brands, we have already started offering a platform for more sustainable brands and products”* (Website information de Bijenkorf, n.d.). They also mention to have yearly campaigns to increase sustainability awareness among their customers. Furthermore, WE fashion reports that they included information in the washing labels of the garments with information on it about washing and drying with a low ecological footprint. They are also planning to launch an in-store campaign on this topic in 2019. About their marketing activities they write; *“WE fashion has completely changed the campaigns, the new collections are shown by our own employees and fans. Models were unnecessary, because this campaign is about real people.”* (WE fashion Sustainability report, 2018, p. 49). HEMA also has a campaign which promotes pride and HEMA also sells matching products. The profits of the products benefit the COC, a Dutch interest group for lesbians, gays, bisexuals and transgenders. Hunkemöller also has such a collaboration where they sell bracelets for the charity organization Pink Ribbon.

#### *4.5.3 Purchasing activities*

Seven of the eight firms mention purchasing activities in their public communication. A common topic is the analysis of the purchasing process and the lower tier suppliers in the supply chain. Wibra and the Sting both reports that they have identified which raw materials are currently used in their processes . Furthermore they both state that they will focus on replacing conventional cotton for more sustainable alternatives, Wibra also mentions to research sustainable materials like wool and polyester. HEMA is still in the analysis process, they mention that they are currently creating an overview of their second-tier suppliers. C&A reported more general that they are thoroughly analyzing their purchasing practices to identify area’s for improvement. WE fashion also state that they already have an overview of their lower tier suppliers and are now integrating in their processes: *“To obtain a clear overview of the social performance of factories in lower tiers of our supply chain, we started to involve them in the social management system, by registering wet-processing units and material suppliers on our purchase*

orders” (WE fashion Sustainability report, 2018, p. 19). Moreover, WE fashion also reports that they have updated their sustainable raw materials strategy and has also updated this information on the supplier portal through which they provide information to their suppliers. HEMA also mentions their activities regarding the purchasing of sustainable materials, *“In 2018, we developed sustainable products by selecting a different raw material, such as recycled polyester, organic cotton, FSC paper and FSC bamboo”* (HEMA Sustainability Report, 2018, p. 22).

C&A discloses an example of their activities in purchasing more sustainable cotton. They state: *“Working with C&A Foundation and CottonConnect, we have been piloting a project in Shandong Province to support farmers in their transition from conventional to organic cotton. During 2018, we expanded the project to a total of 300 farmers (from 105 in 2017), and purchased 90 metric tons of in-transition cotton to produce 144,000 T-shirts and 80,400 pairs of jeans”* (C&A Sustainability Report 2018, p. 11). Furthermore, C&A also listed such an example of training suppliers in sourcing better cotton in Mexico. Two other firms also mention trainings in sustainable purchasing. De Bijenkorf, and WE fashion state that their buyers are being trained. Hunkemöller does not mention training explicitly but states that their buyers are well informed about production capacities of the different factories, and that they take that into account to make accurate forecasts.

#### *4.5.4 Processing activities*

Processing activities are mentioned by all eight of the firms that were analyzed. The first topic identified within process activities are the activities regarding chemical management and water saving. This topic was mentioned by two firms. C&A reports on their activity plan on the topic and WE fashion describes how they currently are in the development phase for water saving activity planning *“In order to raise sustainability levels in relation to wet processing, it is vital that we gather more data about the techniques that we currently use, develop further expertise about suitable alternatives and establish potential savings in terms of water consumption and chemical usage”* (WE fashion Sustainability report, 2018, p. 33).

The second topic identified is packaging and transport activities. Two firms mention to use recycled cardboard boxes for home deliveries. Furthermore, four firms mention the activities they carry out to reduce the carbon emission of their transport process. The third process activities topic is energy saving activities. De Bijenkorf and WE fashion report to have switched to green energy and installed led lights in their offices and manufacturing locations. G-star Raw states that they are in the process of making plans regarding this topic: *“We are also partnering with an external consultant to set a strategy to more robustly understand our GHG footprint, and to systematically implement energy efficiency programs. Towards the end of 2019, we began building an inventory of our scope 1 and 2 emissions, with a view to assessing Scope 3 emissions in 2020”* (G-star Raw Sustainability report, 2019, p. 13).

Furthermore, recycling was mentioned by five firms. Four firms state the activities in order to recycle cardboard and plastic. HEMA and WE fashion are making plans for their plastic and other waste streams to be recycled. And again, training was a much named activity. Five firms mentioned various trainings regarding sustainability in processing.

#### *4.5.5 Investment decisions*

The last category of activity information, investment decisions, relates to the information that the analyzed firms disclose about their investments discussing how they decide on investing and what they invested in. Seven of the eight firms did mention something regarding their investment decisions, all the disclosed information was about donations towards charities. C&A and Hunkemöller disclosed concrete sums of money that they have donated, the other five firms only mentioned which firms they donated to, and explained to which specific cause they send the money, and with which actions they raised the money for donation. Furthermore, WE fashion also stated their decision process in choosing charities: *“In 2017 and 2018, all colleagues were invited to choose the charities. We had great response and could support several charities in these years”* (WE fashion Sustainability report, 2018, p. 48).

#### *4.5.6 Other activity information*

Lastly within the category of activity information some information did not fit in one of the subcategories but was mentioned so often that it was noteworthy to include in the results. Namely, all firms except for Wibra also report extensively on their employee wellbeing and HR activities. Most of the mentioned activities relate to onboarding of new employees, internal training and personal development, employee vitality and sustainable employability activities like gym memberships and teambuilding activities.

#### 4. 6 Effectiveness information

“Effectiveness information provides transparency around how much (or little) progress is being made by a given actor or place” (Gardner et al., 2019 p. 165).

Effectiveness information reports on the effectiveness of the interventions aimed at reducing the negative environmental and social impact of the activity, set against a certain baseline or target. Since the theoretical framework did not provide any subcategories, the choice was made to code this category inductively. Out of the coding process, three subdimensions were identified; status quo, assessment processes and effectiveness of actions. Status quo refers to the disclosing of the current state of affairs of the production and output. When the status quo is disclosed, the progress can be assessed against a set baseline. The second subcategory, assessment processes refers to the information on the effectiveness of the assessment processes and the disclosing of the outcomes of the assessments. The last subdimension is the effectiveness of actions and include concrete information about the results and effects of the actions that are conducted by the firms to improve sustainability. As shown in table 9, two firms did not report anything on effectiveness and six other firms reported on all the subdimensions. However, among the firms that did report on this dimension, some notable differences in the concreteness of reporting were identified..

**Table 9: Effectiveness information**

Organization	Status quo	Assessment processes	Effectiveness of actions
<i>Wibra</i>			
<i>HEMA</i>		V	V
<i>De Bijenkorf</i>		V	V
<i>The Sting</i>			
<i>WE fashion</i>	V	V	V
<i>C&amp;A</i>	V	V	V
<i>G-star Raw</i>		V	V
<i>Hunkemöller</i>	V	V	V

✚ V : disclosed, empty: not disclosed

##### 4.6.1 The state of affairs of production and emissions

Since the Sting and Wibra did not provide any information on the effectiveness of their actions. So these firms communication is not included in the results. The other six firms did mention effectiveness, they all mentioned their goals and were concrete about the effects. However, not all firms disclosed the baselines of their progress, some only mentioned the current numbers of aspects within their production. Three firms mentioned the state of affairs of their production. C&A and Hunkemöller disclosed the dispersion of percentages of audit categories that their production locations are in, from A until E, where A is the best and E is the lowest score. WE fashion reported on this even more elaborate with a table

which showed how their production facilities scored per performance area. Furthermore, the same three companies also disclosed their current carbon emissions. C&A also provides numbers on the years before so a comparison can be made in for example their water footprint: *“Our 2018 water footprint increased by 18% compared to 2017. This includes a 13% increase in blue water consumption, a 16% increase in green water consumption, and a 19% increase in grey water consumption. This is due to a variety of factors, most notably a 12% increase in raw material use. However, we have achieved an absolute reduction of 8% in our blue water consumption in raw material extraction compared with 2016, or roughly 28 million cubic metres (m<sup>3</sup>) of water”* (C&A Sustainability Report 2018, p. 153).

#### *4.6.2 Effectiveness and outcomes of assessment processes*

The six firms that reported on effectiveness information also disclosed the effectiveness of their assessment processes and what the findings have been. C&A mentioned their progress in what percentage of their products is verified by ‘credible third-party standards’. Furthermore, C&A, WE fashion and Hunkemöller all three reported on the percentage of issues under the Bangladesh accord that have been solved. Additionally these companies joined with HEMA and de Bijenkorf also disclosed incidents that were found during (third party) assessments. De Bijenkorf firstly states that no severe deviations or issues were found. HEMA mostly mentioned the number of improvement plans that resulted from the audits, but the other companies were transparent about some striking issues, and how they dealt with it. Hunkemöller for example discloses the two grievances they have received in the past year and how they handled these issues. Furthermore, C&A disclosed multiple incidents which of one regards underage workers: *“In 2018 we detected seven incidents of underage workers in Myanmar and Mexico. In all of these cases except one, the workers were between 14 and 16 years old. We handled each situation with care and in accordance with our remediation process, including working closely with the suppliers and local civil society to ensure that the case was clearly resolved and that the underage workers were supported through the process. The children found in Myanmar are both now in education. We are making sure they are receiving proper local support, including the provision of a monthly income to their families by the factory in which the children had been employed. In Mexico, we are closely working with Save the Children to address this issue in a more proactive manner since sometimes we see resistance from the children and their families to join the remediation process and return to school.”* (C&A Sustainability Report 2018, p. 145). Another example of transparency about the results of assessment processes is G-star Raw when they describe the compliance issues regarding their chemical management program: G-star Raw: *“The overall average compliance rates for G-Star RAWs manufacturing partners is close to 95%. One of G-Star RAW’s partners failed to have its MRSL substances tested, while another had no valid test results for VOCs8. Furthermore, three manufacturers had detection limits for one of the parameters in the PFOA group of chemical substances, and one manufacturers failed on Phthalates.”* (G-star Raw Detox report, 2019, p. 7) Even though those firms reported very transparently about the raised issues, it is important to mention that some companies only

mentioned issues on one topic or only mentioned the issue without follow-up activities from the company.

Another result of external assessments is the possibilities or rewards for the efforts that are made. Three firms mentioned prizes that are won as a result of their efforts. Hunkemöller mentions their awards in the areas of learning solutions and won a prize as a top employer. Moreover, de Bijenkorf states: *“Our animal welfare efforts have been recognized by the international animal welfare organization PETA (People for the Ethical Treatment of Animals) with the Most Progressive Department Store Award in 2019”* (Website information de Bijenkorf, n.d.). Lastly C&A disclosed their more than 14 awards, prizes and nominations for sustainability efforts and transparency within the garments sector. They reported very elaborate as the following statements illustrate: *“We were ranked number 4 among the most transparent brands in the global 2019 Fashion Revolution Transparency Index, which rates 200 companies according to disclosures about their social and environmental policies, practices, and impact.”* (C&A Sustainability Report 2018, p. 60) and *“We were rated ‘Good’ and an example of responsible fast fashion in the Good on You Fashion Platform 2018 rating, compared to many companies who were rated ‘It’s A Start’.”* (C&A Sustainability Report 2018, p. 60)

#### 4.6.3 Effectiveness of Actions

Finally, the six firms also reported on their concrete actions and its effectiveness. Four firms reported on the amounts of clothing and other materials that were recycled. Furthermore, also four firms reported on the percentage of sustainable materials they used or sold. However, some companies were more concrete than others. C&A states very concrete numbers and effects: *“In 2018, the Textile Exchange estimated that through the purchase of organic cotton in 2017, C&A saved 170.8 billion litres of water, avoided the use of 157 metric tons of hazardous pesticide, and improved the quality of over 174,000 hectares of soil”* (C&A, p. 74). While HEMA makes more general statements: *“In 2017, we made a major effort to make sustainable purchases of cotton, wood and paper. In 2018, we purchased even more sustainable materials”* (HEMA Sustainability Report, 2018, p. 8). WE fashion and de Bijenkorf both elaborately explained reduced carbon emissions due to the switch to green energy: *“In our baseline year 2015, our CO<sub>2</sub> emissions amounted to 20,002 kilotonnes. Due to the switch to green energy in 2017, we reduced our scope 1 and scope 2 emissions to 2,623 kilotonnes, a decrease of 87%. We did not foresee that the impact of this measure would be so great and therefore we achieved our 30% CO<sub>2</sub> reduction much faster than expected”* (Website information de Bijenkorf, n.d.). And the amounts of trainings that were given and attended were broadly explained. Other activities that were mentioned are sustainable production, chemical management effectiveness and water that has been saved. Lastly what stood out was the clear emphasis of some companies on their achievements in HR activities in their internal firms. Especially Hunkemöller and HEMA disclosed their efforts and progress on various types of HR topics. Concluding, six of the eight companies reported on the effectiveness of their activities.

However, some firms had a very narrow focus while others remained somewhat vague in their statements. Also not every organization mentioned the actual effects of their actions.

## 4.7 Comparing the firms

Finally, levels of reporting of the firms can be compared. Table 10 gives an overview of the different firms and their level of reporting per dimension.

**Table 10: Comparison of supply chain transparency between firms**

	Traceability information	Transaction information	Impact information	Policy information	Activity information	Effectiveness information
<i>Wibra</i>	+	-	++	++	++	-
<i>HEMA</i>	+	++	++	++	+++	++
<i>De Bijenkorf</i>	+	+	++	+++	++	++
<i>The Sting</i>	+	+	+	++	++	-
<i>WE fashion</i>	+++	+	++	+++	+++	+++
<i>C&amp;A</i>	+++	++	+++	+++	+++	+++
<i>G-star Raw</i>	+++	+	+++	+++	++	++
<i>Hunkemöller</i>	++	+	+++	++	+++	+++

✚ - : no disclosure on this dimension, +: disclosure on at least on subdimension, ++: disclosure on half or more of the subdimensions, +++ disclosure on all subdimensions.

Some general patterns can be identified. C&A constantly scored the highest on all dimensions, and reported on almost all subdimensions. Thereafter, WE fashion is the runner up in terms of completeness and G-star Raw and Hunkemöller score complete on half of the dimensions. HEMA and the Bijenkorf are in the bottom because they report complete on only one of the six categories. Lastly Wibra and the Sting scored constantly the least complete, in fact both firms did not report completely on any of the dimensions. These findings show that even though some dimensions are generally less reported on, in general firms that report completely, do so on almost all dimensions and vice versa. The firms that report incompletely do so on others as well.

In the interest of the analysis, it was investigated how long the firms have been engaged in supply chain transparency. It was interesting to find that the firms that are engaged in supply chain transparency longer; C&A reports since 2015, WE fashion since 2009, G-star Raw since 2012 and HEMA since 2015, generally reported more complete on the different dimensions of supply chain transparency. However, one exception is to be made, because Hunkemöller seemed to have started reporting in 2018 which means that the analyzed public communication would be their first. This means that they did relatively well, compared to HEMA, which started three years before that and reported less complete. From the other firms, no former public communication was to be found. The Sting's report can only be accessed through the AGT website and it is not communicated on their own corporate website, and since de Bijenkorf and Wibra only provided supply chain information on their websites, the publication dates could not be traced. However, these firms scored the least over-all on the completeness of their supply

chain transparency on the various dimensions. Two observations can be made; the first is that the firms who have been involved in supply chain transparency for several years showed to report more complete on the different dimensions than the firms of which their reporting history is not known. The second observation is that the firms that only provided public communication via their corporate websites reported less complete on supply chain transparency than the firms that reported through actual reports dedicated to the provision of supply chain information. This indicates that supply chain transparency could be a step-wise process, where firms can learn and grow and become better at it over time.

## 5. Conclusion

This study was set out to answer the research question: *What aspects of supply chain transparency are disclosed by the largest fast fashion firms that are participating in the Dutch AGT since 2016?* The results show that not all six analyzed categories of transparency were reported on equally. There were also differences found in the level of concreteness of the information that was provided, and general patterns of completeness in reporting were found among the firms in the sample. This chapter will answer the research question by providing a holistic outline of the results.

In general, most firms did report relatively complete on the dimensions impact information, policy information and activity information. These categories were almost completely covered in the reports of the different firms, even on all subdimensions. However, there was a large variation in the concreteness of the information provided. While some firms reported that they acknowledged that their production processes have large impact on the environment, other firms provided extensive lists of the specific risks per production phase. The dimensions that were less reported on were traceability and transaction information.

Even though some firms did report on their suppliers names and addresses, almost nothing concrete was described about the power relations and dependencies between the actors. What also stood out was that the only traceability information provided was about the suppliers. No concrete traceability information about other actors in the supply chain was reported. Furthermore, the transaction information about commodity purchases and other transactions can help create an overview of the power relations within the supply chain. This part was completely neglected, with exception of the information on donations to charities. Even though this is insightful, one might wonder about the true motivations for disclosing solely this particular transaction information. Lastly effectiveness information was very differently represented among the public communication of the firms. While most firms reported on the effectiveness and outcomes of their assessment processes and the effectiveness of (some of their) activities, two firms did not report anything on this dimension at all.

Furthermore, the firms were compared on their supply chain transparency among each other. This analysis showed that there is a clear division of forerunners, some firms in middle and laggards. The firms that reported complete on several dimension did so consistently and the firms that reported incomplete also repeated this at several other dimensions. What stood out is that the firms that are engaged in supply chain transparency longer, reported more complete on the several

dimensions and the firms that only provided information on their websites reported on significantly less dimensions of supply chain transparency. This could mean that firms can become more transparent over time.

## 6 Discussion

This study researched what aspects of supply chain transparency are disclosed by the largest fast fashion firms who are participants of the Dutch AGT since 2016. This chapter will discuss and interpret the results of the analysis in light of the existing literature on transparency. Thereafter the theoretical and practical implications of the research will be discussed and, finally, the implications for future research will be described.

### 6.1 Interpretation of the results

First of all, the results about the disclosing of information on the different dimensions of supply chain transparency confirm the findings of Gardner et al. (2019) in their study about the status quo of supply chain transparency in the agricultural commodities industry. They report shortfalls on the number of countries and commodities that are being mapped and the different types of actors that are being assessed. Furthermore Gardner et al. (2019) state: “Major shortfalls include a comparative absence of information on both the most vulnerable (e.g. smallholders) and the most powerful (e.g. investors) supply chain actors; information on the vertical and horizontal distribution of the economic benefits of commodity production and trade and information on the extent and effectiveness of any activities that are being implemented to improve sustainability outcomes on the ground.” (p. 175) This is mirrored in the findings of the focal study, where only three firms provided names and addresses of their suppliers. Further traceability information on other actors in the supply chain was not reported on. The findings of Gardner et al. (2019) regarding transaction information were also similar in this study. The objective for reporting on transaction information is to provide insight in who the main beneficiaries are within the supply chain, to appoint the share of responsibility for sustainability. But this is currently not possible with the given information. The only transaction information that the majority of the companies provided was the amount of money they donate to charity organizations.

Some of the findings also differed from the outcomes of the study of Gardner et al, (2019). This study found additional gaps in reporting on the impact information of firms throughout the various stages in the supply chain and about the role of the actions within the relationship was also not much revealed by the analysed firms. Moreover, Gardner et al (2019) found also that information was missing regarding activities and effectiveness information. This study showed that two firms in the sample did not report anything about effectiveness information, but activity information was broadly covered by most firms. In fact, the findings about the dimensions that were reported on relatively well are consistent with the findings of Turker & Altuntas, (2014). Their analysis of fast fashion firms showed that the firms in their sample paid significant attention to the reporting on activities aimed at sustainability, and that the firms used a code of conduct and were very focussed on the audit and assessment processes of suppliers, similar to the findings in the focal study.

These findings regarding the use of the code of conduct can also be linked to the critical voices in the empirical debate about supply chain transparency. While this could be regarded as a positive development that all firms make use of compliance to a code of conduct, this could also have its downside. Given that other research has found that a code of conduct can also cause more workload and pressure because of the increased required monitoring, surveillance and control of the garment workers (Mol, 2015).

The same accounts for policy and commitment information. It was noticed that all eight companies are committed to several external initiatives, pledges and certification standards and use these external programs as a base for their assessment processes. All firms listed the commitments that they joined and most of the times, the objectives of the MSI's and pledges were explained. However, it was not always clear what kind of effect these (external) commitments would have on their actions. These findings confirm the statement of Gupta et al. (2020) that there is a proliferation of private certifications, labelling and business to business traceability schemes. They raise the question of the neutrality of the information provided and the risk of greenwashing. Furthermore, Mol (2015) argues that the abundance of competing certifiers can obstruct environmental reforms in the supply chains. Even in this small study, the eight analysed firms already make use of over 30 different certification programs and sustainability commitments. This can cause information overload and complexity and can result in the withholding transparency data because all the certification requirements become too costly (Mol, 2015).

Furthermore, some general observations can be made. Most organizations dedicated large parts of their public communication on the development and HR practices for their own employees. Other topics that were elaborately covered were the received prizes and awards and the donations to charities and its effects. In some cases this seemed relatively out of balance compared to the efforts, policies and activities that were described on topics like reducing forced labor or child labor. These findings confirm the statements of Maignan and Ralston (2002) that Dutch companies portray CSR activities as ways of organizational success. The same research found that Dutch companies tend to focus mostly on production processes, employee health and safety, similarly to the results shown in this study. This focus on organizational success in supply chain transparency could be connected with the fact that the Dutch public is critical on the intentions of firms getting involved in social affairs, and that firms need to create credibility to get information they provide to be trusted.

This study focused on large fast fashion firms and larger sized organizations are related to higher quality in supply chain transparency, since they have the resources that are required (Mol, 2015). The size of the firms, combined with the fact that all firms in the sample voluntarily joined the AGT, resulted in expectations of some quality and completeness in reporting on the different dimensions of supply chain transparency. Considering that the necessary conditions, (e.g. resources and good intentions) were

present, the quality of the reports seemed relatively low. Furthermore, relating to the diversion manoeuvres described by Coombs and Holladay (2013), some organizations did seem to provide an overload of information. For instance, one of the analysed CSR reports consisted of 246 pages and included a lot of repetition of the same subjects and achievements. Other reports were rather vague and reported mostly on intentions, rather than concrete facts and plans, making it almost impossible to be held accountable because no measurable actions were described.

One of the requirements for supply chain transparency to have a transformative effect is that the information provided is understandable and usable for the relevant actors (Gupta et al., 2020). This was currently not always the case because of the overload or vagueness of information. However, a reason for this could also be the context of the fast fashion firms. As described in the introduction, the fast fashion industry is characterized by its fast cycle times, disintegrated supply chains and complexity and opacity in the supply chains (Niinimäki et al., 2020, p. 190). It might also be a complicated process for the firms to create internal transparency and map their own supply chains. This could also be the reason for the gaps in reporting on traceability information and transaction information. Taking into account that the organizations that had previously reported on their sustainability activities also appeared to report significantly more complete and concrete this could indicate that supply chain transparency is a step-wise process, and firms provide better quality after a couple years of research and practice. This offers hope for the future of supply chain transparency.

## 6.2 Scientific contribution

This study contributes to the current theoretical and empirical debate on supply chain transparency. It provides systematic insights in the status quo of supply chain transparency by, large fast fashion firms. The study confirms findings from previous studies regarding supply chain transparency. It shows that large gaps in supply chain transparency, regarding the traceability and transaction information of actors in the supply chain exist in the reporting of large fast fashion firms, similar to the findings of Gardner et al, (2019) of the state of affairs of supply chain transparency of firms in the agricultural commodity industry. Furthermore the study confirms the findings of Turker & Altuntas, (2014) that fast fashion firms pay significant attention to the reporting on activities aimed at sustainability.

By revealing the significant gaps in the reporting of large fast fashion firms, this study furthermore provides a better understanding of the shortcomings in transparency that are currently in play in the Dutch context. This can help building a more comprehensive view to understand how transparency can work in a transformative way in improving sustainability in supply chains. The findings also suggest that those firms, which began reporting early are more advanced, suggesting that supply

chain transparency needs to be understood as a stepwise process. Therewith, the study also raises questions on what to expect from firms who are just starting with reporting on their sustainability efforts and shows that firms that are reporting longer, can provide more and complete supply chain transparency.

## 6.2 Practical implications

The findings of this study also have practical implications. First, for firms that are engaging in supply chain transparency, it is recommended to learn about the different categories of transparency as described by Gardner et al., (2019) in order to provide a complete report. The focal study provided the ground for firms to benchmark their own supply chain transparency against relevant peers.

The second recommendation for firms is to provide accurate and specific information, and to keep the report concise so it is understandable and usable for relevant actors. The findings of this study are also of importance for NGOs and other stakeholders, aiming to promote sustainability among fashion firms. This study could be a basis for NGOs and other stakeholders to show the status quo of supply chain transparency of large Dutch fast fashion firms. The findings of the focal study can help them to understand on which topics to focus when assessing the supply chain transparency of firms. For these stakeholders it is recommended to focus on the dimensions of traceability and transaction information and to carefully assess if firms report concrete enough to be held accountable for their claims.

Lastly the recommendation for multi stakeholder initiatives and the AGT in particular is to provide clear requirements on public reporting and include a standardized reporting format. This provides structure for the organizations, makes analyses for the controlling parties like consumers and interest groups more accessible and is the most important factor for reporting credibility (Lock and Seele, 2016). This findings of this study, furthermore provides a solid basis for evaluating the progress of the AGT members, and signatories of similar MSI's in the coming years, since this research provided the baseline.

## 6.3 Opportunities for future research

The focal study, which provided insights in the status quo of supply chain transparency at large fast fashion firms that are participants of the Dutch AGT, offers many starting points for future research. One of these opportunities for future (comparative) research by studying the differences of reporting of the participants of the AGT in the coming years compared to the findings as revealed in this study. This could provide a better understanding of the progress that make over time in the quality of their transparency in sustainability reporting. Another option for future research is to compare

these findings in the specific context to the public communication in other starting MSI's, in order to create a better understanding of which factors of an MSI influence the reporting of its participants.

Moreover, while this study did not look into the drivers of supply chain transparency, it provides a ground for future research that could contribute to the current empirical debate about the factors that influence supply chain transparency by comparing these findings to reporting of with other corporate characteristics, contextual factors like country of origin or internal factors (Campopiano & De Massis, 2015). Lastly, this study was designed as a content analysis of the texts and graphs on the websites and documents that the provided. The pictures, video's or font differences were not included in the content analysis. It would be interesting to see whether including these would have changed the conclusions of this research.

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## 8. Appendices

### 8.1 Appendix 1: Coding scheme

The table below gives an overview of the coding scheme derives from the theory of Gardner et al. (2019), that is used in the coding phase of the study. It displays the category (as in ‘code group’) the subcategory ( as in ‘code’) and the stipulative definition used to define the group.

**Table 11: Coding scheme**

<i>Code Groups</i>	<i>Code</i>	<i>Stipulative definition</i>
<i>1. Traceability</i>	1 Traceability	Traceability information provides information about the relations with and between actors and places within the supply chain.
<i>1. Traceability</i>	1.1 Traceability actors names	The names and addresses of the different actors involved in the supply chain .
<i>1. Traceability</i>	1.2 Traceability connection	The nature and rigidity of the connections between actors.
<i>1. Traceability</i>	1.3 Traceability role actor	The role of the different actors involved in the supply chain, stakeholders like NGO’s excluded.
<i>2. Transaction information</i>	2 Transaction information	General information of transactions that the organization conducts.
<i>2. Transaction information</i>	2.1 commodity purchases	Transaction information on commodity purchases from the organization or other actors in the supply chain.
<i>2. Transaction information</i>	2.2 sales of inputs commodity	Sales information of the inputs to the commodity production process of the organization or the other actors in the supply chain.
<i>2. Transaction information</i>	2.3 investment/ownership	The investments of the organization and its ownership information, including ownership of actors outside of the garment supply chain.
<i>3. Impact information</i>	3 Impact information	Impact information on the (side) effects and risks of the actions of the organization or its associated actors throughout the different stages of the supply chain.
<i>3. Impact information</i>	3.1 Environmental impact	Positive/negative impact on the environment

<i>Code Groups</i>	<i>Code</i>	<i>Stipulative definition</i>
<i>3. Impact information</i>	3.2 Environmental risk	Risks regarding the environment
<i>3. Impact information</i>	3.3 other impact	Other (side) effects of the supply chain.
<i>3. Impact information</i>	3.4 other risks	Other risks resulting from the processes of the supply chain.
<i>3. Impact information</i>	3.5 social impact	Impact on social/ animal issues.
<i>3. Impact information</i>	3.6 social risks	Risks on social/ animal issues.
<i>4. Policies &amp; commitments</i>	4 Policies and commitment	Information on the policies the organizations have and have implemented and the commitments the firms made to improve sustainability in the supply chain.
<i>4. Policies &amp; commitments</i>	4.1 policies	Policies and internal commitments.
<i>4. Policies &amp; commitments</i>	4.2 commitments	Commitments to external parties.
<i>4. Policies &amp; commitments</i>	4.3 assessment processes	Audit/ assessment processes of the progress on improving sustainability.
<i>5. Activity information</i>	5 Activity information	Information on the activities that are being executed in order to improve sustainability. Including the actions taken to achieve the objectives and commitments as described in the policies.
<i>5. Activity information</i>	5.1 production activities	Activities in the production process and suppliers working environment.
<i>5. Activity information</i>	5.2 sales activities	Activities in the sales and stores.
<i>5. Activity information</i>	5.3 purchasing, activities	Activities in (commodity) buying.
<i>5. Activity information</i>	5.4 processing, activities	Activities regarding waste, processing and recycling.
<i>5. Activity information</i>	5.5 investment decisions	Decisions regarding investments or donations or collaborations
<i>6. Effectiveness information</i>	6 Effectiveness information	Measurements and effects of the (progress of) actions and interventions that are

<i>Code Groups</i>	<i>Code</i>	<i>Stipulative definition</i>
		executed in order to achieve sustainability within the supply chain.
	<b>6.1 Status quo</b>	<b>The current state of affairs of production processes, outcomes and pollution</b>
	<b>6.2 Assessment outcomes</b>	<b>The effectiveness of assessment processes and the outcomes of assessments</b>
	<b>6.3 Effects of actions</b>	<b>The concrete effects of the activities that are undertaken to improve sustainability</b>

 *The subdimensions in bold are inductively coded and added to the framework as derived from Gardner et al., (2019).*