

Sustainability practices and web-based communication: an analysis of the Italian fashion industry

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1. Introduction

Fashion can be defined in broad terms as an industry that typically encompasses any products or markets characterized by the presence of the style element and a high volatility in product demand. The fashion industry is in fact a highly competitive business where product lifecycles are very short and differentiation advantages are built mainly on brand image. The economic relevance of this industry is significant. In Europe, in 2013, it contributed € 92.3 billion to import revenues and € 42.4 billion to export revenues (Euratex, 2013). In Italy, the national fashion system is responsible for about 30% of the turnover and 28% of the total number of fashion companies in Europe (Sistema Moda Italia, 2013). Both exports and imports are very relevant in the Italian fashion industry, representing, respectively, 52.2% and 42.4% of revenue (Sistema Moda Italia, 2013). With these numbers, Italy is the second largest fashion-industry exporting country worldwide, after China.

Currently, fashion companies must not only face the challenges posed by high market unpredictability, they must also adapt to a new business context that is increasingly focused on sustainability issues due to the consumers' increased sensibility about and awareness of green and social concerns (De Brito *et al.*, 2008; Gam, 2011; Hill and Lee, 2012). Therefore, many companies are undertaking a green and social transformation to respond to requests for more sustainable processes and products and to ensure that their partners, at every level of the supply chain, operate under responsible working conditions (De Brito *et al.*, 2008; Lueg *et al.*, 2013; Turker and Altuntas, 2014).

However, since the request for sustainability is relatively new in the fashion industry, and there is a lack of defined programs and tools that could support fashion companies in making this change, this present study aims to contribute to the literature on sustainability, in particular, by adopting a supply chain perspective that considers the sustainability practices undertaken by focal companies within the supply network (Ahi and Searcy, 2013). Moreover, according to the literature that highlights the growing importance of the web channel in today's business context, not only to sell products but to also support a company's brand image (Cervellon and Wernerfelt, 2012; Adams and Frost, 2006), our research considers the web-based communication that fashion companies are

implementing to support their sustainability programs. In fact, communication is often the key point in the management of a full corporate responsibility program. Many companies are actually considering whether they should communicate their sustainability-related actions to consumers and other stakeholders (such as investors), and how to do so. However, companies are not always willing to openly communicate their efforts on sustainability because of the fear of attacks by media and non-governmental organizations (NGOs) (such as the Greenpeace campaigns) or the lack of advanced sustainable practices within their entire supply networks. Therefore, studying how companies face the challenge of sustainability by aligning it with careful web communications has become an actual issue (e.g. Eder-Hansen *et al.*, 2012; Delmas and Cuerel Burbano, 2011). Despite the growing importance of this topic, studies investigating web-based sustainability communication strategies in relation to sustainability practices are still scarce. Moreover, many works that have focused on the fashion industry do not, simultaneously, consider the social and the environmental dimensions of sustainability and nor the relationship between those practices, as well as the drivers/barriers, and the issue of web-based communication. Consequently, our research aims to fill these gaps by using multiple case studies to explore which environmental and social sustainability drivers, barriers and practices are adopted by companies in the Italian fashion industry (*RQ1*) and how those companies are communicating their sustainability commitment through their corporate websites (*RQ2*). In this way, this study analyses the presence of an alignment (or misalignment) between these two dimensions (sustainability practices vs. web-based sustainability communication).

2. Theoretical Background

2.1. Sustainable development

Today, sustainable development has become a strategic imperative for all industries whose production processes have relevant impacts on the environment and society, as well as all companies that are searching for new sources of competitive advantage (Ahi and Searcy, 2013; Ho, 2014). Until a few years ago, sustainability was not considered to be a pertinent issue: social and environmental requirements were mainly confined within the firm's boundaries. However, during the last several years, the growing pressure to address sustainability has exponentially led companies to always be held responsible not only for their own direct actions, but also for the actions of their supply network partners. These new pressures exerted upon companies to implement a more sustainable way to run a business generally come from different internal or external sources, such as employees, owners, investors, managers, or NGOs and governments

(Ciliberti *et al.*, 2008), due to the enhanced consciousness that not only the final product, but also the management of the entire supply chain, requires strict rules and constant monitoring. Today, many firms have made a commitment to the development of sustainability programs because they recognize that dealing with the environmental and social aspects of business can quickly affect their share value and sales (Seuring and Müller, 2008). In this way companies are actually considering the “Triple Bottom Line” perspective (Elkington, 1997), which posits that achieving a better alignment among environmental, social and economic aspects will improve a firm's business (Carter and Rogers, 2008).

However, pursuing sustainability goals can be also risky since, generally, the success of any green and/or social initiative is unpredictable and difficult to forecast, due to factors beyond company's control, such as regulatory constraints, customers' responses, the commitment of workers or geopolitical events. Together, these factors contribute to making sustainability a complex issue (Walker *et al.*, 2008; Seuring and Müller, 2008). Implementing sustainability in a supply network is also highly challenging because of the need to coordinate different business functions and players, often on a global scale. This is especially true in the fashion industry where many actors can be located in different countries around the world and supply chain configurations are generally complex and tangled due to the numerous players involved in the process. It follows that fashion companies have become among the ones most exposed to sustainability pressures and attacks by NGOs and public opinion, which have forced this industry to start becoming particularly interested and involved in the definition of sustainability programs (Pedersen and Andersen, 2015).

2.1.1. Environmental practices in the fashion industry

In the fashion industry, production processes (such as dyeing, tanning or finishing) require the massive use of chemical substances, thus leading to a high environmental impact (Caniato *et al.*, 2012). In addition, the weight of a global-scale transport system, which with increasing frequency moves final products and raw materials into and out of many different countries, results in additional and extensive damage to the environment, in terms, for example, of CO₂ emissions (Fletcher, 2013). As a result, the attention of academics and practitioners has been increasingly focused on environmental practices in an effort to shed light on how companies in the fashion industry can become sustainable (De Brito *et al.*, 2008; Caniato *et al.*, 2012; Blome *et al.*, 2014).

The most debated environmental practices have first focused on concerns about the product area (Ciliberti *et al.*, 2008; Chung *et al.*, 2008; Cervellon and Wernerfelt, 2012; Moon *et al.*, 2013; Fletcher, 2013) by considering the possibility of producing green products based on raw materials made by, for instance, organic or recycled fibres and components or through the elimination of

toxic elements (e.g. Cervellon and Wernerfelt, 2012). Moreover, aspects related to the products' packaging assume an important position in the push for sustainability changes because of the high impact that their use has on the environment. Thus, many companies are now interested in reducing the amount of packaging they use and in developing greener packaging comprised of recycled or recyclable materials (Ciliberti *et al.*, 2008).

Green attention has also been focused on practices related to the industry's processes (Nieminen *et al.*, 2007; Lakhal *et al.*, 2008; Moon *et al.*, 2013) by learning how to properly manage waste, water and sustainable energy and by considering the implementation of a full environmental management system that could monitor all the processes involved within the production of final goods in terms of pollution and Life Cycle Assessment (LCA).

However, over the years, a broad consensus has been established so that it is now believed that companies should consider the environmental impact of the entire product lifecycle, for which the focal company is considered to be responsible from cradle to grave (i.e. from purchasing to disposal), within the entire supply chain (De Brito *et al.*, 2008; Lakhal *et al.*, 2008; Ashby *et al.*, 2012; Perry and Towers, 2013). In this way, suppliers represent one of the most important and critical sources of risks from an environmental point of view, since focal companies are generally held responsible for any supplier shortfalls and more companies have started selecting and monitoring their supply networks based on their alignment with sustainability criteria (Perry and Towers, 2013; Turker and Altuntas, 2014). The sustainable path within the supply chain must also consider distribution, and companies in the fashion industry have recently started to evaluate the environmental impact of their transportation options by trying to develop more ecological routes and methods (Choi *et al.*, 2012). Finally, the supply chain point of view should be extended to final markets by considering customers as active players that should be fully involved in the environmental sustainability change (Cervellon and Wernerfelt, 2012; Eder-Hansen *et al.*, 2012).

2.1.2. Social practices in the fashion industry

In terms of the social dimension, recent scandals arising from the mistreatment of workers and the violation of human rights have revealed on a critical and complex scenario within the fashion industry (De Brito *et al.*, 2008; Seuring and Müller, 2008). Companies in the fashion industry are actually very exposed to sustainability pressures, and the relevance of the social dimension for fashion brands has radically increased (Seuring and Müller, 2008). Therefore, especially in a context characterized by the use of outsourcing and delocalization strategies for production activities, as is the case for the fashion industry, the development of a more conscious way to conduct business begins with improvements in the *workers'* conditions (De Brito *et al.*, 2008; Lueg

et al., 2013; Turker and Altuntas, 2014) in terms of strengthening human rights protections (e.g. avoidance of child labour) and ensuring the workers' welfare.

However, social sustainability is still one of the most difficult challenges for the fashion industry due to the complexity of the supply chain and the cultural differences that can be found across different countries throughout the world (Turker and Altuntas, 2014; Choi *et al.*, 2012). This means that companies are not only expected to improve workers' conditions, they are also expected to take care of the local communities that live near their production plants and develop philanthropic actions in favour of disadvantaged countries in order to spread the new idea of a social supply chain even among different populations (De Brito *et al.*, 2008).

The development of social sustainability also strongly involves the supplier dimension so that the improvement of working conditions can occur at every level of the supply chain. For instance, after many accusations of working condition violations, the Gap developed an independent monitoring program to ensure that suppliers adopt an ethics code (Arrigo, 2013).

2.1.3. Drivers and barriers to sustainability

In the field of sustainability, the literature has extensively focused on drivers and barriers (e.g. factors that enable or prevent the adoption of sustainability practices) in order to understand how these factors influence whether and how companies adopt environmental and social practices (e.g. Caniato *et al.*, 2012; Perry and Towers, 2013; Arrigo, 2013).

Extant literature classifies the drivers for sustainability into two main categories: internal and external (Walker *et al.*, 2008). In particular, among the external drivers, studies have recognized the presence of specific regulations (Zhu *et al.*, 2005) as well as pressures from customers, competitors, local communities and NGOs (Sarkis, 2003; Hassini, *et al.*, 2012). Studies have noted that the internal drivers include the commitment by the company's top management team (New *et al.*, 2000) to gain new opportunities (Hanna *et al.*, 2000) and new competitive advantages for and improvements in the corporation's reputation (Walker *et al.*, 2008; Rossi *et al.*, 2013) as well as the objective of reducing costs (Handfield *et al.*, 1997) and improving quality (Pil and Rothenberg, 2003). For the fashion industry, the literature highlights that, today, sustainability is strongly driven by the risk of damages to the corporate image (Caniato *et al.*, 2012; Perry and Towers, 2013; Arrigo, 2013); in fact, NGOs, such as Greenpeace, are undertaking different initiatives to boycott all companies that do not publicly report their green and social achievements and commitments (Du *et al.*, 2010).

In addition to the sustainability drivers, the literature has also addressed the main barriers that can hinder these efforts (Gilbert, 2006; Vermeulen and Ras, 2006; Walker *et al.*, 2008;

Hearson, 2009; Giunipero *et al.*, 2012). In general, sustainability efforts can be slowed by the high costs of sustainability initiatives and programs (Cooper, 2000) or by the lack of commitment from the company's owners (Vermeulen and Ras, 2006), as well as by the absence of clear regulatory constraints or even by suppliers' inability to adhere to the company's sustainability policies (Walker *et al.*, 2008). In this industry, the need for short lead times and the reality of a supply chain configuration that is generally fragmented and dislocated across different countries, makes it difficult to adhere to green and social goals (Gilbert, 2006), especially at the supplier level. For instance, suppliers in the fashion industry are generally subject to intense pressures to reduce lead-times, and, to respect these always-stricter deadlines, they might offset these constraints with their employees' working shifts (Hearson, 2009). Often times these suppliers operate overseas; therefore, focal firms struggle to implement a monitoring system that could provide reliable information about all the actions undertaken within their extended supply network. The complexity of the fashion supply chain is such that the introduction of sustainable criteria into those processes presents many difficulties.

2.2. Web-based sustainability communication

The issue of developing proper communications with final customers and other stakeholders in the field of sustainability is particularly new for the fashion industry, but it is rapidly becoming relevant (Eder-Hansen *et al.*, 2012; Epstein and Buhovac, 2014). "Sustainability communication" is defined as the set of strategies and subsequent practices that have a relevant role in disseminating information about an organization's environmental and social behaviours to influence, support and enhance the company's corporate image in the eyes of its stakeholders and final customers and to indirectly promote its products (Morsing, 2006; Morsing and Schultz, 2006; Pomeroy and Dolnicar, 2009). In addition, today, the web has become the predominant communication channel for sustainability initiatives (Delmas and Cuerel Burbano, 2011; Fulton and Lee, 2013) since corporate websites allow companies to publicize a great amount of information in an economical and quick way and to release detailed information, which is constantly updated and customized, to different stakeholders groups, unlike traditional media (such as newspapers, magazines, television and radio) (Esrock and Leichty, 2000). One of the main advantages of adopting web-based communication is that it enables a company to directly publish sustainability information on its website and, consequently, to make that information directly available to the company's customers. The evolution of the web-based communication channel has opened new prospects and opportunities for the future and web-based sustainability communication is gradually replacing previous traditional channels, since an increasing number of companies, such as Kering and LVMH

groups, are actually publishing their annual sustainability reports online (Isenmann *et al.*, 2007; Sweeney and Coughan, 2008; Sweeney and Coughan, 2008; Turker and Altuntas, 2014). Substantially, along with the increasing use of the web and requests by stakeholders for companies in the fashion industry to improve their environmental and social performance, companies in that industry are increasingly required to communicate the social and environmental practices of their operations and supply chains in a clearer way.

However, despite the fact that companies now have more opportunities to share data about their social and environmental practices with final customers than they had in the past, such information is still lacking. Only a few companies are in fact efficiently adopting web-based communication aimed at sensibly informing their stakeholders about their good sustainable behaviour, thereby achieving alignment between what they internally implement and what they externally communicate (Adams and Frost, 2006). First, even if almost all companies maintain a corporate website, it is generally not designed with the primary purpose of communicating sustainability initiatives, but is mainly oriented toward supporting brand recognition among consumers and promoting e-commerce activity (Du *et al.*, 2007, 2010). More importantly, a company could be seriously committed to addressing its sustainability practices, but it might not be interested in communicating its internal activities related to sustainability due to the risk of becoming targeted by NGOs attacks (which aim to verify whether or not the sustainability practices communicated by the company via the web channel are actually applied). In this context, web-based sustainability communication has become a crucial issue that all companies should address, since key stakeholders, such as consumers or investors, are paying greater attention to those practices and rewarding virtuous companies (Du *et al.*, 2007). In this way, the web channel can help companies share information about their sustainability commitment and influence the customers' purchase intent (Pomeroy and Dolnicar, 2009).

3. Methodology

3.1. Case study method and sampling

To study environmental and social sustainability practices and the relationship between these practices and web-based sustainability communication strategies in the Italian fashion industry, we adopted a multiple case study approach (Yin, 2003; Voss *et al.*, 2002). The case study methodology is appropriate when the research is exploratory and the phenomenon under investigation is still poorly studied, as it offers the opportunity to achieve in-depth results through direct experience (Voss *et al.*, 2002). In fact, although more research studies have been conducted both on web-based communication (Isenmann *et al.*, 2007) and sustainability practices (Ahi and Searcy, 2013) during

the last decade, a perspective that connects these different dimensions is still lacking.

In this present study, the case study sample was created according to theoretical and literal replication logics (Eisenhardt, 1989) and, to build a representative sample, we set the following eligibility criteria by selecting companies that: (i) operate in the fashion industry (developing different product categories); (ii) are medium- or large-sized in terms of revenue; (iii) have international networks to address possible different environmental and social national regulations and (iv) are brand owners (subcontractors were excluded).

We analysed a sample of 12 companies that meet the criteria presented above and that are heterogeneous in terms of revenue and product types to offer a complete overview of the researched issues. The number of case studies can be considered sufficient to provide accurate results (Yin, 2003). Table 1 summarizes the main information about the selected cases.

Table 1. The sample companies

3.2. Data collection and analysis

After defining the research sample, we designed an ad-hoc structured protocol to gather data about sustainability practices and web-based communication. The research protocol was organized to collect information related to:

- Internal and external drivers and barriers that influence how a company approaches its sustainability practices (Caniato *et al.*, 2012);
- Environmental sustainability practices adopted in terms of products, processes and supply network (De Brito *et al.*, 2008; Cervellon and Wernerfelt, 2012; Ciliberti *et al.*, 2008; Perry and Towers, 2013);
- Social sustainability practices that focal companies are mostly adopting in terms of workers, local communities, suppliers and philanthropy (De Brito *et al.*, 2008; Choi *et al.*, 2012; Lueg *et al.*, 2013);
- Web-based sustainability communication that companies are adopting to support their sustainability programs (Cervellon and Wernerfelt, 2012; Adams and Frost, 2006).

We collected that information between January and June 2014, through direct interviews with chiefs of sustainability programs, industrial directors, industrial planners, supply chain managers, operations managers, quality managers and energy managers. We triangulated the information through plant visits and by analysing the companies' annual reports, sustainability reports, code of conducts and official press releases. Key informants were followed up by contacting them again via telephone, to deepen the understanding of any emerging doubt. The data collection stage involved

multiple investigators and interviewers and all of the interviews were recorded and re-transcribed (Eisenhardt, 1989).

Once we collected all the data, we conducted a within-case analysis (Eisenhardt, 1989); thus, the information that emerged from each interview was organized according to the different areas of the protocol (i.e. “drivers”, “barriers”, “environmental practices”, “social practices” and “web-based sustainability communication”). Thereafter, a cross-case analysis was performed to classify the sample companies. We compared all of the companies to each other in order to verify the level (high vs. low) of the adopted sustainability practices (both social and environmental) in relation to the related adoption of web-based communication, with the final aim of assessing the companies’ fit (Low/Low or High/High) or misfit (Low/High; High/Low) in these two dimensions. Figure 1 summarises the classification through a matrix.

Figure 1. Fit and misfit between the companies’ sustainability practices and web-based sustainability communication.

4. Results

The four quadrants of the matrix have been named as follows: (i) Low commitment, (ii) Low disclosure, (iii) High commitment, (iv) High Marketing (Figure 2).

Figure 2. Descriptions of each group.

Low commitment

This group is composed by companies that are not proactively engaged in sustainability management initiatives and, in line with that they do not communicate anything about their environmental and social commitment on their corporate websites. Companies *Five* and *Eight* belong to this group.

The sustainable practices adopted by these two companies, such as the deployment of specific actions to reduce energy consumption, are mainly isolated, occasional and aimed more at achieving economic advantages than sustainable advantages. Such low commitment on the sustainability issue is reflected in their lack of a serious and proactive internal interest on this topic, mainly due to the high costs of sustainable actions, which are considered, for the moment, higher than the possible future benefits. On the whole, these companies are adopting some non-relevant sustainable practices (both environmental and social), which are not embedded within a long-term sustainability strategy, since these practices are generally unstructured and are mainly implemented

with the intent of gaining cost savings (such as the reuse of scraps by company *Five* or the adoption of bulk packaging and the introduction of LED lighting at retail shop by company *Eight*) or the compliance with regulations. For this group of companies, sustainability is not considered to be a value-added element of their competitive strategy and the main reason is that their internal and external drivers towards sustainability are less strong. For instance, these two companies are still not experiencing pressures from NGOs, as is happening for other larger fashion companies, because of their medium size and their lower international image. Consequently, for these enterprises such a lack of external pressures, together with the absence of a serious internal commitment to the human or financial resources required for sustainability programs, and a cultural-organizational inertia in this field, act as a barrier to taking the sustainable leap. In regard to web-based sustainability communication, neither company is communicating anything about sustainability through its corporate website. Such lack of interest in the implementation of sustainable practices and the related external communication highlights a consistency, which is a fit between the facts (e.g. no commitment on sustainability) and the statements reported on their corporate websites.

Low disclosure

The upper left corner of the matrix considers companies that can be acknowledged as best performers, in terms of sustainability practices, but they are not sufficiently communicating their efforts and commitment to their stakeholders. Companies *Two*, *Six*, *Seven* and *Eleven* belong to this group.

The sustainable practices implemented by this group of companies are notable for being particularly long-term, systematic and comprehensive, such as the development of green vendor ratings, as well as the efforts to monitor and support suppliers to help them improve their social and environmental key performances indicators.

In this case, these four companies are approaching sustainability with a structured plan that is embedded in their strategic agenda. In fact, these “*low disclosure*” companies focus their sustainability practices on explicit and incremental macro targets, generally released with a top-down approach by the top management teams to the low-level business units, which are subsequently put in charge of accomplishing the related micro-goals. It follows that all of the companies in this group have systematized their sustainability actions at all hierarchical levels to the point that, in the case of companies *Two* and *Eleven*, the sustainability division has become a strategic function that influences other business units. This is also true for companies *Six* and *Seven*, which do not have a dedicated sustainability division but that are considering the sustainability challenge to be a sensible issue that should be treated in a long-term systematic way and that has

many and different impacts on different areas of the company. To a great extent, these four companies agree that, in pursuing sustainability goals, they are also able to increase the quality of their products.

However, taking the sustainability leap is also quite complex for companies in this group. For instance, they are carefully approaching sustainability, even if they perceive that their customers still have a marginal interest in this issue. Another barrier that partially hinders further efforts on sustainability is related to the general high costs associated with these kinds of practices.

In terms of web-based sustainability communication, companies in this group are characterized by not releasing detailed information regarding their initiatives, even if these practices are often extensive. For example, company *Two* has recently developed a system that guarantees the traceability of the raw materials used for a final product up to the last tier supplier level, but no information about this important achievement is available on the corporate website. This choice is not driven by structural constraints, such as a lack of resources in for creating the communication; rather it follows a strategic “non-communication” directive aimed at avoiding any green-marketing attacks. In fact, communicating too much sustainability information can result in a boomerang-effect thereby exposing the company to criticism. These companies adopted such “non-communication strategy” because, when dealing with sustainability issues, different aspects should be considered together and simultaneously, but not everything can always be completely monitored over time, especially in the fashion industry, since supply chains are typically complex and extended worldwide, involving different suppliers and sub-suppliers.

High commitment

This group is characterized by companies *One*, *Four*, *Nine* and *Ten*, which are adopting several sustainability practices (i.e. LCA analysis, green vendor ratings, extended welfare policies for employees, reuse of rainwater, etc.) in a systematic way and are extensively communicating their good conduct through their corporate websites. For these companies, the main drivers to sustainability are internal, as the increased attention to such issues is nurtured by the willingness of the owners and top-management teams to improve the company’s environmental and social impact.

The internal pressures that come from the top management teams can justify the high level of commitment on the sustainability issue showed by all the companies of this group, despite the considerable differences between their dimensions (in terms of revenue). In particular, on this last point, it is worth noting that this group includes two large and two small companies. The former companies launched their enterprises at different times years ago building their business models only on the economic dimension, but they are now addressing the challenge of sustainability

because, due to their size, they have become more vulnerable to NGOs attacks. On the other hand, the latter two companies were launched more recently and they have built their strategic foundations on sustainable business models. Beyond these differences, all of the companies of this group face the same difficulties in achieving sustainability goals. The main barrier these four companies face is the challenge of extending their good conduct to their suppliers and external partners, which are not fully able to follow sustainable strategies.

The sustainability practices adopted by these companies are characterized by a high degree of consistency throughout the different stages of their supply chains and by the long-term view with which they are implemented (only products and processes, but also supply network practices). Among the most relevant practices that are implemented by these companies is the adoption of LCA to control CO₂ emissions along all steps of the products' lifecycles and the efforts undertaken to make supply chains more transparent and easier to control. However, the social dimension is very developed in these companies, which have greatly empowered their low-level employees (who are made responsible for suggesting and, afterwards, introducing any sustainability actions) and have implemented extraordinary welfare policies (e.g. higher wages, extended health assistance, scholarships for children, etc.) for their workers.

These practices are comparable to those adopted by companies in the “*low disclosure*” group, but the major difference between these two groups can be found in their web-based sustainability communication. In fact, companies in the “*high commitment*” group are characterized by a strong web-based sustainability communication strategy, denoting the alignment between the extent of their endeavours and their sustainable actions. In particular, all of these companies have a dedicated section on their websites that reports the company's environmental and social achievements as well as its future agenda for sustainability.

On the whole, this group of companies achieves a perfect fit between the high internal sustainability efforts they undertake and what they communicate to stakeholders through their corporate websites.

High marketing

This group consists of companies characterized by a low development of sustainable practices, but by a strong communication effort in relation to the few actions they have undertaken. Companies *Three* and *Twelve* belong to this group.

These two companies are motivated to approach the sustainability challenge in very different ways. In fact, company *Three* is driven by its owner's interests in this field, but it surprisingly lacks an internal commitment from top managers who are still reluctant to earmark the

extra costs generally related to sustainable solutions. On the other hand, company *Twelve* has started to address the sustainability challenge after a strong attack from an NGO campaign two years ago, which has had an impact on its corporate image.

The companies in this group are, by some means, addressing the sustainability challenge, but their actions in this regard are still rare, such as the development of some capsule collections (e.g. a few pieces of the entire production) made by sustainable raw materials (for instance, organic cotton). These practices cannot be considered to be strictly linked to a real sustainable strategy; rather, they adhere to the companies' desire to partially target the conscious consumer market segment. In this way the companies in this group are using sustainability as a marketing lever, but all of their fashion collections are still mainly driven by the designers' decisions that are, most of the times, not reconcilable with sustainable solutions or practices. Likewise companies labelled as "*low commitment*", "*high marketing*" are adopting unrelated sustainable practices, which are not part of any long-term sustainability strategy. The only difference between the two groups is that companies belonging to the "*low commitment*" category are avoiding any form of web-based communication because they are not really pursuing sustainability, whereas companies in the "*high marketing*" category, even though they are characterized by minimal sustainability practices, have built strong corporate communications about the few sustainability actions they have taken.

Despite the low level of sustainability practices, both of these companies have dedicated important sections to sustainability on their corporate websites, which foreground their actions and good behaviour on the issue. The emphasis on such communication is greater than the actual practices implemented by the companies. The lack of an extended internal commitment is not the only motivation for such a low level of sustainability. In fact, there is also a lack of preparation about how to implement sustainability. For instance, company *Twelve* started to consider the sustainability issue after a strong attack (by a well-known NGO campaign in 2013) and then began to do something to avoid experiencing any new attack. Despite such critical pressures, this company is still not aware of how to organize its sustainability strategy. Consequently, the sustainable practices that are implemented can be considered to be sporadic solutions based on the points that were addressed from the NGOs campaign. In a nutshell, this company has not developed any guidelines for taking the sustainability leap due to the lack of internal commitment by the top management team, which is just reacting to the external pressures posed by the NGOs. Different from those companies in the "*high commitment*" group that were pressured by NGOs and that afterwards decided to work on adapting their business model to address sustainability, companies in the "*high marketing*" group were unable to embed real sustainability strategy in their values.

It must be clarified, however, that these companies are indeed addressing sustainability, but the extension of their actions is still limited, while the related web-communication is over-balanced. This results in a misfit between how these two companies internally approach sustainability and how they communicate that commitment to their stakeholders.

6. Conclusion

This research contributes to filling the gap in the lack of a perspective that links the implementation of sustainable practices (both social and environmental) at the supply chain level and the related web-based communication by identifying four different approaches adopted by 12 companies in the Italian fashion industry (*low commitment, high commitment, low disclosure, high marketing*). In a broader view, the alignment (fit or misfit) among the adopted practices and the web-based communication represents the connection between the two areas of sustainability management and the marketing. We noticed that only a few companies (e.g. “*low commitment*” and “*high commitment*”) have established an effective alignment between their web-based sustainability communication and what they are really doing in terms of sustainability.

The second main finding is related to the identification of sustainable practices. Despite the fact that several companies in our sample are investing many resources into sustainability, most of the adopted environmental practices consist of developing energy-savings solutions within the production facilities and the use of renewable/recycled raw materials. In spite of that, we found that only a few companies in the fashion industry are developing extended supply chain solutions because of the high complexity of their supply chains and the subsequent difficulties in controlling the suppliers’ actions. This also occurs at the social level where most of the adopted practices are related to a company’s philanthropic activities. Our results highlight that the extension of sustainability at the supplier level is still insufficient for the companies in our sample; thus, sustainability represents a high risk for focal companies. In fact, if a focal company supplies products from suppliers that are not very sustainable, such a company could be held responsible by NGOs and public opinion for the lack of commitment by its suppliers or it could be criticized for not having chosen other suppliers. Therefore, this inability to extend sustainable practices at the supplier level explains why many companies in our sample are quite reluctant to create any form of external web-based communication; they do not want to risk communicating that they are developing sustainability practices, while they do not have full control over their suppliers’ situations. Alongside the identification of such practices, our classification highlights that there are several similarities in the adopted sustainability best practices by companies populating the upper side of the matrix. These companies, in fact, differ only in their decisions about the degree of web-

based communication. We found similarities in the adoption of practices among companies populating the lower side of the matrix as well, but in that case the extension of such practices was very narrow.

The third main finding concerns the identification of the main drivers and barriers that influence the companies' approaches to sustainability. In general, the internal pressures from the companies' owners and top management teams are crucial for developing a strong commitment to sustainability within organizations. While the fear of any possible attacks from NGOs is an important leverage for facing sustainability, it is interesting to point out that, while NGOs represent an external driver for the "*high commitment*" group, for the "*low disclosure*" group they act as a barrier to communication since those types of companies do not communicate their sustainable efforts in order to avoid NGO attacks. This study also found that other important barriers exist, such as the organizational complexity required to coordinate and manage sustainability within a worldwide supply network, the fact that fashion products are still mainly driven by the designers' decisions (which could impose constraints on any possible sustainable solution in relation to the products) and, finally, the high costs generally associated with implementing sustainable practices.

On the whole, the matrix developed in this paper can be adopted as a tool that allows for interpreting a company's level of maturity in relation to the sustainability challenge and strategies it has developed to address those issues. In fact, when sustainability is not part of a competitive strategy, companies implement very few sustainability practices and, at the same time, they provide little information to consumers ("*low commitment*"). At another level of maturity, some companies have started to implement sustainability strategies just because the media and NGOs have attacked them or because the market required more sustainability (therefore for these companies sustainability is seen as a marketing lever). The lack of any internal commitment means that these companies still have little experience about sustainability and their expertise on the issue is superficial, even though they extensively promote what they do ("*high marketing*" companies). The third level of maturity consists of companies that started to work on sustainability not because the market or NGOs asked for it, but because the company itself is convinced of the value-added benefit that this commitment will bring in the future. They are in no hurry to communicate their sustainability practices; indeed, they do not communicate that information so as to avoid any damage to the company's image ("*low disclosure*" companies). Finally, the last level of maturity characterizes firms that are implementing many sustainability practices and communicating what they do ("*high commitment*").

The matrix developed in this study represents the maturity evolution of companies addressing the issue of sustainability; in the future, due to the fact that addressing sustainability is

becoming compulsory for more and more industries, companies will be always pushed to advance from the first to the second or the third maturity levels, and then to arrive to the fourth level. In this way, this research study has important implications for practitioners as well.

Nevertheless, this research study has some limitations. The sample only consisted of Italian companies in the fashion industry and future researchers are encouraged to extend this analysis to other countries. New research opportunities could also arise by investigating small enterprises (not only medium-large companies, as examined in this work). Finally, this research study does not reveal the impact that the economic dimension has on the issue of sustainability. As largely supported by extant literature, sustainability strategies and practices generally have a long-term effect and, thus, this research could be expanded in the future by adopting a longitudinal approach aimed at evaluating the economic performances of each one of the clusters we highlighted.

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