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USING ENVIRONMENTAL STANDARDS TO COMMUNICATE SECURITY, QUALITY AND ECO-DESIGN IN THE FURNITURE SECTOR: AN ITALIAN CASE STUDY

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ABSTRACT

In today's society, environmental sustainability is becoming increasingly important. It raises the need for sustainable development in which the environment is both a constraint and a driving force for product and process innovations. Nevertheless, the effectiveness of these innovations depends strongly on the way in which they are communicated to the consumers. The aim of this study is to identify the role of environmental standards in the communication strategies of eco-sustainable products by using a case-study method related to the furniture sector.

Keywords: environmental sustainability, eco-design, environmental standards, green communication.

INTRODUCTION

Recent developments in the consumption patterns highlight the growing interests of the consumers towards products' authenticity and environmental safety. In 2010, 50.6% of Italian consumers paid attention to the environmental impact of their consumption and lifestyle, while 31% defined themselves as "sustainable citizens", environmentally responsible, critical about waste, and aware of the negative consequences that their consumption choices can generate (Fabris, 2010). Consequently, consumers increasingly demand for safety products in order to satisfy their need for environmental protection and long-term personal wellbeing.

Companies are gearing up to face this new phase of economic development. The fifth Report (2016) provided by the National Council of Green Economy shows that, in 2015, the 27.5% of Italian companies is *Core Green* (i.e., they produce environmental goods or services specifically aimed at reaching high environmental performances), while 14.5% of them is *Go Green*, because they are adopting green models of management. The set of *Core Green* companies, together with *Go Green* ones, brings green businesses up to a 42% of the total Italian enterprises.

Furthermore, a strong propensity to environmental certifications is widespread among Italian companies. With over 24 thousand certifications, Italy is the second country in the world for number of ISO 14001 certificates, after China (105 thousand). It is the first Country for number of EDP (Environmental Product Declaration) certifications, the third for ecolabel and EMAS (Eco-Management and Audit Scheme) and the fifth country in the G20 for forest certifications. Italy, in short, is one of the most advanced country in terms of environmental standards. A matter that should be read in the context of an overall competitive repositioning of Italian businesses in terms of quality and green economy (Symbola, 2016).

Environmental sustainability is generally perceived by companies as a source of competitive advantage because it promotes the development of innovations that better meet the consumer demand. However, playing as a green company requires the development of new approaches that involve the entire firm and all the managerial skills operating in the value-chain, to introduce technological innovations as well as business, organizational and design solutions leading to an effective and efficient use of natural, financial and social resources (Hart and Milstein, 2003; Davenport, 2013).

With reference to the design, innovations could be very important to decrease the environmental impact, acting both on the product and process innovation. With this respect, the concept of eco-design is increasingly widespread, particularly in the wood and furniture industry (Mirabella *et al.*, 2014; Landeta-Manzano *et al.*, 2016). It concerns the product innovation and implies the continuous search for innovative solutions that limit industrial waste and improve the use of cleaner materials in all stages of the value creation process (Karlsson and Luttropp, 2006).

Even if the development of eco-sustainable products certainly meet the emerging trends of the consumers for environmental and personal safety, the success of green companies depends largely on the way they communicate eco-sustainable products to the market. Communication strategies may include the use of environmental claims, brands, labels, standards and social and environmental reports. All these instruments should be accurate and verifiable. Moreover, a sustainable communication should be developed not occasionally, but in a continuous way, in order to be a clear expression of the company's long-term sustainable commitment (Lofthouse, 2006; Persico and Rossi, 2016).

This paper tries to provide further understanding about the communication strategies of sustainable products, by focusing on environmental standards. It uses the case-study method (Yin, 2013) applied to an Italian company operating in the furniture sector. Exploring a furniture firm is particularly interesting in this study given its recognized attention to the environmental safety, and its high attention to the design. Moreover, within this sector, there are also several environmental standards that can be used.

The rest of the paper is structured as follows. Next section introduces the theoretical background of the study, investigating the emerging green behaviours occurring both in the demand and the supply side of the market. Moreover, it focuses on the furniture sector, underling the central role of eco-design innovations. At the end of this section, the role of environmental standards as communication tools is discussed in the light of existing literature and the research question of the work is therefore proposed. The third section depicts the research method, while the fourth section describes the findings emerging from the case-study analysis. The last section of the paper discusses the main results and highlights the limitations of the study, thus suggesting future research directions.

THEORETICAL BACKGROUND

The sustainable-citizen: emerging trends in the consumption patters

In the contemporary society, consumption plays an increasingly important role in everyday life of individuals, since it provides functional satisfaction as well as social and cultural implications which help to define the personal identity of each consumer (Gabriel and Lang, 2015).

Consumption is a language that speaks in terms of individuality and values, and the term *consume* can no longer be tied to the simple use of a product in view of the personal needs' satisfaction, but broadens its potential, becoming itself an autonomous act.

Given the importance of consumption for the individuals' life and self expression, understanding how the consumers' patterns are changing over the time is always relevant and the marketing literature has deserved ever great attention to this topic (De Vries, 2008; Solomon *et al.*, 2012).

Recent studies reveal that, in the last decades, the compulsive consumerism has given way to a growing conscious and responsible behaviour: today consumers are well informed, critical and selective (Kumar, 2009; Fabris, 2010). They have acquired greater awareness compared to the past, thus showing new lifestyles, needs and desires.

Postmodern consumers act wisely in their purchases; they tend to avoid waste, make effective use of products, and reduce domestic stocks. Purchases are more intensive during the sales periods, and attitude toward store-switching is increasingly frequent as individuals need to compare prices and goods before choosing (Kumar, 2009).

Current consumers are also unpredictable and less loyal to product brands, while they are giving increasing importance to other intangible attributes of the consumption, such as time and experience (Johnson *et al.*, 2001; Verhoef *et al.*, 2009).

Hence, the hierarchy of needs is deeply changed: people tend to consume much less than in the past, without giving up the quality of products and their ethical and social significance. Individuals are increasingly involved in saving their health and freedom of choice, as well the society and natual environment where they live. The emerging consumption approach is characterized by frugal lifestyles and growing attention toward the natural cycles of the resources that the earth provides (Haanpää, 2007).

In this context, the consumer can be defined as critical and sustainable, environmentally responsible, waste disapproving and, above all, aware of all the consequences that his/her consumption choices can generate (Kumar, 2009; Fabris, 2010). The demand for convenient, healthy and safe products has rapidly improved (Gray *et al.*, 2003; Rezai *et al.*, 2012). For instance, consumers are increasingly interested in functional foods, that are "*healthy or herbal types of food which have medicinal properties that can prevent or cure some diseases*" (Rezai *et al.*, 2012). These foods are considered as vital for growth and development, as well as for disease prevention (Gray *et al.*, 2003), thus they meet the consumers' desire to improve their quality of life, in terms of longevity and added performances (Lawrence and Germov, 2004; Kotilainen *et al.*, 2006). The increasing attention toward environmental protection (Vermeir and Verbeke, 2006; Ellen *et al.*, 2006) also enhances the consumption of products incorporating sustainability attributes (Kletzan *et al.*, 2006; De Boer *et al.*, 2006), such as organic, fair trade, animal friendly or local products (Crane, 2001; Sharfie and Rennie, 2009; Fischer *et al.*, 2012).

Several authors call the new consumer as a "sustainable citizen", environmentally conscious, responsible for his/her choices and always well informed (Burgess *et al.*, 1998; Dobson, 2007; Spaargaren and Oosterveer, 2010). This means that the "consumer-customer" tends to give way to the "consumer-citizen" who pays attention not only to the value for money but to the way the product has been produced and distributed (Spaargaren and Oosterveer, 2010). Before choosing a product, in fact, people are paying increasingly attention to the use of raw materials, to the company's respect of human rights and working conditions, and to alterations that manufacturing processes and waste disposal can provide to the natural balance of environmental resources.

Firms' sustainability and the development of new business models

The increasing demand for environmental-saving and sustainable products rises new competitive challenges to businesses (Luo and Bhattacharya, 2006). Consumers must be able to find products fitting their acquired sensitivity toward sustainability and environmental issues. Thus, firms' competitiveness increasingly depends on their ability to offer safe products, which respect the social and environmental legitimacy (Mueller *et al.*, 2009). This implies a transition towards the use of new technologies and the development of new strategies and managerial approaches concerning both the creation and distribution of value. Attempts to reduce CO2 emissions and the adoption of any measure aimed at reducing wastes and scraps are involved in such changes. This means a continuous search for efficiency in the use of resources, from the design up to the stage of product delivering. Other changes can involve activities such as the waste collection, the use of non-renewable resources, the reuse of the goods at the end of their life-cycle, the protection of biodiversity, the adoption of renewable energies and the promotion of local productions, biological crops and non-polluting farms (Breslow *et al.*, 2016; Hicks *et al.*, 2016).

Extant studies highlight the need for the development of new industrial policies covering the agricultural sector (Lasier *et al.*, 2016) as well as other industries, such as energy, chemistry, engineering, transport, nanotechnology, and manufacturing (Chrun *et al.*, 2016; Kennedy and Whiteman, 2014). Within these industries, firms have to be increasingly advanced in making sustainable and environmental-saving products, services and processes in order to preserve the nature and to improve the social wellbeing of humans.

The last GreenItaly Report (Symbola, 2016) shows that more than 26% of Italian firms has invested in green products and technologies from 2010 up to 2016. In the manufacturing sector, that number rises to 32%, showing a stronger growth than in the past. In 2015, the companies that have done this type of investment were 120 thousand, 36% more than the previous year. The green, currently, produces an added value of about 102 billion euro every year, a large proportion of the Gross Domestic Product (GDP). These results - coming mainly from construction (31.1%), agriculture (19%), industry (12%) and services (7.3%) - bring highly relevant phenomena: for level of green employment, environmental and waste management capacity and reducing emissions, Italy is now at the top of all the European charts, surpassing, in many situations, virtuous countries such as France and Germany.

The dynamism of Italian companies is associated with positive results in foreign markets. Green businesses export out of Italy in 18.9% of cases, compared with 10.7% of other countries. Especially, they tend to have a greater presence in non-European markets, such as India, China, South Africa and Saudi Arabia. Also the employment index is positively affected by the firms' green investments. The production system reveals a level of green employment much higher than other countries. The 51% of small and medium-sized Italian companies has at least one green job, more than in the UK (37%), France (32%) and Germany (29%). Similar findings concern the environmental performances. The Eurostat data for 2015 estimated that Italian companies, with 337 kg of raw materials per million of euros, not only do much better than the EU average (497 kg), but are placed second among those of major EU economies after the UK (293 kg), ahead of France (369 Kg), Spain (373 Kg) and well ahead of Germany (461 Kg). Positive trends emerge also for energy saving (Italy is second among the major European players, behind the UK), waste reduction (with 39 tons per million of euros, Italy is the most efficient in Europe), and decrease of atmospheric emissions (Italy is second among the five major EU economies with 113 tons of CO2).

All this suggests that investing in sustainability and environmental-saving solutions is becoming an important source of competitiveness for enterprises, in terms of internationalization, occupation, turnover and, above all, innovation. In 2015, 22.2% of the firms that made such investments introduced product innovations, against 11.4% of firms not investing in this field. Notably, in the manufacturing industry, the propensity to innovate is even higher, achieving a value of 33.1% (Symbola, 2016). In this respect, environmental preservation and sustainable development can be considered both as a constraint for firms' competitiveness and a driving force of innovation (Faucheux and Nicolai, 2009).

Sustainable innovation and eco-design in the furniture sector

To be sustainable, innovation should fit the market demand as well as the economic growth, involving different business fields, such as logistics, manufacturing, procurement, as well as the development of new products. It should take into account the entire value creation process and all the product's features, to introduce innovations that will ensure effective and efficient use of natural, financial and social resources (Hart and Milstein, 2003; Davenport, 2013).

By considering that, design-related innovations could be particularly relevant. The word design refers not only to a stylistic tendency or to a specific object representing the product of creation. It is the activity of creation itself, i.e., a process including a "*set of thought-filled events and procedures that lead to the creation of that which is being designed*" (Miller, 2005). Therefore, design innovation moves from initial concept to a completed product and, specifically, the "eco-design" innovation integrates sustainability and environmental aspects from the earliest stages of the product development. Synonyms for eco-design include green design, design for X (e.g. waste reduction) and dematerialization (i.e., reducing the amount of waste generated per industrial product, as defined by Herman *et al.*, 1990). Anyway, eco-design takes into consideration the sustainability issues at early stages of the product innovation process, thus minimizing environmental impacts right from the start (Karlsson and Luttropp, 2006).

A large number of eco-design tools have been developed over the time, as a result of interest in the area. Based on previous studies, Bocken and colleagues (2014) classified the eco-design tools as guideline, evaluative, comparative, trade-off and eco-ideation tools. All these aim at promoting a dynamic and holistic approach to sustainable innovation (Thomas, 2008) that goes beyond the mere reduction of environmental impact of the product, driving the company's strategy towards the interaction between scientific discovery, technological application, good design and social impact.

Eco-design innovation concerns a number of sectors and companies often driven by increased competition (Charter, 2016), among which the furniture industry, where firms are increasingly committed to improving their environmental performances (Bovea and Vidal, 2004; González-García *et al.*, 2012). Within this context, the eco-design innovations can concern the products' ergonomics, their aesthetics, as well as their social impact and overall sustainability. Eco-design, in fact, can interest the reduction of energy and raw materials' use, the adoption of renewable energies, the extension of the products' life cycle, the development of goods easier to maintain, repair or reuse over time. It involves every level of the supply chain. Starting from raw materials, eco-design encourages a sustainable forest management, taking care to the lands' biodiversity, productivity and regeneration capacity, and the prevention of illegal wood cutting. In designing and conceptualizing new products, eco-design advocates for saving raw materials by creating, for example, furnishing objects whose components are readily separable at the time of their disposal (to this end, it could be helpful to use removable

fasteners, such as screws or frames, instead of glues). In addition, the use of raw materials easier to recycle than wood - such as aluminum and glass - is recommended. In the production phases, eco-design recommends the increasing use of water paints, in place of chemical ones, to improve the workplace's healthiness and reduce emissions into the atmosphere. Therefore, investments in new machinery performing water-painting processes are also advocated. During the assembly and finishing of the product, eco-design invites to use machinery with high-energy efficiency as well as glues containing no-toxic elements. It also promotes the re-use of production waste both to save the amount of raw materials used and to stock the central heating systems, thus supporting the energy requirements. Finally, concerning the distribution phase of the product, eco-design suggests to optimize the storage of goods, to enable a better use of spaces and to reduce the number of trips, and therefore the fuel consumption and related emissions.

How to communicate sustainability and eco-design. The role of environmental standards

Extant literature reveals that eco-design strategies can provide several benefits to enterprises, both in terms of image and product quality (Knight and Jenkins, 2009; Plouffe *et al.*, 2011; Santolaria *et al.*, 2011). Nonetheless, previous results were not always positive in terms of costs and exploitation of new business opportunities.

The success of eco-design innovations, in fact, depends on several conditions (Johansson, 2002; Knight and Jenkins, 2009).

First, a cultural development is required, among both companies and consumers, to improve the overall awareness that each material has the ability to be reused, becoming a resource for other production cycles. A refusal, in fact, does not necessarily represent a material with chemical-physical characteristics altered, yet it is often a product that no longer meets the consumers' needs. Moreover, the success of eco-design innovation also depends on the firm's ability to develop a product that can be easily recycled at the end of its life cycle, generating the maximum amount of reusable material and the minimum amount of mixed waste.

Overall, the success of eco-design innovations requires a company's effort to develop a professional communication strategy with all the consumers and stakeholders (Lippmann, 1999; Pascual *et al.*, 2003; Lofthouse, 2006). Communication strategies should be aimed at promoting not only the firm's products or brands, but also its entire sustainable approach. The consumer-citizens are no longer individuals that have to be convinced, but people well informed and interactive who have changed the communication's rules: they ask for a clear language and a continuous dialogue with the firms. The value perception of a product is increasingly associated with the social and environmental company's profile. Thus, communication strategies should be planned to inform consumers about the firm's sustainable orientation, alongside the product/brand's attributes, using accurate and truthful claims and messages. Communication, in other words, should harmonize the social, environmental and market image of both the company and its products or services. At the same time, it should be aimed at educating the public, in addition to provide specific information about the product/firm, to improve its awareness about the importance of sustainable and environmental-related issues.

All this can be synthetized by the Triple Bottom Line approach (Elkington, 2008), that suggests the need to find a good balance among three critical elements in developing a sustainable approach to communication: the achievement of economic results (profit), the

preservation of environmental resources (planet) and the support of social progress (people). This requires involvement and discussion with stakeholders, verifiability of information reliability, clarity and completeness of the information provided and continuity of communication programmes.

Policies and tools for communicating are different and vary according to the company and the industry's specificities (Persico and Rossi, 2016). These include, beyond the traditional activities such as advertising, the social balance and the ethical code. Also the Web 2.0 communication provided by social networks can be critical to improve the interaction among stakeholders, as well as to encourage the word of mouth and the overall attention towards sustainability. Other tools and policies concern the participation of the company to workshops and conferences promoting healthy, environmentally or safe-related issues. Similarly, local or international fairs should be "sustainable communication places" where companies can meet customers and talk with them about their sustainable approach.

Besides establishing specific marketing strategies, the use of instruments like environmental standards and labels could be critical for communicating the overall sustainable and eco-design approach of the company.

In the last decades, a rising number of firms have adopted environmental standards concerning both processes and products, such as the International Environmental Management System Standard ISO 14001 and organic certification (Delmas and Montes-Sancho, 2011). Environmental standards have been proposed as an innovative governance mechanism for improving the firms' environmental and financial performances (e.g., Darnall *et al.*, 2000; Nakamura *et al.*, 2001; Barla, 2007; Aerts *et al.*, 2008; Delmas and Montiel, 2009). They have the potential to reduce risks related to environmental compliance (Delmas, 2001; Grolleau *et al.*, 2007) and decrease insurance costs (Barla, 2007). Moreover, they can help the firm to improve efficiency, by establishing new information systems which can induce the redesign of production processes (Christmann, 2000), trigger innovation, and improve technologies that will positively affect the firm's competitiveness (Shrivastava, 1995).

Nevertheless, to the author's knowledge, there is very little empirical evidence to support the hypothesis that environmental standards also represent strategic communication tools, and no evidence has been found specifically related to the furniture sector.

Previous research investigated the environmental standards as communication tools making reference to specific issues or firms' contexts. Truffer *et al.* (2001), for example, focused on the electricity sector while others (e.g., Daily and Huang, 2001; Govindarajulu and Daily, 2004; Delmas and Pekovic, 2013) underlined the role of environmental standards to improve the firm's internal communication and thus the employs' commitment and productivity. Research also highlighted that environmental standards can enhance corporate reputation (e.g., Konar and Cohen, 2001) and provide access to environmentally oriented consumers (Nakamura *et al.*, 2001; Anton *et al.*, 2004; Delmas and Montiel, 2009). This suggests the potential role of these standards as communication tools, however how they are exactly perceived and used in the overall communication strategy of firms still remains unclear.

In this paper, we argue that environmental standard can play a critical role for implementing an effective marketing communication strategy, especially with regards to the furniture sector, where environmental certifications are particularly numerous and widely adopted.

METHODOLOGY

The research method for this study is based on the qualitative case-study approach. This aims to understand the dynamics occurring within single settings (Eisenhardt, 1989). It typically combines multiple data collection techniques such as archives, interviews, questionnaires, and observations, thus supporting in-depth descriptions of the phenomenon observed (Gronhaug and Olson, 1999) that provide an intimate understanding of the research topic, both in a contextual and historical dimension (Yin, 2013).

Case studies can be used to accomplish various purposes: to provide description (e.g., Kidder, 1982), test theory (e.g., Pinfield, 1986), or generate theory (e.g., Gersick, 1988). In the present study, it was adopted mainly for theory generation, given the lack of empirical evidences concerning the investigation of environmental standards as tools for implementing an effective overall communication strategy. Actually, the case study method has been widely recognized as the most appropriate for an exploratory theory building approach (Eisenhardt, 1989; Perry, 1998; Strauss and Corbin, 1998; Yin, 2013).

As concerning the firm's selection, literature suggests that the cases may be chosen to replicate previous cases or extend emergent theory, or they may be chosen to fill theoretical categories and provide examples of polar types (Eisenhardt, 1989). As noted by Eisenhardt (1989) and Yin (2013), given the limited number of cases that can usually be studied, it makes sense to choose cases such as extreme situations and polar types in which the process of interest is "transparently observable". Hence, it was chosen Moretti Compact, because it has a clear environmental orientation and adopts multiple environmental standards concerning both the environmental management and the furniture it produces. Furthermore, Moretti Compact is a famous Italian company that is well note worldwide in the furniture sector and it represents a worthy example of successful mid-sized firm. This provides the opportunity to identify best practices that could be generalized to other firms operating in similar contexts.

The empirical study has been carried out by face-to-face interviews to the Moretti Compact's CEO. Two interviews were performed, each lasting one hour and a half, using an open-ended questionnaire divided into three sections aimed at investigating: (i) the company's profile, its product and market portfolio and its positioning strategy, (ii) the company's approach towards sustainability and environmental issues and the adoption of environmental standards, (iii) the communication strategy of the company and the use of environmental standards for communication purposes.

The empirical research has been also supported by a review of the company's archival documentations and publications (financial statements, press releases, etc.) that are electronically and papery available. The use and integrations of different information sources has permitted to develop an in-depth analysis of Moretti Compact, supporting both a descriptive and inductive investigation of the firm (Bonoma and Wong, 1985).

RESULTS OF THE ANALYSIS

The company profile

Moretti Compact is an Italian company (located in the Marche Region) that was found in the early 70's, developing bedrooms and living rooms mainly for foreign markets.

In the mid-70s, anticipating the evolution of the domestic market, the production was oriented exclusively towards the children bedrooms sector. After about a decade, the company explored new market segments by studying and implementing advanced solutions

incorporating new technologies and innovative design typical of that period. In the early 90's, after coaching in the company the founder's successors and other external skills, Moretti Compact developed furniture solutions increasingly innovative, that combine design and functionality.

The current production complies with international safety standards and joins the company's technological and IT (Information Technologies) development, thus providing contemporary furniture concepts that makes Moretti Compact as a leading company in the furniture industry for children and teens.

Currently, the company has nine production plants, divided into nineteen units, covering a total manufacturing and exhibition area of over 48,700 square meters. It has overall 200 employees and works both in Italy and worldwide with own stores and authorized dealers.

Sustainable orientation and the adoption of environmental standards in Moretti Compact

Moretti Compact produces bedrooms for children and teens, and furniture for living rooms, such as cabinets and bookcases. It is particularly specialized in the production of innovative bedrooms designed to be tailored spaces where people can dream, play and stay with friends thanks to a combination of multiple flexible items.

The company aims to be a lifestyle choice for those looking for quality, safety, health, environmental sustainability and made in Italy.

Each design project rises from a reflection about the potential purpose for which the product could be purchased, looking beyond its most obvious uses. This drives creativity and innovation in Moretti Compact and fits its green culture, thus enhancing the development of bedrooms and other furnishings that are safe spaces, easily to transform from play areas to rooms for studies and relaxation.

Innovation and sustainability represent the main drivers of competitiveness for the company.

It is always looking for modular solutions, cheerful and pleasant to live, capable of concentrating in small spaces the multiple functions of bedrooms and other furniture.

In terms of sustainability, Moretti Compact is recognized among the Italian excellent firms.

Producing furniture for younger generations means to be responsible for their choices and always ready to look for the best. It means to be innovative, willing to improve the production standards and to find always new solutions. The sustainable orientation of the company looks at eco-design innovations as an essential driver for survival and development. The company, in fact, aims at incorporating safety and environmental-saving not only in the new products but in all the supply chain, by involving internal and external stakeholders. That's why Moretti Compact has decided to submit its production to strict controls, concerning the environmental management as well as the process and product management.

With respect to environmental management, Moretti Compact acts in compliance with the international standard UNI EN ISO 14001:2015 and is evaluated according to the requirement of Accredia RT-09 (fast revision) for the following activities: design and manufacture of bedroom furniture for children and teenagers for the stages of cutting, edging, drilling, sanding, moulding, varnishing, assembly, packaging and dispatching.

This standard - internationally accepted - defines how to provide for an effective environmental management system. It is designed to address the delicate balance between

maintaining profitability and reducing environmental impact. The standard supposes that the continuous improvement, on which the environmental management system is based, brings to the improvement of global environmental performances and increases the overall efficiency of the enterprise or institution. ISO 14001 represents the most common voluntary instrument of environmental management and its respect confirms the company's interest in ensuring environmental saving and eco-sustainability, by controlling the causes and environmental-related effects of each business activity.

Besides ISO 14001, Moretti Compact act in compliance with the international standard BS OHSAS 18001:2007 which provides a responsible risk control, steadily aimed at increasing the safety and health of people at work.

The environmental commitment of the company is also proved by its energy-saving efforts. The installation of six photovoltaic plants for the production of renewable energy, equal to 1,800,000 kw/h, has contributed around 60% to the company's energy needs and provided annual savings of approximately 700 tons of CO2. The exploitation of renewable energy is of great importance for the climate and environment protection. Consequently, Moretti Compact is planning to realize additional photovoltaic systems in the next years. Moreover, in 2016, it opened a new biomass cogeneration plant to produce electric and thermal energy through gasification of wood chips. Reducing waste and using innovative technologies for transforming energy more efficiently are increasingly involving the company. Hence, it became part of the Leaf Community, the first totally sustainable community created by the Loccioni Group. The Leaf Community is a model for industrial innovation excellence studied in various universities, even abroad. It includes the most important Italian companies who share the dream of a sustainable world and, together, are committed to make it happens. The Leaf Community measures the companies' commitment to sustainability using the Leaf Meter, which collects real-time data related to production plants from renewable sources. Until now, the values found in Moretti Compact allow to distinguish it in the national context, placing the company among the best for its eco-innovative practices.

As concerning the process and product management, several environmental standards have been introduced inside the company to certificate the sustainable quality of its furniture.

First, Moretti Compact has chosen to use the low-emission panels called Low Emission Board (LEB), made from 100% recycled wood which is in compliance with the Forest Stewardship Council (FSC) standard. It means that to realize the ecological panel no tree has been cut down. Moreover, LEB panels are characterized by a very low formaldehyde emission, equal to 0.3 mg/litre that is five times lower than the E1 panel's level of emission. Emission control is performed constantly, also before each panel's manufacturing, to ensure full compliance with the quality standards of the entire production. It is a revolutionary and technologically innovative panel because it assures a very high environmental and healthy safety level. Notably, the LEB panel reduces pollution in enclosed environments, contributes to the preservation of forests, and reduces the waste and greenhouse gas emissions. Thus, the adoption of ecological panels reveals the company's commitment to address a perfect balance between environmental protection and care for the consumer's health.

During the manufacturing process, Moretti Compact also uses only water-based paints. These are diluted not with chemical solvents, but only with water, thus preserving the environment and the workers and consumers' health. In fact, the single-component water paints used by Moretti Compact reduce the emission of dangerous substances in the atmosphere up to 95%, compared to the traditional solvent-based paints. Moreover, they are fully compliant with the EN 71.3 standard relating to the use of paints on toys or materials that can occasionally come

into contact with the mouth of children. The EN 71.3 standard requires that the concentration of dangerous substances (such as lead, chromium, mercury, cadmium, arsenic) - usually present in all paints - is extremely low, well below the levels considered toxic. The paints used by Moretti Compact have percentages of heavy metals so low that, normally, are below the threshold of detectability. At the end of the painting process, the application of a UV protective layer on flat surfaces ensures excellent resistance against abrasion, while other additives create a hygienic barrier and preserve surfaces from bacterial growth. In this way, the use of water-based paints allows the company to combine quality, aesthetics, and durability of the furniture over time.

The eco-design approach requires the company to pay attention not only to the use of raw materials, but involves all the value creation process, by considering also the way the product is consumed and the length of its life cycle. That's way Moretti Compact submits all its products to a strict control procedure before selling them, to verify their safety according to the Italian, European and international evaluations of "risk assessment" required by the Italian Institute of Toy Safety.

The Moretti Compact products also have a basic warranty of two years, extendable to ten years by completing the appropriate coupon attached to the products. This is to confirm the quality, safety and innovative performances of the product.

Finally, the company uses high-quality metal ware, using hinges and guides drawers with slow closing cushioned (tested and guaranteed for 80,000 cycles of opening). In this way, the closing movement becomes silent and, above all, safe.

All the above certifications and environmental standards attest the Moretti Compact's approach towards environmental saving and sustainable development, making it one of the most innovative and proactive company of the Italian furniture industry.

The communication strategy and the use of environmental standard as communication tools

The Moretti Compact's commitment towards sustainability and environmental protection has changed its marketing strategy over the years.

In the early stage of its development, the main objective of the company was to sell and develop new products to meet the demand of foreign markets. During the mid-70s, Moretti Compact has decided to focus its core business on the production of bedrooms for children and teens. The sales-oriented approach has slowly given way to a market and customer-oriented approach, based on the continuous search for innovative and high quality solutions meeting the consumer's desire to buy furniture that are aesthetically attractive, customized according to their specific needs, durable and, above all, safe. Innovation was thus increasingly focused to meet the market's demand for both functionality and aesthetics and long-term sustainability.

Today, these attributes distinguish the Moretti Compact products within the furniture industry, and make the difference, worldwide, for high quality and Italian design. Notably, the company acts according to Functional System IT01 - 100% Original Italian Quality. It means that all the products are conceived, designed and manufactured entirely in Italy, using excellent Italian skills and advanced technologies.

Qualitative and environmental standards are used by Moretti Compact both to improve the product's performance and as a means of marketing and communication tools aimed at strengthening the market positioning and its differentiation. The communication strategy of

the company, in fact, does not seek to persuade and convey the consumer that its furniture is better than others. Rather, it focuses on the enhanced performances of the product - and of the firm consequently - in terms of safety and sustainability.

This approach has been widely spread in many industries: from mechanical to electric and electronic, from pharmaceutical to food. However, it can be considered as innovative in the wood and furniture sector, in terms of communication and marketing policies as well as in terms of organizational and business models, since it implies the development and management of relationships with several external partners such as laboratories and technology centres specialized in the wood and furniture sector.

The traditional communication focused on aesthetic attributes and price of the furniture has, therefore, given way to a more sophisticated communication approach aimed at enhancing the quality performances of the product as well as its safety, sustainability and environmental friendliness attributes.

Some traditional tools continue to be employed by Moretti Compact. Among them, there are the website, the company's attendance at local and international fairs, advertising on radio and TV. What has changed is the content of the communication. Using environmental and other quality standards, the company provides messages that are less promotional and more consistent with the concept of sustainability. The website, for example, has been updated to make it more dynamic and interactive, as the postmodern consumer wants to be well informed and likes to participate in the creation of contents. Moreover, contents have been added in the website concerning the certification labels of the company. Moretti Compact has improved its presence on social networks, where often fosters debates on social and environmental-related issues. Recently, it has spread through the main social networks a comic strip, which explains the features and performances of the children's rooms as well as the main issues related to excessive dangerous substances' emissions. Still, specific advices on the maintenance and cleaning of furniture are delivered to the customer, via leaflets, brochures and during the direct sale, to ensure proper use of the product and maintain its life as long as possible.

To sum up, the use of certifications as a communication tool has contributed to strengthen the sustainable image of Moretti Compact in the market. At the same time, it has improved the company's need to implement continuous controls on processes and products, and to provide the highest clarity and transparency to the consumer about its approach towards quality and sustainability.

Discussion of results and future sustainable activities in Moretti Compact

Moretti Compact has pursuit an innovative strategy acting in compliance with several quality and environmental standards. It uses LEB panels derived from re-cycled wood, water paints that reduce the emission of dangerous materials. Moreover, it respects international standards in terms of environmental management. All this qualifies Moretti Compact as a proactive and eco-innovative company in the furniture sector, whose management believes in sustainability as a source of both competitive advantage and environmental and social safety.

It is worthy to note that in the furniture sector there are no environmental standards required by law. However, there are a number of national and international certifications that are very important for companies and consumers to recognize the qualitative value of both processes and products. Moretti Compact has shown great inclination toward the use of these standards, because it recognizes that environmental quality is accessible not only by legal regulations. Rather, it requires a spontaneous and voluntary commitment of the company that should

believe in both social and commercial opportunities coming from the adoption of such certifications.

Moretti Compact considers environmental standards as an accelerator of competitiveness, a catalyst for the business performances' improvement, having a positive impact on the management of relationships with businesses and society and on the overall consumer satisfaction. The investment in environmental certifications, in fact, has contributed to improve the company's attention toward customers' needs, thus strengthening its innovative tension and its capability to incorporate in their furniture the emerging social values and lifestyles.

These findings, resulting from the case-study analysis, are in line with those observed by Alma Laboris (2014), related to Italian firms acting in the key-industries of Made in Italy (Automation, Clothing, Furniture, Food) equipped with environmental certifications. During the period 2009-2013, these companies had an average increase in turnover of 3.5%, compared to 2% of non-certified ones. As for employment, the certified enterprises had a growth of employees by 4%, while non-certified companies had an increase of 0.2%. By considering the company sizes, smaller businesses get more advantages. SMEs (up to 50 employees) with environmental certifications recorded a spread of 4 points in turnover (against 1.1 in average for medium firms, and 0.6 points for large firms) and by 1.2 points in employment (compared with 0.6 and 0.7 points related to medium and large companies respectively).

Although exports represent one of the main reasons why businesses choose to be certified, in the case of Moretti Compact this factor has not been seen as a driving force. Rather, the main reason that led the company towards certification has been, and continues to be, the desire to offer high quality products that are environmentally friendly and meet the sustainable needs of the consumer.

After discussing how and why environmental standards are actually used in the company, the manager interviewed was also asked about the future perspectives and possible limitations concerning the standards' adoption within Moretti Compact. The company will continue its path undertaken on certification, involving a growing number of stakeholders. Notably, in the near future, it aims to further rationalize the supply network, operating exclusively with wood suppliers who act in compliance with international standards of forest management (i.e., FSC: Forest Stewardship Council and PEFC: Programme for the Endorsement of Forest Certification).

Moreover, Moretti Compact, through the extensive use of environmental certification, aims to improve the knowledge and awareness about environmental issues and sustainability among all actors involved in the furniture industry, including the final consumer. The CEO interviewed is rather worried about the general lack of awareness of the social and commercial opportunities of certifications among both businesses and consumers.

Many partners of the company have poor and inadequate knowledge of environmental certifications, due to multiple reasons (limited resources, lack of organizational structures or adequate professional skills...), including the recognized inability of several certification agencies to communicate the true scope of the standards. A similar situation occurs among consumers. They show a growing interest in green. However, according to the company's CEO, "*if we ask consumers to voluntarily indicate the known environmental certifications, a few of them are able to give a response, or provide a correct answer, often confusing types of existing certifications*". In addition to these limitations, the company notes the existence of some deficits affecting the public action: green public procurement and bureaucratic

simplifications offered to the certified companies are still not enough motivations to increase the use of environmental standards in all sectors.

Considering the above limitations, Moretti Compact needs to strengthen, for the future, the use of environmental standards in its overall corporate communication strategy to foster a cultural shift in thinking and action of both companies and consumers. The web, and in particular the social networks, will be certainly privileged as communication media, especially to intercept younger consumers. Tools like Facebook and Twitter will be reinforced to talk about everyday sustainable behaviours, thus trying to attract new fans and to increase the individuals' brand loyalty. Similarly, the company intends to increase its presence and visibility within environmentally-related and cultural events, as well as its attendance to specialized fairs, such as the national fair "Do the right thing", dedicated to the critical consumption and sustainable lifestyle, or the international fairs "Biofach-Vivaness" on organic food and natural cosmetics and "Sana", focused on organic and natural goods.

CONCLUSIONS, LIMITS AND FUTURE RESEARCH DIRECTIONS

The modern consumption patterns can be placed between a traditional and a multi-style behavior, often varied and chaotic. The recent economic crisis further strengthened the development of an attitude of "smart austerity", which is characterized by (Ancc-Coop, 2015):

- simplicity and selectivity: consumers needs to simplify their purchases, putting attention on the functional attributes of products in addition to symbolic ones;
- attention to low cost: saving is not seen as a sacrifice. The consumer asks for affordable products while maintaining high levels of satisfaction. This requires commitment and creativity;
- resistance: individuals tolerate less and less exaggerations, and leverage the web to learn about the products' attributes they need to purchase.

Thus, today people appear very savvy and sophisticated. They show a more conscious behavior than in the past, asking for health and safe goods, which respect environment and animals ad take care of their short and long-term personal well being. As noted by Brown *et al.* (2000) with regard to the food sector, even as children, consumers are able in getting what they want, so assuming a critical role of vehicle, communicator and negotiator.

Changes of the consumption patterns go together with those involving the climate and resource efficiency, thus reducing the companies' ability to compete through automation strategies and low costs. To face the above trends, companies have to focus on factors such as product's performance, assistance and customization, services, as well as safety and sustainability. Integrated approaches aimed at producing more innovative solutions whilst reducing both the carbon and resource intensity of products, services and systems will increasingly emerge (Charter, 2016).

A number of companies are shifting their mindset from a focus on supporting incremental innovations to approaches that stimulate more radical and systemic eco-innovations.

Among these, Moretti Compact has decided to focus all its efforts on quality, meaning as the result of safety, ecology and design.

The current and future behavior of Moretti Compact suggest at least two interesting practical implications. First, to implement an effective green approach, the firm must establish a network of collaborators attentive to the environmental and sustainability issues. All actors in

the supply chain should be certified and, in any case, should share the goals of sustainability. Second, despite the social and commercial opportunities related to the use of environmental standards, much has to be done to improve the general awareness among businesses and consumers about such potential advantages. Measures aimed at improving the overall knowledge of certifications are needed. Moreover, the case-study suggests the need to enhance the skills of certification agencies, strengthen the public commitment and even improve the existing environmental certification standards, also creating new labels specifically dedicated to different industries. Only in this way, environmental certifications can aspire to a greater spread, becoming a structural factor in the qualitative growth of the productive system of each country.

Despite the limitations of the present study, mainly linked to the case-study method that usually limits the generalizability of the research findings, our analysis confirms the importance of sustainable strategies in the context of the furniture sector and shows the prevalent use of environmental certifications as communication tools. As emerged in Moretti Compact, this allows the company to ensure the consumer about the quality of its products and to support the general effort of the firm to communicate the differential characteristics of its products, highlighting their higher value compared to the low-cost productions coming from emerging countries.

Future research will be developed to test the generalizability of the present findings by carrying out a quantitative analysis on a wide sample of furniture companies. Moreover, a comparison between Italian and foreign companies, as well as among firms operating in different industry contexts, could be worthy of interest in future studies. Finally, future research could investigate the link between the adoption of environmental standards and corporate performances, to better understand the organizational changes that could be associated with “greening” a firm.

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