CORPORATE SOCIAL RESPONSIBILITY GUIDING SUSTAINABLE INNOVATION IN THE FASHION SYSTEM: THE ROLE OF STANDARDS

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Abstract

The theme of sustainability is an interesting topic in the fashion industry. This industry has one of the highest levels of pollution and also from a social outline is responsible for serious injuries to human dignity, given the poor working conditions in many factories in developing countries. The paper deepens the relation between corporate social responsibility (CSR) and innovation in the Italian fashion system. Which is the level of sustainable innovation in the Italian fashion industry? This is the research question deepened through the analysis of the degree of the social and environmental standards in the fashion system. Standards represent an important driver of organizational, process and product innovations, they impose the use of new technologies, new processes, new materials, but also a different organization of supply chains, and allow evaluating fashion companies' concrete commitment in CSR. The research intends to explore this relation in order to contribute to the debate on this topic.

1. INTRODUCTION

Fashion represents one of the most polluting industries in the world, with 20% of the global waste of water, the 10% of carbon dioxide emissions and a strong incidence in the production of greenhouse gases

that is expected, in the next 12 years, will increase by 60%, contributing massively to global warming (United Nations, 2018), as well as an alarming social level are data on unbridled consumerism, against very low percentages of clothing recycling.

The paper intends to contribute to the debate on CSR and innovation in the fashion industry, proposing first of all an overview of the existing standards for the fashion industry.

The debate on innovation and sustainability standards in the fashion system needs to be improved. In fact, there is a lack of research in the field and both theoretical and empirical contributions remain largely undeveloped.

The study of the sustainable innovation in the Italian fashion industry, through the analysis of the degree of the social and environmental standards in the fashion system, is the aim of the paper.

The work presents some elements of originality inherent above all in a deepening of the theme of sustainability in the fashion system with reference to the identification of the main standards that can be used in the sector, highlighting their characteristics and areas of applications.

The paper is structured as follows: the first part deals with the theoretical debate on CSR, standards and innovation in the fashion industry; in the second part the work reports the method of empirical research, the results, the discussions and the practical implications, the conclusions with the limits of the research and the future trajectories of research.

2. CSR, INNOVATION AND STANDARDS: THE THEORETICAL BACKGROUND. A FOCUS ON THE FASHION INDUSTRY

The theoretical backbone is articulated in three research lines: CSR and innovation; innovation and sustainability standards; fashion industry and CSR.

The debate on CSR and innovation underlines that the adoption of this approach implies a radical change of strategic and management perspective (Perrini & Pivato, 2007) which includes all key areas of business management (production, marketing, human resources, financial, etc.) (Perrini et al., 2006). Many studies have empirically investigated this link and have provided very interesting insights about the performance of firms with respect to sustainability innovation (Rodriguez et al., 2002; Markley & Davis, 2007). According to Little (2006), CSR can lead to innovation, creating new ways of working, new products, services, processes and new market space, which can lead many companies to redefine their business models.

Other studies have underlined the opportunities deployed by CSR strategy on creative and innovative business (Mahlouji & Anaraki, 2009); the opportunity to change the competitive landscape by introducing entirely new consumer offerings, developing new processes or creating new market segments (Bhattacharyya, 2010).

CSR strategy has close contact with innovation (van Kleef & Roome, 2007), ensuring a business' competitive advantage, and bringing societal benefits to all people involved (Elkington 1994; Rodriguez et al. 2002; Porter & Kramer, 2006). Recent studies, in order to analyze the bidirectional relationship between CSR practices and innovation - according to the resource-based theory - show that this relationship is not the same in different sectors (Gallego-Álvarez et al., 2011); others find that greater innovation performance, in China firms, is associated with an increase in firm green CSR (Wu et al., 2018).

CSR requires implementing innovations not strictly product related, but more extensively, they cover the organizational and management structure in terms of how business practices and processes are sustainably driven. This approach implies the regeneration of all resources and business capacities and consequently the enhancement of competitive factors (De Chiara, 2016).

With regard to fashion industry, recent studies underline how corporate social responsibility activities can be pursued as a core business strategy (CSR-Driven innovation) in companies, in the ready-made garments sector in Bangladesh (Haque, 2018); in the same country, other studies show the benefit of doing business internationally in a sustainable manner (Parker, 2011). In Italy, Battaglia et al. (2014) analyze the link between the adoption of CSR and competitiveness performance among small and medium enterprises operating in the fashion industry. The results of this study show a significant correlation with regard to the innovation process.

Recalling the characteristics of the industry - as the varying degrees of government involvement, employment regulation, and environmental protection - the study of Laudal (2010) suggests that these companies must assume primary responsibility for a multitude of legal and moral standards, which may include communications about their CSR practices. On this topic, the debate on innovation and sustainability standards in the fashion system needs to be improved. In fact, there is a lack of research in the field and both theoretical and empirical contributions remain largely undeveloped.

Standards are useful tools both for consumers, who can thus orient themselves in their choices of responsible purchases, and for companies, as shown by some recent data on the economic performance of certified companies: during the crisis, between 2009 and 2013, the 4A Italian companies (food, automotive, aerospace, apparel-fashion) with environmental standards saw their turnover increase by an average of 3.5% against 2% of those not certified (Symbola Foundation, 2015).

The theoretical debate clearly shows that the environmental standards guide companies in improving their performance with natural repercussions on management aspects, on energy savings, on materials, on the delicate management of waste and therefore on the widest production costs (Nishitani et al., 2012; Testa et al., 2014; Daddi et al., 2011). Furthermore, the certified companies would also benefit from a series of "bureaucratic" advantages linked to the simplifications

envisaged by the European, national and even regional legislative framework. In fact, they can benefit from simplifications in environmental matters, such as extensions of the duration of the authorization acts, a reduction in the time required to investigate, the possibility of adopting self-certifications to obtain the renewal of authorizations, but also the reduction in the frequency of checks or of any cuts in taxes and duties and reduction of financial guarantees (Daddi et al., 2014). Furthermore, the widespread trend, moreover in all sectors, has won growing consumer groups, influencing the conduct of companies both at B2C and B2B level (Scuola Superiore Sant'Anna, 2013).

The debate on the Italian fashion industry and CSR shows that companies have already started betting on finding a balance between creativity, innovation and sustainability. Companies' investments are recorded to limit the consumption of water and energy, in the dyeing and finishing phases; to contain the use of chemicals, in industrial processes based on biochemistry and biotechnology; to optimize the production chain, from design to distribution, rationalizing processes and reducing waste (TextileEvolution-Made in Italy 4.0).

The thesis of sustainable innovation as a driver of competitiveness is endorsed by some recent surveys: in the textile sector, the motivations in the development of green products are studied in the need to differentiate production from that of the competitors; in the need to adapt to customer requests or to standards imposed by foreign markets; in the compliance to ethical values (Blumine-Acimit, 2016).

The Italian fashion industry is one of the fundamental business: its competitiveness is based on a mix of tradition, style and innovation, which has led Italy to record positive trends also in the last year, with rates growing in the turnover (+ 2.5% in 2017) and exports (+ 4.3%) - positive estimates also for 2018 - which confirm fashion as the second largest industry in the country (Confindustria Moda based on Istat data, 2017). On the supply side, the business suffers from the emergence of an increasingly aggressive production system based on rapid response to the market and low-cost labor (in countries such as Bangladesh, Cambodia, China and Vietnam). This represents a strong threat to many Italian producers and suggests the adoption of strategies aimed at enhancing models based, instead, on quality and tradition, where sustainable innovation could represent a multiplier.

3. THE METHODOLOGY OF EMPIRICAL RESEARCH

Empirical research involves a series of phases. The first phase concerns the identification of standards applied in the fashion industry. This research required a desk analysis in order to classify the main industry, product and process standards for the fashion industry, and to individuate the public accreditation actors or the private ones that in Italy manage the standards.

The second phase consisted of the evaluation of the degree of diffusion of each standard in Italy, at 2019, with data collected in the

period March-May 2019. This analysis involved the collection of the number of certified companies for each standard from the different accredited bodies. The data thus collected was organized by province and region, at the national level, in order to assess the consistency of the presence of standards by territorial area.

4. RESULTS

The system of standards in the fashion industry is complex and dynamic and moves on different levels. Globally recognized instruments (for example ISO 14001) coexist with standards and labels applied in specific areas which - in turn - can be managed by public bodies (Ecolabel, for example) or not (OEKO-TEX, for example). Moreover, there are international standards (such as ISO 50001), together with standards of individual NGOs, or, again, those arising from the collaboration between various stakeholders such as businesses, NGOs and civil society associations (WRAP, for example).

Another element of complexity concerns the item of standards, that is to say the areas of intervention: some coverage of individual environmental aspects (ISO 14046, Waterfootprint, for example) others concern several environmental aspects considered together (EMAS, ISO14001); there are standards that require continuous improvements in environmental performance (EMAS and ISO 14001) or compliance with specific requirements (Ecolabel); others impose strict prohibitions on the use of certain substances (OEKO-TEX Standard 100).

The environmental standards are then enriched by social standards too (SA8000, OSHAS 18001, etc.), but there are also standards that deal with both dimensions of sustainability: environmental impact and protection of human rights and human dignity.

Another aspect is their different levels of intervention: some standards act as a "label", they are standards that can be defined as "global" because of their wide recognizability with an adoption and coverage on a global scale (for example ISO 14001, Ecolabel); on the other hand, there are standards valid and used only in one country (or in a small group of countries) and therefore indicated as "national". These last standards, despite a reduced territorial dimension compared to the global ones, have a value linked to the weight of their internal market. Having a strong impact on own territory, they can be of particular interest to all those companies that intend to enter a specific market.

The field of application of the standards required a further distinction between "product standards" and "system standards". The former regard to a good (or service) and they consider its entire life cycle; the latter concern more specifically the management aspects of environmental and/or social burdens deriving from the activities and production processes of the organizations. Compared to the classifications described so far, it is necessary to underline that it is possible to make a further distinction between those that have a specific mark to be affixed to the product label (with the relative rules that govern their use) and those that do not.

The result of the desk analysis shows a wide and diversified system of standards adopted by the fashion industry with particular reference to textiles and clothing. The main standards in the textile and clothing sector are presented in Table 1 (see Appendix).

Looking at the degree of diffusion of each standard in Italy at June 2019 (Table 2, see Appendix), the results show that the Italian companies in the textile-clothing make little use of international standards (such as EMAS) and international product standards (Ecolabel, Fairtrade), despite these standards have a wide market diffusion. However, it is necessary to underline the exception to the IS0 14001 standard which registers 70 certified companies.

The low diffusion of international standards could be due, on the one hand, to the specificity of the instruments of the related industry and, on the other, to the complexity of their management in a sector composed mainly of small businesses.

On the other hand, the results allow affirming that the standards related to the raw materials attesting the use of organic products are more widespread. Focusing on this kind of standards the international schemes are different, even if the most used are Global Organic Textile Standard (GOTS), with 123 certificated companies in Italy, and Organic Content Standard (OCS), which replaces the Organic Exchange Blended and Organic Exchange 100 standards. Moreover, in order to enhance textile products obtained from recycled materials, guaranteeing traceability in all stages of the production chain, several Italian companies have joined the Global Recycling Standard (GRS) (59 certificated companies).

A further important development trajectory of standards dedicated to the world of textiles refers to the use of chemical products that are dangerous for human health and the environment: among these, at least OEKO-TEX Standard 100 must be mentioned, with 823 certificated companies in Italy. Whose family also includes the standard of Sustainable Textile Production system (STeP) and that of a product Made in Green, created precisely to remedy an excessive fragmentation of the global supply chain and overcome the differences in the sector discipline present in the different countries.

In fact, although there has been some harmonization in environmental standards and their interpretation to remove barriers to international competition (Brack, 1998; Faucheux & Gheorge, 1998), different countries followed different routes in the race for leadership in environmental technology as a consequence of their governments' specific policies and linkages with industry.

Remaining focused to the global perspective, other schemes can be added to the groups presented above as Bluesign particularly widespread among manufacturers of sportswear (Patagonia, Nike, Puma, etc.) but this standard has a low diffusion in Italy.

Finally, it is necessary to refer to the "Detox Campaign" of Greenpeace centered since 2011 on the elimination of 11 classes of chemicals used in production (considering the entire supply chain), such

as dyes or chemical agents. In fact, Detox, raising public awareness and raising attention to the practices of companies in the sector, pushes towards new ways of certifying the safety of the product and the manufacturing process, which exclude third parties from the attestations of truthfulness and correctness of the company statements by self-certification. In Italy, there are 58 certificated companies.

The mapping of the degree of diffusion in Italy of the different sustainability standards attests to the adoption, by companies in the textile and clothing sector, of business models based on environmental and social sustainability.

5. DISCUSSIONS AND PRACTICAL IMPLICATIONS

At the current stage, the research proposes first of all an overview of the existing standards for the fashion industry, distinguishing them in the international system and product certifications, and disciplinary for the textile-clothing sector. The systematization of knowledge with respect to the characteristics of the standards represents an output available to those - companies, trade associations, scholars - who want to deepen the theme of the recognition of sustainable products in the fashion system, through knowledge of the aspects relating to the various standards.

Looking at the relationship between the use of standards and innovation, it is more than intuitive to imagine that the first "revolution" for a company - the first paradigm shift - has to do with the accreditation process itself. In fact, very often certification systems, such as ISO 14001, require a series of process innovations aimed at introducing green technologies or in any case making necessary interventions to reduce the environmental impact of business processes. Besides, when a company decides to obtain certifications such as the Ecolabel, the road to product innovation can only be reached by conforming to a decisive threshold of environmental performance linked by a double thread to the introduction of the innovations themselves.

High number of Italian companies certified OEKO TEXT 100 proves that Italian companies have a greater interest in informing stakeholders too, in particular consumers, about the absence of harmful chemical substances, prohibited by law, and on those not expressly prohibited but commonly considered harmful.

Given the particular relevance of the issue of sustainability in the fashion chains, the results offer some preliminary points for reflection and practical implications on the nature of the managerial guidelines based on sustainability. These reflections represent an important element aimed at guiding the study of the need for the development of sustainable behavior in an approach that looks at the knowledge and application of the standard system as a driver of innovation and competitiveness in the sector.

In fact, sustainability can be a key factor to strengthen the competitiveness of the sector, acting as a further distinctive feature for Italian companies, compared to a competition that often bases its competitiveness on price. Many opportunities, linked to sustainability,

can be seized especially by smaller companies if responsible behavior becomes a strategic lever. But in light of the analysis carried out so far on the standard system, the need for an appropriate simplification activity of the complex world of standards seems to be required in order to allow their effective use as a driver of innovation and of competitiveness. A long and complex path that goes from the systematization to the greater clarity and to the better diffusion at the sector level.

On the other hand, a paradigm shift in the textile and clothing sector now seems necessary. Companies need to review their medium-long term strategies starting to consider the instrument of standards as a real strategic lever also for innovation.

6. CONCLUSIONS AND FUTURE RESEARCH AGENDA

The fashion industry represents one of the most polluting industries in the world - with 20% of global water waste, 10% of anhydrous emissions carbon, a strong incidence in the production of greenhouse gases (United Nations, 2018) - as well as at an alarming social level are data on unbridled consumerism, against very low percentages of clothing recycling.

Deepening of the theme of sustainability in the fashion system, with reference to the identification of the main standards that can be used in the sector - highlighting their characteristics and areas of applications - represents a topic of great interest. Equally important is the study of the relationship among CSR, standards and innovation in the Italian fashion system, in order to evaluate fashion companies' concrete commitment in CSR. At the moment the results of research show above all a high commitment by Italian companies to inform stakeholders about the absence of harmful chemical substances in clothing considered the high number - among the various standards - of companies that have chosen the OEKO TEXT certification.

This result is probably also due to the fact that the research is at the early stages yet. At this preliminary stage of the work, the objective is to describe sustainability standards useful in the fashion system, as well as the degree of diffusion of standards in Italian fashion companies. Therefore, in this phase, the research presents the limited results to a desk analysis conducted through the consultation of the databases of the different institutions and certification bodies that are responsible for issuing the aforementioned standards. This level of analysis must be integrated with a mapping of the degree of diffusion of the standards, both in the environmental and social fields, in the Italian territory, in order to reflect on the differences in adherence to the standards system and in the implementation of innovations sustainable, as well as the level of adhesion of Italian fashion companies to sustainable business models.

This research will be conducted at the territorial level together with an evaluation at the firm level. With respect to analysis at the national level, a qualitative survey will conduct with the aim to shed light on the

dynamics underlying the different levels of certification and to describe the reasons and the drives of a higher concentration in specific places in order to make possible to derive some considerations on the different degree of sustainable innovation of the Italian regions and therefore on the first policy interventions for the local institutions. Another trajectory of future research will be addressed, at the company level, through an analysis on a sample of companies, to extrapolate the drivers of sustainable innovation, induced by the various standards, and individuate managerial implications.

REFERENCES

1. Battaglia, M., Testa, F., Bianchi, L., Iraldo, F., & Frey, M. (2014). Corporate social responsibility and competitiveness within SMEs of the fashion industry: Evidence from Italy and France. *Sustainability, 6(2),* 872-893. https://doi:10.3390/su6020872

2. Bhattacharya, S. S. (2010). Exploring the concept of strategic corporate social responsibility for an integrated perspective. *European Business Review, 22(1),* 82-101. https://doi.org/10.1108/09555341011009025.

3. Blumine (2016). Le tecnologie green nella filiera tessile: Un valore aggiunto nei processi di innovazione sostenibile. Report presentato durante *l'Assemblea plenaria di ACIMIT,* 21 giungo 2016.

4. Brack, D. (Ed.). (1998). *Trade and environment: Conflict or compatibility*. London: The Royal Institute of International Affairs.

5. Centro Studi Confindustria Moda (2019). *Il settore tessile, moda e dell'accessorio. Anno 2018 e primo semestre 2019*. Retrieved from: https://www.confindustriamoda.it/wp-content/uploads/2019/01/Conf-Moda_Nota-Eco_260619.pdf.

6. Daddi, T., Testa, F., Iraldo, F., & Frey, M. (2014). Removing and simplifying administrative costs and burdens for EMAS and ISO 14001 certified organizations: evidence from Italy. *Environmental Engineering and Management Journal, 13(3)*, 689-698. https://doi.org/10.30638/eemj.2014.073

7. De Chiara, A. (2015). *Stakeholder engagement e strategie per la sostenibiltà*. Torino: Giappichelli Editore.

8. Elkingthon, J. (1994). Towards the sustainable corporation: Win-win-win business strategies for sustainable development, *California Management Review, 36(2),* 90-100. https://doi.org/10.230/2F41165746

9. Faucheux, S., & Gheorge, A. (1998). Foreword. *International Journal of Sustainable Development, 1(81),* 1-8. https://doi.org/10.1007/978-94-017-3188-1_1

10. Fondazione Symbola (2015). *Certificare per competere. dalle certificazioni ambientali nuova forza al made in Italy*. Retrieved from https://www.accredia.it/app/uploads/2018/03/Articolo-Certificare-per-competere.

11. Gallego-Álvarez, I., Prado-Lorenzo, J. M., & Sánchez, I. (2011). Corporate social responsibility and innovation: A resource-based theory. *Management Decision*, *49(10),* 1709-1727. https://doi.org/10.1108/ 00251741111183843

12. Hasan, H. (2018). Corporate social responsibility (CSR) driven innovation & opportunities for sustainable international business. *International Journal of Business and Social Research*, *8(3),* 19-28.

13. Laudal, T. (2010). An attempt to determine the CSR potential of the international clothing business. *Journal of Business Ethics, 96(1),* 63-77. https://doi.org/10.1007/s10551-010-0449-6.

14. Little, A. D. (2006). The innovation high ground: Winning tomorrow's customers using sustainability-driven innovation. *Strategic Direction, 2(1),* 35-37. https://doi.org/10.1108/02580540610635942.

15. Mahlouji, H., & Anaraki, N. A. (2009). Corporate social responsibility towards social responsible innovation: A dynamic capability approach. *International Review of Business Research Papers, 5(6),* 185-194.

16. Markley, M. J., & Davis, L. (2007). Exploring future competitive advantage through sustainable supply chains, *International Journal of Physical Distribution & Logistics Management, 37(9),* 763-774. https://doi.org/10.1108/09600030710840859.

17. Nishatni, K., Kanedo, S., Fujii, H.mKomatsu, S. (2012). Are firms' voluntary environmental management activities beneficial for the environment and business? An empirical study focusing on Japanese manufacturing firms, *Journal of Environmental Managagement*, *105,* 121-130. https://doi.org/10.1016/j.jenvman.2012.03.054.

18. Parker, E. (2011). *Steps towards sustainability in fashion: Snapshot Bangladesh*. In L. Hammond, H. Higginson & D. Williams, (Eds.). London, UK: Centre for Sustainable Fashion, London College of Fashion and Fashioning an Ethical Industry.

19. Perrini, F., Pogutz, S., & Tencati, A. (2006). *Developing corporate social responsability. A European perspective*. Cheltenham, UK: Edward Elgar Publishing.

20. Perrini, F., & Pivato, S. (2017). Responsabilità sociale e competitività delle piccole-medie imprese, in R. BENINI (a cura di). *L'impresa Responsabile e la Comunità Intraprendente*, Halley Editrice.

21. Porter, M. E., & Kramer, M. R. (2006). Strategy and society: The link between competitive advantage and corporate social responsibility, *Harvard Business Review, 84(12),* 78-92. https://doi.org/10.1108/sd.2007.05623 ead.006.

22. Rennings, K., Ziegler, A., Ankele, K., & Hoffman,E. (2006). The influence of different characteristics of the EU environmental management and auditing scheme on technical environmental innovations and economic performance, *Ecological Economics, 57,* 45-59. https://doi.org/10.1016/j.ecolecon.2005.03.013.

23. Rodriguez, M. A., Ricart, J. E., & Sanchez, P. (2002). Sustainable development and sustainability of competitive advantage: A dynamic and sustainable view of the firm. *Creativity In-ovation Management, 11,* 135-146. https://doi.org/10.1111/1467-8691.00246

24. Scuola Superiore Sant'Anna (2013). *EMAS implementation in the EU: Level of adoption, benefits, barriers and regulatory relief, B.R.A.V.E.* Project-Survey on European EMAS organizations.

25. Testa, F., Rizzi, F, Daddi, T., Gusmerotti, M. N., Iraldi, F., & Frey, M (2014). EMAS and ISO 14001: The differences in effectively improving environmental performance. *Journal of Cleaner Production, 8(1),* 165-173. https://doi.org/10.1016/j.jclepro.2013.12.061.

26. Van Klee, J. A., & Roome, N. J. (2007). Developing capabilities and competence for sustainable business management as innovation: A research agenda. *Journal of Cleaner Production, 15(1),* 38-51. https://doi.org/10.1016/j.jclepro.2005.06.002.

27. Yeung, S. M C. (2018). Corporate social responsibility and quality management system in the context of Blockchain technology. *Corporate Ownership & Control, 15(4-1),* 231-242. http://doi.org/10.22495/cocv15i4c1p10

28. Weiwei, W., Yexin, L. Tachia, C., & Wenzhong, Z. (2018). Will green CSR enhance innovation? A perspective of public visibility and firm transparency. *International Journal of Environmental Research and Public Health*, *15(2),* 268. https://doi.org/10.3390/ijerph15020268

APPENDIX

Table 1. Main sustainability standards in the textile-clothing sector

Standard/ certifications in the fashion industry	Label	Certifying institution	Contents	Applications
OEKO-TEX (Confidence in textiles)		A Private Association of European laboratories	Independent and uniform international control and certification system for raw materials, semi-finished and finished products in the textile sector at every level of processing, as well as for the accessory materials used.	The whole production chain, from yarn production to finished products.
Standard 100 Texted for harmful substances			Certifies materials, chemical products, by a single component of the textile product, as well as the production processes on the absence of harmful chemical substances, prohibited by law, and on those not expressly prohibited but commonly considered harmful.	Applicable to the textile sector in every production level, it offers greater transparency in supply relationships and simplifies the flow of information related to possibly harmful substances.
Standard 100 Eco-friendly factory			It certifies compliance with environmental requirements (emission reductions, waste recycling, optimization of energy consumption and non-use of environmentally harmful substances and materials) and social (health and safety of workers, compliance with contracts, child labor) and presence on at least 30% of the products on the market for the Standard 100 certification.	Applicable at every level of the production chain in the textile-clothing sector.

Other Labels: 1. My STeP; 2. Made in green; 3. Eco Passport; 4. Detox to zero; 5. Leather Standard.	OEKO-TEX® CONFIDENCE IN TEXTILES MySTeP OEKO-TEX® CONFIDENCE IN TEXTILES MADE IN GREEN 00000000 Institute OEKO-TEX® CONFIDENCE IN TEXTILES ECO PASSPORT OEKO-TEX® CONFIDENCE IN TEXTILES DETOX TO ZERO OEKO-TEX® CONFIDENCE IN LEATHER LEATHER STANDARD		1. Database allowing to monitor the standards throughout the production chain, from the production of yarns to finished products in all manner; 2. Independent label certifying that there are no dangerous substances and that the production processes are ethical and sustainable. 3. Certification of an independent system that does not certify textile companies, but rather the products of chemical companies: checks new-generation chemicals that want to enter the textile market; 4. Review of the OEKO-TEX® criteria, which is committed to supporting the Zero Discharge of Hazardous Chemicals initiative. This commitment raises awareness among companies involved in the OEKO-TEX® system on chemical issues associated with the compounds identified by Greenpeace in the DeTox campaign; 5. Specific independent certification for textile fibers made with animal skin.	Applicable at every level of the production chain in the textile-clothing sector.
Worldwide Responsible Accredited Production (WRAP)	WRAP 12 PRINCIPLES	Independent label	The WRAP certificate demonstrates the company's commitment to ethical, social and environmental standards, to guarantee responsible production.	Manufacturers of clothing, footwear and accessories.
Fair Wear Foundation (FWF)	FAIR WEAR FOUNDATION	Independent label	It aims to improve working conditions in countries where clothes are made.	Textile industry
Step	STeP	Private International Certification	Certifies production processes that respect certain limits and do not use certain substances.	Textile industry

Animal-Free Fashion		The project developed by LAV (Anti-Vivisection League)	Using a rating, the certification encourages companies to give up totally or at least partially the use of materials of animal origin: fur, feathers, leather, silk, wool.	Fashion firms
Global Organic Textile Standard (GOTS)		Private Standard	The GOTS label certifies the biological clothing in natural fabrics: linen, hemp, wool and organic cotton. It is among the most important and sought-after textile certifications.	The whole textile chain
Organic Content Standard (OCS)		Private Standard	Ensures that a certain percentage of organic cotton is present in the product. It concerns exclusively the validation of the content declared by fashion companies with respect to the presence of organic cotton.	Fashion firms
Organic 100				
Organic Blended				
Global Recycle Standard (GRS)		Private Certification Managed by Textile Exchange	Voluntary and private certification that mainly concerns textile products of companies that produce and market worldwide finished products or semi-finished products from recycled material.	Recycled / regenerated cotton; Recycled / regenerated wool; Recycled polyester, recycled polyamide, leather fiber regenerated.
EU-Ecolabel		European Union (EU Ecolabel) governed by EC Regulation n. 66/2010.	A voluntary ecological label that guarantees the consumer that a product or service has been created paying attention to the various environmental aspects throughout its life cycle.	Some product and service categories

Fairtrade		Private Consortium	Ethical certification of the most recognized product in the world. It guarantees above all working conditions, promotes livelihoods for families involved in the textile/food sector of underdeveloped countries. It also embraces the environmental aspect, dictating the basic rules of an eco-sustainable production.	Different textiles but also handicrafts, food, etc
Bluesign®		International Private Standard	The bluesign® standard does not take into consideration only the finished product but analyzes all the input flows: from raw materials to chemical components, to human resources, with a sophisticated "Input Stream Management".	Certifies the entire textile chain
ISO14046 Water Footprint		International ISO Standard	Quantifies the potential environmental impact on water of a product, process or organization.	Applied to various products
ISO14067 Carbon Footprint		International ISO Standard	An instrument designed for the market, it was developed to facilitate the supply of low-greenhouse gas emission products and to satisfy the demands of consumers who pay more attention to environmental dynamics.	Applied to various products

Source: our elaboration

Table 2. The sustainable standards degree in the textile-clothing sector in Italy in June 2019

Standard/Certification	Number of certified companies	Certifying institution
EMAS	9	ISPRA
EU ECOLABEL	4	ISPRA
GOTS	123	ICEA
STEP by OEXOTEXT	18	CENTRO TESIILE COTONIERO ABBIGLIAMENTO
OEXOTEXT 100	823	CENTRO TESIILE COTONIERO ABBIGLIAMENTO
MADE IN GREEN by OEXOTEXT	2	CENTRO TESIILE COTONIERO ABBIGLIAMENTO
DETOX TO ZERO by OEXOTEXT	0	CENTRO TESIILE COTONIERO ABBIGLIAMENTO
LAETHER STANDARD by OEXOTEXT	4	CENTRO TESIILE COTONIERO ABBIGLIAMENTO
ECO PASSPORT by OEXOTEXT	11	CENTRO TESIILE COTONIERO ABBIGLIAMENTO
RCS	4	ICEA
GRS	59	ICEA
OCS	10	ICEA
FAITRADE	3	FLOCERT
BLUSIGN	4	BLUSIGN
DETOX by GREENPEACE	58	CONSORZIO ITALIANO IMPLEMENTAZIONE DETOX (CID)
UNI EN ISO 14001	66 (textile) 4 (leather)	DIFFERENT AUTONOMOUS INSTITUTIONS

Source: our elaboration