

ECO-CONCEPTS & ETHICAL ISSUES IN SUSTAINABLE FASHION INDUSTRY: BEMATEKS-KIDS FASHION GROUP

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ABSTRACT

Sustainable fashion is a concept that includes sustainable development and fashion together. Until now, these two concepts together were an oxymoron. However, today, for fashion companies, this dual combination symbolizes a crucial promise for the future. In recent years, affordable and trend-sensitive fashion have been detected as highly profitable but this situation has raised discussion on ethical issues in fashion industry. Generally, the fashion industry strives for competitive advantage through product innovation. Accordingly, the fashion industry has been criticised for exploiting human rights, animal welfare, textile pollution from production and waste, use of non-renewable resources and over packaging. For these reasons, a fashion manufacturer would consider not only aesthetical, creative and trendy fashion designs but also cleaner production processes, logistics, recycling process and corporate social responsibilities or in other words, basically generate eco-concepts for all products and processes in fashion industry. In this context, eco-concepts has been utilised as a medium to distinguish environmental-friendly products and processes from others as a sustainable competitive advantage in the fashion market. This research uses a case study on an eco-friendly company from Turkey to demonstrate the significance of eco-concepts in supply chain management in fashion industry. On the basis of literature synthesis of eco-perspectives, the research provides a discussion platform on the case study.

Keywords: *eco-concepts, environmental-friendly, ethical issues, fashion industry, sustainable supply chain management.*

1. INTRODUCTION

Sustainability is fuzzy and wide concept and the discussion what to sustain continues, the resources or lifestyle. Furthermore how holistically the sustainability should be approached is under discussion. According to the holistic approach for *environmental ethics ecosystems* and biosphere as a whole should be considered, not individual's rights. Furthermore in ethical discussion the value aspect is most important; what is considered to be valuable and from where value comes from. Furthermore environmental ethics raises deep questions; who counts morally and why. Moreover the human actions are under evaluation in environmental ethical discussion; "how should human beings act in the nonhuman natural world" (Niinimäki, 2015).

Over the past decade, sustainability and ethical conduct have begun to matter in fashion (Emberley, 1998; Moisander and Personen); companies have realized that affordable and trend-sensitive fashion,

while typically highly profitable, also raises ethical issues (Joy et al., 2012; Aspers and Skov, 2006). Traditional fashion brands have proliferated in leaps and bounds. Armani, Hugo Boss, Bulgari, Burberry, Calvin Klein, Roberto Cavalli, Chanel, Chloé, Christian Dior, DKNY, Diesel, Dolce & Gabbana, Gucci, Guess, Lacoste, Polo Ralph Lauren, Yves Saint Laurent, Marc Jacobs, Moschino, Orono, Prada, Versace, Louis Vuitton and the list continues with more products flooding the market every year to join the behemoth of this fashion trail. While these big brands proliferate in the marketplace, *eco-fashions* attract only a small number (Niinimäki, 2010; D'Souza, 2015). Distinct eco-concepts have been collected in the overall umbrella term of *eco-fashion*. There seems to be a foggy understanding of what is "*eco-fashion*" as a variety of terms have been used such as ethical, organic, green, fairtrade, sustainable, recycled, re-used etc. *Eco-concepts* which has been developed in fashion industry involves the use of organic, vintage, recycled, locally based, and natural

materials to bring consumers ecologically and socially *sustainable choices* in clothing. These concepts focus on minimizing the use of hazardous chemicals and the production of waste by-products, maximizing efficiency in their use of energy and water, and establishing fair wages and production standards that are healthy for workers etc.

Many growing factors are considered which are distinguished ethical from traditional fashion including use of sweatshop-free labor, energy-efficient processes, alternative energy and low impact dyes in manufacturing. Nevertheless, fashion consumers nowadays are trying to choose an ethical wardrobe to pick up eco-friendly garment or fabrics. There are three criteria for selecting eco-friendly fabrics as i. The use of fewer toxic chemicals, ii. The use of less land and water, iii. The reduction of *green* house gases. In fact, some of the fabrics may perform better than others based on the above criteria. It may in more cases, one fabric is more preferable according to one of the criteria but less preferable according to another, making for complicating choice in fabric qualities, cost, labor conditions or carbon footprint of product transportation. Now, many cotton firms or industries have a vibrant campaign promoting their products as *sustainable pointing* that due to new technologies and farming methods. The industry has greatly reduced its use of energy, water and toxic chemicals. But very few farming has the significant success of reducing soil erosion, improved irrigation methods to reduce water use, improve methods of pest management, have reduced pesticides and most significantly, the use genetically modified (GMO) cotton has reduced the use of land and toxic chemicals (Kaikobad et al, 2015). In this context, this research explores *eco-concepts* and *ethical issues* as a *sustainable competitive advantage* in the case of Bematex - Kids Fashion Group from Turkey.

2. ETHICALITY AND SUSTAINABILITY IN FASHION INDUSTRY

Sustainable development is a problematic expression, and few people agree on what it means. One can take the term and 'reinvent' it considering one's own needs. It is a concept that continuously leads us to change objectives and

priorities since it is an open process and as such, it cannot be reached definitively. However, one of the most widely accepted definitions of sustainable development, though diffuse and non-operating, is the one proposed by the World Commission on Environment and Development (WCED 1987) report, *Our Common Future*, also known as the Brundtland Report, which defines *sustainable development* as the development model that allows us to meet present needs, without compromising the ability of future generations to meet their own needs. The essential objective of this development model is to raise the quality of life by long-term maximisation of the productive potential of eco-systems, through the appropriate technologies for this purpose (Gardetti, 2005; Torres and Gardetti, 2013). The diversity among definitions of sustainability is also evident related to the fashion industry, making it complex to understand the criteria and the scope of sustainability in this industry. There are several concepts that are used for the same meaning, such as *green*, *ethical* and *sustainable* fashion, which creates confusion (Shen, Richards and Liu, 2013; Åkerberg, 2015). *Sustainable issues* in clothing production are very complex because the supply chain in the clothing industry is fragmented, complicated and global. The manufacturing processes are less transparent than in food production, for example. Hence *sustainability* and *ethicality* in *eco-clothing* are evaluated only through a limited and very narrow lens, for example the use of an environmentally friendly material or production method (Niinimäki, 2010; Beard, 2008; Fletcher, 2008), process of branding, marketing or logistics.

Sustainable fashion can be defined as fashionable clothes that incorporate fair trade principles with sweatshop-free labour conditions while not harming the environment or workers by using biodegradable and organic cotton (Åkerberg, 2015; Joergens, 2006), and designed for a longer lifetime use, that is produced in an ethical production system, perhaps even locally, that causes little or no environmental impact and makes use of *eco-labelled* or recycled materials (Shen, Richards and Liu, 2013; Åkerberg, 2015; Fletcher, 2008). This definition will cover both the environmental and the social dimensions of sustainability, which makes the fashion sustainability definition more comprehensible and consistent (Shen, Richards and Liu, 2013; Åkerberg, 2015).

The supply chain perspective will make the impacts of the product through its flow between divisions visible by defining these divisions and actors that are responsible for achieving a sustainable process. The product life cycle impregnates the whole supply chain when evaluating a product's impacts on environment and the economy. A further focus will be on the end of the supply chain, i.e. the process following the main purpose usage of the product as recycling, reusing or disposal processes. This end stage has often a vital role in determining the lifetime of the product and companies' profitability (Åkerberg, 2015).

In the article, "*Sustainable Fashion Supply Chain: Lessons from H&M*", Bin Shen shows the structure of sustainable fashion supply chain including *eco-material* preparation, sustainable manufacturing, green distribution, green retailing, and ethical consumers based on the extant literature. In this study the case of the Swedish fast fashion company, H&M, which has constructed its sustainable supply chain in developing *eco-materials*, provides safety training, monitoring *sustainable manufacturing*, reducing carbon emission in distribution, and promoting *eco-fashion*. Moreover, based on the secondary data and analysis, the researcher learns the lessons of H&M's sustainable fashion supply chain from the country viewpoint: I. The H&M's sourcing managers want to select suppliers in the countries with lower degrees of human well beings; II. The H&M's supply chain manager may set a higher level of inventory in a country with a higher human wellbeing; and III. The H&M CEO may consider the degrees of human wellbeing and economic wellbeing, instead of environmental welfare when initiation the online shopping channel in a particular country (Kaikobad et al, 2015; Shen, 2014).

3. ECO-CONCEPTS IN FASHION INDUSTRY

Fashion is a process, is expressed and worn by people, and as a material object, has a direct link to environment. It is embedded in everyday life. So, *sustainability within fashion* means that through the development and use of a thing or a process, there is no harm done to the people or the planet, and that thing or process, once put into action, can enhance the well-being of the people who interact with it

and the environment it is developed and used within (Torres and Gardetti, 2013). Product design and development has a fundamental role in designing and producing *sustainable products*. The decisions made during the *product design and development process* affect up to 80% of the environmental and social impacts of a product. The choices made in materials, forms, colours and production systems also affect the use and disposal of the product in the whole life cycle, and the designer thereby also influences patterns of sustainable consumption (Tischner 2008; Niinimäki, 2009). In product development there have been two main approaches to sustainability since the 1990's: *eco-efficiency* and *eco-sufficiency*. In *eco-efficiency* the principle is to produce the same or more products from less material. In *eco-sufficiency* the aim is to gain the same welfare benefit out of fewer goods and services (Niinimäki, 2009; Carley and Spapens, 1998). *Eco-design* includes product life-cycle thinking. In designing for the environment the designer must consider not only aesthetical, trend and fashion issues, but also the production process, logistics, the use and maintenance of textile items and finally the recycling or disposal of the product (Tischner 2008; Carley and Spapens, 1998). The perspective of the product life cycle involves the whole supply chain since it is appreciated that environmental impacts in a product's life can take place in all parts of the supply chain, and when evaluating the product life stages regarding sales and profits it includes the total supply chain as well. The recycling loop emphasises the desirable process of recycling in terms of sustainability at the end stage of the product life cycle (Åkerberg, 2015). To evaluate the environmental impact a product has during its life cycle, one can use the assessment tool of Life-Cycle Assessment, LCA. LCA is focused on minimising negative environmental impacts by reviewing all stages in a product's life cycle as to identify where actions will be most effective (Åkerberg, 2015; Gmelin and Seuring, 2014).

Sustainable design in fashion has so far been largely focused on materials selection. Several brands have developed or are in the process of developing indices that will help their designers and product development teams choose materials based on environmental impacts throughout the clothing life cycle. Examples of such indices include NIKE Inc.'s Materials Sustainability Index and Timberland's Green Index, which inspired the

broader- reaching Outdoor Industry Association's *Eco-Index*. Both NIKE's index and the *Eco-Index* have also been incorporated into the Sustainable Apparel Coalition's Higg Index, which is currently endorsed by almost 50 industry-leading brands, retailers, and suppliers (BSR, 2012). On the other hand, from the consumers' perspective, "consumers realize that sustainable production following better and newer processing technologies and using safe and sustainable materials" (Niinimäki, 2009). *Eco-clothing* can command a higher price than conventional clothing because of the production process and high quality that is associated by the product (Niinimäki, 2010).

Environmental sustainability is not just about protecting the environment; it is also about restoring the environment for future generations and has found its roots in every constituency of the functioning of a business. *Eco-fashions* are no exception. An *eco-fashion* can be defined as a type of clothing that protects society from adverse environmental impacts (D'Souza, 2015; Joergens, 2006; Claudio, 2007; Ochoa, 2011). *Eco-fashion* can be defined as clothing that is designed for long lifetime use; it is produced in an *ethical production system*, perhaps even locally; it causes *little or no environmental impact* and it makes use of *eco-labelled* or recycled materials (Niinimäki, 2010; Fletcher, 2008; Joergens, 2006). These eco-fashions support the principle of sustainable development by having minimum impact on the environment while making use of *eco-labels* and recycled materials in their processes; and by minimizing waste (D'Souza, 2015; Fletcher, 2008; Joergens, 2006). An example where LCA is used in practice is *eco-labelling* (Åkerberg, 2015; Guiné et al., 2004), which has the purpose of promoting products with a reduced environmental impact compare to other products in the same product group (EU, 2009). Eco-labelling hence provides consumers with a tool to compare eco-friendly products and an increasing number of eco-label programmes are based on LCA (Åkerberg, 2015; Guiné et al., 2004). Examples of renowned eco-labels are The Mobius Loop, The European Eco-Label, ISO 14001, The Fairtrade Mark, The EC Energy Label, The Forest Stewardship Council and EPA Energy Star (Åkerberg, 2015; UCL 2014).

It appears that the *eco-fashion industry* needs to formalize better boundaries, norms and regulations. Mintel (2009), a UK market research company, proposed the following definitions in order to

clarify the distinct concepts included in the overall umbrella term of "*ethical fashion*": "*Ethical clothing* refers to clothing that takes into consideration the impact of production and trade on the environment and on the people behind the clothes we wear. *Eco-clothing* refers to all clothing that has been manufactured using environmentally friendly processes. It includes *organic textiles* and *sustainable materials* such as hemp and non-textiles such as bamboo or recycled plastic bottles. It also includes recycled products (clothes made from recycled clothing including vintage, textile and other materials and can also be termed re-used) and is not necessarily made from organic fibres. *Organic clothing* means clothes that have been made with a minimum use of chemicals and with minimum damage to the environment and fairtrade is intended to achieve better prices, decent working conditions, local sustainability and fair terms for farmers and workers in the developing world" (Mintel 2009; Cervellon et al., 2010). *Green*, for its part refers mainly to the environmental effects of textile processing and consumption of clothing (Cervellon et al., 2010; Phau and Ong, 2007). With reference to labels, the Australian Ecolabel Program, the European Union official *eco-label* and the *US Green Seal label* are all summarily united under the *Global Ecolabelling Network*. Trade or verification bodies are contingent to particular countries, but at an international level, a global network of organizations exists such as the *International Fairtrade Association (IFAT)* and the *Global Organic Textile Standards (GOTS)* (Mintel 2009; Cervellon et al., 2010).

4. ENVIRONMENTAL SUPPLY CHAIN MANAGEMENT

New radical business thinking is needed to create a bigger change in the fashion field. The economic and industrial systems of the fashion industry are currently based on extremely fast cycles of production, fast-changing trends and planned obsolescence of the products. As garment prices fall, producers must maintain profitability by increasing the amount of sold units, which has led to a huge amount of fashion products on the market and extremely saturated markets (Niinimäki, 2015; (Niinimäki, 2011; Niinimäki, 2013). It is needed find new radical ways to create a win-win situation for both consumers and manufacturers - for all stakeholders - and *for sustainable* development. *Sustainable business logic* is based on fundamentally different logic than traditional

fashion business and not on the growth logic alone (Niinimäki, 2015; Fletcher and Grose, 2012).

In a report from January 2014, Boston Consulting Group (BCG) stated *sustainability* as an emerging consumer value among luxury customers. In order to keep up with changing values in the luxury markets, it was highly recommended to set a focus on *sustainability matters*. In some industries, like in the food sector, the *eco-trend* is becoming well established and also a mainstream activity (Åkerberg, 2015; Ritch, 2014).

The current marketplace reveals a mounting emphasis on *environmental sustainability*, and firms are increasingly seeking ways to respond (Olsen, Slotegraaf and Chandukala, 2014; Banerjee, Iyer and Kashya, 2003; Grinstein and Nisan, 2009). By the end of 2017, the amount U.S. firms will spend on *green projects* is expected to reach \$44 billion (Olsen, Slotegraaf and Chandukala, 2014; Verdantix, 2013). *Sustainable product development* poses a challenging problem for companies wishing to incorporate full sustainable practices in their businesses, as disputes among financial profits, objectives and social goals often arise (Marshall and Brown, 2003; Cowan and Kinley, 2014). Like many industries competing in today's marketlandscape, the fashion industry is plagued by a host of negative environmental and social externalities, from environmental degradation and hazardous chemicals to low wages, violation of workers' rights, and child labour issues (Fletcher, 2008; Chapman, 2010; Giesen, 2008; Bly, Gwozdz and Reisch, 2015). As a result, the term '*sustainable fashion*' has begun entering the vernacular of policymakers, non-governmental organizations, and fashion design educators alike, and movers in the fashion industry have begun experimenting with innovative materials, improved supply chains, and textile recycling programs (Bly, Gwozdz and Reisch, 2015), branding, marketing and logistics applications with a new approach.

Supply chain management is "the systemic, strategic coordination of the traditional business functions and the tactics across these business functions within a particular company and across businesses within the supply chain, for the purposes of improving the long-term performance of the individual companies and the supply chain as a whole" (Åkerberg, 2015; Mentzer, 2001). Lately the imperativeness of declaring supply chain activities has increased since

consumers nowadays are demanding more information about sourcing and manufacturing in order to evaluate if the activities are sustainable or not. This opens up opportunities for brands to differentiate in this point (Joy et al., 2012; Åkerberg, 2015). Koplin (2005) stresses the importance of focal companies ensuring that the manufacturing of products is not damaging the environment, labour conditions are acceptable and that there are no social problems across the supply chains. If ensuring a well operated supply chain the brands will also maintain a good reputation since they have to take responsibility for their suppliers towards media and critical NGOs (Åkerberg, 2015; Koplin, 2005).

However, for *strategic sustainability thinking*, it is important to consider not only what efforts and investments to make but if would it be worthwhile to withdraw from some markets because of ethical reasons or too big social or ecological risks (Niinimäki, 2015; Belz and Peattie, 2011). In this regard, a deep assessment should be made according to the company's own value base. Including sustainability in the company's strategic planning might open new strategic possibilities but it can also be done to prevent risks in legal, resource, environmental, reputational or sociopolitical levels (Niinimäki, 2015; Lowitt, 2011).

Zsidisin and Siferd (2001) define *environmental supply chain management* (ESCM) for an individual firm as: the set of supply chain management policies held, actions taken and relationships formed in response to concerns related to the natural environment with regard to the design, acquisition, production, distribution, use, re-use and disposal of the firm's goods and services (Kogg, 2003). If a company has to account for environmental effects in other parts of the supply chain, it may have to motivate other actors, sometimes several tiers upstream, to comply with requirements that may be of critical importance to the focal company but not necessarily to its supplier. It must also be able to verify that its suppliers are complying with such requirements in a way that is satisfactory not only to the company but also, in many instances, to other relevant stakeholders. It is interesting to note how in this context management control evolves from an intra-firm into an inter-firm issue (Zsidisin and Siferd, 2001; Birnberg, 1998).

5. PERSPECTIVE OF CORPORATE SOCIAL RESPONSIBILITY

The certification and labelling of '*socially responsible products*' has been clearly attracting more and more interest in recent years. The systems and practical solutions developed in this field aim to make "*ethical products*" recognisable and generally available. This trend arises from growing consumer appreciation of not only the technical advantages, price, quality, delivery times and environmental safety of the products they buy but also of their social and ethical aspects (Koszewska, 2011). The challenges that the fashion industry "has to deal with have led to the development of a range of initiatives to address the situation. More and more firms seem to understand that the growing community of conscious and demanding consumers will insist more and more strongly that manufacturers respect the principles of ethical conduct, people and the natural environment. This awareness has encouraged renowned firms to add 'ethical' garment lines to their fashion collections; another sign of change has been the establishment of the Fairtrade Cotton Mark (Koszewska, 2011).

The OECD surveyed the quality of CSR communication between textile and clothing manufacturers and their consumers and of the instruments that textile and clothing manufacturers use to inform buyers about their manufacturing conditions (OECD Trade Policy Working Paper No:47). It was found that textile and clothing manufacturers employ almost all available CSR tools (Koszewska, 2011) like certification and labelling, CSR reporting, General/CSR specialised consumer guides and corporate marketing.

Eco-labelling, and increasingly more often *social labelling*, is a method of differentiating products that better meet social (ethical) and ecological standards with respect to traditional products. Eco - and social labels (special quality marks) are awarded by public or private organisations that aim to popularise and promote products that are kinder to humans or the environment while having comparable usability and functional characteristics. As well as influencing consumer choices, such labels have become the linchpin of the entire certification process and the main object of producers' interest (Hartlieb and Jones, 2009).

Certification systems awarding eco-labels were established much earlier than social labelling, and their influence is much wider. The eco-certification rules were jointly created by a range of international organisations, such as the European Community, World Trade Organisation (WTO), United Nations Environmental Programme (UNEP) and the International Organisation for Standardisation (ISO) (Koszewska, 2011).

Social labelling has its roots in the trade union and cooperative movement. The first consumer organisation established in the UK, Rochdale Pioneers, created its own brand (the Co-op brand) referring to the 19th c. co-operatives. The National Consumer League in the USA introduced and then developed the 'White Label' to female and children's underwear manufactured by factories that respect basic laws and have no workforce under 16 years of age. However, most of the social labels that are applied today were created in the 1990s (Dickson, 2001). Compared with the *ecological labels*, the *social labels* are relatively new and definitely fewer. Although some social labels cannot be awarded without requiring the organisation meet certain environmental standards, they primarily show the organisation's respect for workers' rights, occupational safety and health rules, as well as its involvement in the well-being of local communities and in fair terms of trade. Many social labelling systems have been designed to provide consumers living in developed countries with information about producers operating in developing countries. Most of the systems apply to exporting markets and niche products (OECD Trade Policy Working Paper No:47).

6. CASE STUDY: BEMATEKS-KIDS FASHION GROUP

Bemateks takes its part in children's apparel manufacture in Turkish fashion industry with the brand "*Kanz*". In 2004, Bemateks became partners with Kanz Financial Holding which was established in 1949. In 2009, Bemateks shareholders bought all shares of Kanz Financial Holding. During 2008-2012, children apparel group of worldwide known German toy brand Steiff, German children's accessories brand Doll which was established in 1842 and widely known in Europe and Europe's famous children's brand Pampolina were included in the group. Baby accessory equipments such as

strollers, baby car chairs, playpens were presented to Turkish consumers. Bemateks manages the distribution channel which provides service to more than 35 countries that shape the world's children fashion with Kanz, Pampolina, Steiff, S&D, Whoopi, Doll, Kathe Kruse brands. In 2011, Kidycity.com started providing service as an online shopping store for all mother, baby and children's needs. In 2012 and 2013, three physical Kidycity.com stores were opened in İstanbul, Ankara and Bursa. In 2015, Kidycity.com was replaced as Kanzshop.com. The world famous children's clothing brand sold in Kanzshop.com.

Kids Fashion Group (KFG) is affiliated to Kanz Financial Holding which is a *Group Bema Company*. Companies affiliated to the same group with Kanz Financial Holding: Kanz Verwaltungs GmbH, Josef Kanz GmbH & Co. KG Kanz Vertriebsgesellschaft GmbH, Doll Fashion GmbH, Pampolina Kids Fashion GmbH; S&D Company GmbH; Bemateks Tekstil Paz. San. ve Dış Tic. A.Ş.; Kids Fashion Group Poland. Kids Fashion Group (KFG) based in Germany provides service to children's apparel sector all over the world. KFG, considering every kid has a different style, creates collections that every kid will love in various brands. KFG manufactures and distributes own brands *Pampolina, Kanz, Döll, S&D and Whoopi* all across the world. Also it is the licensed distributor of worldwide known *Steiff* textile collections.

The success of continuously improving and rapidly developing company is based on long term collaborations and partnerships in textile sector, high awareness that provides quality production and close relationships formed by the customers. The manufacturing process is always one step ahead with the machinery park, trained labor force and experience gained in children's fashion over the years with the cutting-edge technology in textile. World's leading brands prefer Bemateks for manufacturing and logistics. Bemateks can meet all manufacturing and distribution requirements of worldwide brands in children's fashion with "Design, Pattern shop, Cutting, Pressing, Embroidery, Sewing, Finishing, Knitting and Logistics" departments.

All innovations in R&D department are monitored, researched and applied rapidly. Design department provides original and trendy design with various options. Bemateks provides service with a capacity of 20 million pieces per year at manufacturing

plants in Turkey and Far East. Being aware of children's products, Bemateks always manufactures healthy products. *Health and quality standards* are approved by tests performed by independent institutions. Bemateks has *OEKO-TEX® Standard 100* to sustain quality from raw material at production stage to the finished textile product and has *Global Organic Textile Standard (GOTS)* to sustain socially responsible textile processing. In addition, Bemateks, as a Business Social Compliance Initiative (BSCI) company, has transaction certificate and ISO 9001 Quality Standard to improve conditions technically and socially in the global supply chain.

One of the most popular eco-label, "the OEKO-TEX® Standard 100 is an independent testing and certification system for textile raw materials, intermediate and end products at all stages of production. Examples for items eligible for certification: Raw and dyed/finished yarns, raw and dyed/finished fabrics and knits, ready-made articles (all types of clothing, domestic and household textiles, bed linen, terry cloth items, textile toys and more). The requirement for certification of textile products according to OEKO-TEX® Standard 100 is that all components of an item have to comply with the required criteria without exception – that means in addition to the outer material also sewing threads, linings, prints etc. as well as non-textile accessories such as buttons, zip fasteners, rivets etc (Oeko-tex Standart 100 Concept)

The textile industry is characterised by a form of cooperation in which each production stage from raw material to finished textile product is often located in a different place in the world. This extremely fragmented structure is reflected in the complex supply relationships between all the companies involved throughout the textile processing chain. On top of this, different environmental regulations apply in the individual countries involved in textile production.

Product certification according to OEKO-TEX® Standard 100 provides companies along the textile chain with an ideal tool and clear added value for their operational quality assurance. The OEKO-TEX® certificate issued by the commissioned institute or the relevant certification centre is valid for a duration of 12 months. It documents that the listed items have successfully been tested according to the OEKO-TEX® Standard 100 and meet the requirements for a joint product class. Product identification with the label

“Confidence in Textiles” and the connected proven safety of textile products is an additional sales argument which according to surveys is more important to consumers than price, functionality or brand. Widespread use and customer awareness of the OEKO-TEX® Standard 100 contribute to the OEKO-TEX® label now having a status similar to that of a brand name and being actively requested by consumers. With this background, marking products with the OEKO-TEX® label provides all textile and clothing manufacturers with valid certificates with an effective way of drawing more attention to their products. Without visible labels on the textile consumers are not in a position to assess the human ecological quality of the textiles (Oeko-tex Standart 100 Certification).

The Global Organic Textile Standard (GOTS) is recognised as the world's leading processing standard for textiles made from organic fibres. It defines high-level environmental criteria along the entire organic textiles supply chain and requires compliance with social criteria as well. Only textile products that contain a minimum of 70% organic fibres can become GOTS certified. All chemical inputs such as dyestuffs and auxiliaries used must meet certain environmental and toxicological criteria. The choice of accessories is limited in accordance with ecological aspects as well. A functional waste water treatment plant is mandatory for any wet-processing unit involved and all processors must comply with minimum social criteria. The Global Organic Textile Standard International Working Group is comprised of four reputed member organisations, namely OTA-Organic Trade Association (USA), IVN - International Association Natural Textile Industry (Germany), Soil Association (UK) and JOCA – Japan Organic Cotton Association (Japan), which contribute to the GOTS, together with further international stakeholder organizations and experts, their respective expertise in organic farming and environmentally and socially responsible textile processing (The Global Organic Textile Standard – The Standard).

Consumption of water and energy are most important aspects in sustainability considerations for textile processors and manufacturers. As part of the environmental management criteria, GOTS requires that - among other information - certified entities must have available and provide data on energy and water resources and their consumption per kg of textile output, target goals and procedures

to reduce energy and water consumption per kg of textile output. GOTS Monitor (Water/Energy) aims at supporting certified entities to approach and comply with these requirements. The main functions of GOTS Monitor (Water/Energy) are to allow an easy data collection on energy and water consumption (per kg of textile output), provide realistic factory-specific benchmark values for these parameters (specifically for wet processing activities). The user will be supported in setting and monitoring realistic improvement targets regarding the progress in the reduction of his water and energy consumption. Effects will be visible in both environmental terms to fulfil the GOTS Standard requirements and in monetary terms for the business case of sustainability (The Global Organic Textile Standard – GOTS Monitor).

Transaction certificate or product certificate (or certificate of inspection) is issued for a single shipment of fiber, yarn, fabric and finished textile products/apparels and indicate the specifications and the quantity of the product as well as the manufacturer, seller (exporter) and buyer. Transaction certificate is issued as a proof of organic manufacturing and/or organic state of organic fiber products for the specified shipment to the buyer. Organic product buyer company is responsible for determination of whether the products are organically manufactured by organic fibers. For this reason, as a proof of inspection and certification, the following documents are requested from the seller/exporter. Company certificate indicating that the seller is an approved manufacturer according to the related certification program. Transaction certificate indicating that the exact quantity of each party of organic product bought by the buyer and its organic certification according to the related certification program. Each organic product bought (fiber, yarn, fabric, finished textile products/apparels) must be received by a transaction certificate. It is an independent standard for labeling the products as "organic" indicating that it is manufactured by certified organic raw material, the chemicals and coloring agents and accessories used are in compliance with the standards, visually and document monitored, in compliance with environment management criteria and social compliance criteria (Groupbema Transaction Certificate).

ISO 9001 Quality Standard provides guidance and tools for companies and organizations who want to ensure that their products and services consistently

meet customer's requirements, and that quality is consistently improved. These worldwide recognized standards reflect the general opinion of related parties about the subject. The Standard is divided into some groups based on subject in order to maintain the quality system model expected easily. ISO 9001:2008 standard is based on eight quality management principles: customer focus, leadership, involvement of people, process approach, system approach to management, continual improvement, factual approach to decision making, mutually beneficial supplier relationships (Groupbema ISO 9001:2008).

Competition caused by globalization and labor cost in developed countries apply pressure on big Western organizations. These organizations tend towards developing countries rapidly in labor-intensive businesses. However, bad working environment and violation of legal regulations in these countries cause another problem. Increasing awareness and social sensitivity of consumers pressure these organizations and force the suppliers for inquisition. In order to minimize the problems about this issue, Foreign Trade Association (FTA) has formed Business Social Compliance Initiative (BSCI) organization in 2003. This organization develops tools and procedures for European Business Social Compliance Programme. In this context, "Code of Conduct" is developed. "Code of Conduct" generally depends on Main Labor Agreements of International Labor Organization (ILO) and aims to improve working environment in supplier countries (Groupbema BSCI).

BSCI is an initiative of the Foreign Trade Association (FTA). All BSCI participants are also FTA members and share the FTA vision of "Free Trade. Sustainable Trade". To fulfil this vision, BSCI has been given specific governance bodies through which BSCI companies are invited to actively take part, to develop and implement an excellent system for improved working conditions in the global supply chain (Business Social Compliance Initiative - BSCI)

The Business Social Compliance Initiative (BSCI) is a leading business-driven initiative supporting retailers, importers and brands to improve working conditions in supplying factories and farms worldwide. The vision is a world of free trade and sustainable global supply chains, in which factories and farms are compliant with national labour legislation as well as with ILO Conventions

protecting workers' rights (Business Social Compliance Initiative - BSCI).

CONCLUSION

The above review of various *eco-concepts, ethical issues* and *corporate social responsibilities* on the case of *environmental supply chain management in fashion industry* shows that certification and *eco-social labeling systems* can be utilized as a differentiation tool. In this context, eco-concepts has been utilised as a medium to distinguish environmental-friendly products and processes from others as a sustainable competitive advantage in the fashion market. Value change via *strategic business logic* in the fashion industry is the most significant factor in *sustainable fashion development*. Consuming less with *strategic sustainability thinking* leads improved *sustainable product development*.

In the future, through material innovation and new production & distribution processes, it is possible to produce fashion products with different quality and life cycles. Perhaps there should be fast and slow fashion production systems and eco & social labels for them. Sustainability may also be the only way designing, producing and distributing products in the future. The early bird catches the worm: it may therefore be recommendation for producers in fashion industry to expertise in sustainable supply chain management.

REFERENCES

1. K. Niinimäki, "Ethical foundations in sustainable fashion", *Textiles and Clothing Sustainability*. Springer Open Journal [Online] 1:3. December, 2015. doi: 10.1186/s40689-015-0002 (Access Date:10.02.2016)
2. V. Emberley. *Venus and Furs: The Cultural Politics of Fur*. London: I. B. Tauris & Co. 1998.
3. J. Moisander, and S. Personen, "Narratives of Sustainable Ways of Living: Constructing the Self and Others as a Green Consumer," *Management Decision* 40(4), pp. 329–42, 2002.
4. A. Joy, J. Sherry, A. Venkatesh, J. Wang, and R. Chan, "Fast Fashion, Sustainability, and the Ethical Appeal of Luxury Brands," *Fashion Theory: The Journal of Dress, Body & Culture* [serial online]. 6(3), pp. 273-296, 2012.
5. P. Aspers, and L. Skov, "Encounters in the Global Fashion Business." *Current Sociology* 54, pp.745–63, 2006.
6. K. Niinimäki, "Eco-Clothing, Consumer Identity and Ideology," *Sustainable Development*, 18, pp.150–62, 2010.
7. C. D' Souza, "Marketing Challenges for an Eco-fashion Brand: A Case Study," *Fashion Theory: The Journal Of Dress, Body & Culture* [serial online]. 19(1), pp. 67-82, 2015.
8. N.K. Kaikobad, Md. Z. A. Bhuiyan, H. N. Zobaida, A. H. Daizy "Sustainable and Ethical Fashion: The Environmental and Morality Issues", *IOSR Journal of Humanities And Social Science (IOSR-JHSS)* [Online] Volume 20, Issue 8, Ver. I, e-ISSN: 2279-0837, p-ISSN: 2279-0845. pp. 17-22, August 2015. Available: www.iosrjournals.org (Access Date: 09.02.2016)
9. M.A. Gardetti, "Desarrollo Sustentable, Sustentabilidad y Sustentabilidad Corporativa", in M.A. Gardetti (ed.), *Textos en Sustentabilidad Empresarial: Integrando las consideraciones sociales, ambientales y económicas con el corto y largo plazo*, Buenos Aires: LA-BELL, 2005.
10. A. Torres, M. Gardetti, "Sustainability in Fashion and Textiles :Values, Design, Production And Consumption" [e-book]. Sheffield: Greenleaf Publishing; 2013. Available: Discovery eBooks
11. D. Shen, J. Richards, and F. Liu, "Consumers' Awareness of Sustainable Fashion," *The Marketing Management Journal* [Online] Vol. 23, Iss. 2, pp. 134-147, 2013. Available: <http://www.mmaglobal.org/publications/MMJ/MMJ-Issues/2013-Fall/MMJ-2013-Fall-Vol23-Issue2-Shen-Richards-Liu-pp134-147.pdf> (Access Date: 06.02.2016)
12. G. Åkerberg, "The Impact of Sustainability as a New Trend in the Fashion Industry," M.S. thesis, Dept. Prod. Manag. Fac. of Eng., Lund Univ., Lund Sweden, 2015.
13. N. Beard, "The branding of ethical fashion and the consumer: a luxury niche or mass-market reality?" *Fashion Theory*, 12(4) pp. 447–468, 2008.
14. K. Fletcher, *Sustainable Fashion and Clothing. Design Journeys*. Earthscan: Malta, 2008.
15. C. Joergens, "Ethical fashion: myth or future trend?," *Journal of Fashion Marketing and Management: An International Journal*, Vol. 10 Issue 3, pp.360-371, 2006.
16. B. Shen, *Sustainable Fashion Supply Chain: Lessons from H&M*. Shanghai: Glorious Sun School of Business and Management, Donghua University, 2014.
17. U. Tischner, "Sustainable product design. in Charter, M. & Tischner, U. *Sustainable Solutions*. Greenleaf Publishing Ltd, Eastbourne, pp. 118–138, 2008.
18. K. Niinimäki, "Consumer Values and Eco-Fashion in the Future", in Proceedings of the Conference "Future of the Consumer Society", ed. Marileena Koskela & Markus Vinnari, Tampere, Finland, pp. 125-134. FFRC ebook 7/2009.
19. M. Carley and P. Spapens, *Sharing the world. Sustainable Living and global equity in the 21st century*. Earthscan, p. 208, 1998.
20. Gmelin and Seuring, "Determinants of a sustainable new product development," *Journal of Cleaner Production*, Vol. 69, p.3, 2014.
21. BSR, *Sustainable Fashion Design: Oxymoron No More?* October, 2012. Available: http://www.bsr.org/reports/BSR_Sustainable_Fashion_Design.pdf
22. L. Claudio, *Waste Couture: Environmental Impact of the Clothing Industry*, 2007. Available: <http://ecn.ecology.com/ecnow/2010/11/02/waste-couture-environmental-impact-of-the-clothing-industry/> (Access Date: 05.02.2016)
23. L. M. C. Ochoa, *Will 'Eco-Fashion' Take off? A Survey of Potential Customers of Organic Cotton Clothes in London*, 2011. Available: <http://publicaciones.eafit.edu.co/index.php/administer/article/view/188> (Access Date: 10.01.2016)

24. Guiné et al. "Handbook on Life Cycle Assessment – Operational Guide to the ISO Standards," Eco-efficiency in Industry and Science, Vol. 7, ISBN 1-4020-0228-9, pp. 5-6, 2004.
25. EU 2009: Eco-label, http://europa.eu/legislation_summaries/other/128020_en.htm, (Access Date:10.01.2016)
26. UCL 2014: Ecolabels, Available: <https://www.ucl.ac.uk/procurement/sustainability/labels>. (Access Date:10.01.2016)
27. Mintel, Ethical Clothing –UK-2009. Mintel International Group Limited, 2009.
28. M.C. Cervellon, H. Hjerth, S. Ricard and L. Carey, "Green in fashion? An exploratory study of national differences in consumers concern for eco-fashion," presented at 9th International Marketing Trends Conference, Venice, Italy, 2010.
29. I. Phau and D. Ong, "An investigation of the effects of environmental claims in promotional messages for clothing brands," *Marketing Intelligence and Planning*, 25 (7), pp. 772-788, 2007.
30. Niinimäki, K. From disposable to sustainable: the complex interplay between design and consumption of textiles and clothing. Doctoral dissertation. Helsinki: Aalto University, 2011. Available: <https://aalto.fi/aalto/handle/123456789/13770>
31. Niinimäki, K (Ed.), Sustainable fashion: new approaches. Helsinki: Aalto ARTS Books, 2013. <https://aalto.fi/aalto/handle/123456789/13769>.
32. K. Fletcher and L. "Grose, Fashion & sustainability: design for change," London, UK: Laurence King Publishing, 2012.
33. E. Ritch, "Extending sustainability from food to fashion consumption: the lived experience of working mothers", *International Journal of Management Cases*, Vol.16, Issue 2, pp.17-31, 2014.
34. M. C. Olsen, R. J. Slotegraaf, and S. R. Chandukala, "Green Claims and Message Frames: How Green New Products Change Brand Attitude," *Journal of Marketing*, Vol. 78, pp.119-137, 2014.
35. S. B. Banerjee, E. S. Iyer, and R. K. Kashya, "Corporate Environmentalism: Antecedents and Influence of Industry Type," *Journal of Marketing*, 67, 106-122. April 2003.
36. A. Grinstein and U. Nisan, "Demarketing, Minorities, and National Attachment," *Journal of Marketing*, 73,105-122. March 2009.
37. Verdantix, U.S. Sustainable Business Spending 2012-2017, June 2013. Available: <http://www.verdantix.com/index.cfm/papers/Products.Details/productid/544/us-sustainable-business-spending-2012-2017/>. (Access Date:10.03.2016)
38. R. Marshall and D. Brown, "The strategy of sustainability: a systems perspective on environmental initiatives," *California Management Review*, 46, 101–126, 2003.
39. K. Cowan and T. Kinley, "Green spirit: consumer empathies for green apparel," *International Journal of Consumer Studies*, 38, 493–499, 2014.
40. A. Chapman, *Mistra future fashion—review of life cycle assessment. Report for MISTRA—The Foundation for Strategic Environmental Research*. Stockholm, 2010.
41. B. Giesen, "Ethical Clothing: New awareness or fading fashion trend?" Saarbrücken: VDM, 2008.
42. S. Bly, W. Gwozdz, and L. A. Reisch. "Exit From The High Street: An Exploratory Study Of Sustainable Fashion Consumption Pioneers." *International Journal of Consumer Studies*, 2: 125, 2015.
43. Mentzer et al. "Defining Supply Chain Management", *Journal of Business Logistics*, Vol. 22, Issue 2, pp.2-4,18. 2001.
44. Koplín J. et al., "Research Methodologies in Supply Chain Management: Integrating Environmental and Social Standards into Supply Management – An Action Research Project", ISBN 3-7908-1583-7, Physica-Verlag Heidelberg New York, p.382, 2005.
45. F. Belz, and K. Peattie, "Sustainability marketing: a global perspective" (3rd ed.). West Sussex, UK: John Wiley & Sons, 2011.
46. E. Lowitt, "The future of value: how sustainability creates value through competitive differentiation," San Francisco: Jossey-Bass, 2011.
47. G. A. Zsidisin, and S.P. Siferd "Environmental Purchasing: A Framework for Theory Development," *European Journal of Purchasing and Supply Management*, 7, pp. 61-73, 2001.
48. B. Kogg, "Greening a Cotton-textile Supply Chain," *Greener Management International* 43, ISSN: 09669671 pp. 53-64, Sept. 2003.
49. J. Birnberg, "Control in Interfirm Co-operative Relationships," *Journal of Management Studies*, 35.4, pp. 421-28, 1998.
50. M. Koszewska, "Social and Eco-labelling of Textile and Clothing Goods as Means of

Communication and Product Differentiation,” *Fibres & Textiles in Eastern Europe*, Vol. 19, No. 4 (87) pp. 20-26, 2011.

51. OECD Trade Policy Working Paper No. 47, CSR and trade: informing consumers about social and environmental conditions of globalised production.

52. S. Hartlieb and B. Jones, “Humanising Business Through Ethical Labelling: Progress and Paradoxes in the UK,” *Journal of Business Ethics*, 88, pp.583–600, 2009.

53. M. A. Dickson, “Utility of no sweat labels for apparel consumers: Profiling label users and Predicting Their Purchases,” *The Journal of Consumer Affairs*, Summer 2001.

54. OECD Trade Policy Working Paper No. 47, B. Fliess, H.J. Lee, O. L. Dubreuil, and O. Agatiello, CSR and Trade: Informing Consumers about Social and Environmental Conditions of Globalised-Production - PART I.

55. Oeko-tex Standart 100 Concept. Available: https://www.oekotex.com/en/manufacturers/concept/oeko_tex_standard_100/oeko_tex_standard_100.xhtml (Access Date:10.02.2016)

56. Oeko-tex Standard 100 Certification. Available: (<https://www.oekotex.com/en/manufacturers/certification/certification.html>). (Access Date:10.02.2016)

57. The Global Organic Textile Standard (GOTS). The Standard. Available: <http://www.global-standard.org/the-standard.html> (Access Date:10.02.2016)

58. The Global Organic Textile Standard (GOTS). Gots Monitor. Available: <http://www.global-standard.org/the-standard/gots-monitor.html>. (Access Date:10.02.2016)

59. Groupbema Transaction Certificate. Available: <http://www.groupbema.com/enUS/GroupCompanies/Detail/bemateks/turkey>. (Access Date:10.02.2016)

60. Groupbema ISO 9001:2008. Available: <http://www.groupbema.com/en-US/GroupCompanies/Detail/bemateks/turkey>. (Access Date:10.02.2016)

61. Groupbema Business Social Compliance Initiative (BSCI). Available: <http://www.groupbema.com/en-US/GroupCompanies/Detail/bemateks/turkey>. (Access Date:10.02.2016)

62. Business Social Compliance Initiative (BSCI). Available: <http://www.bsci-intl.org/content/who-bsci> (Access Date:10.02.2016)

63. Business Social Compliance Initiative (BSCI). Available: <http://www.bsci-intl.org/content/what-we-do-0> (Access Date:10.02.2016)