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Social and Eco-labelling of Textile and Clothing Goods as Means of Communication and Product Differentiation

Abstract

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. This article evaluates the importance of socio- and ecocertification and labelling for meeting buyers' expectations of textile and clothing products. It also discusses consumers' opinions on this matter.

Key words: social labelling, eco-labelling, corporate social responsibility, textile and clothing market, fast fashion, consumer behaviour.

ing countries, where child employment, forced and slave labour, workers' exposure to physical and mental harassment, very long working hours, pay below the minimum rates, dangerous working conditions and discriminatory practices have reached record-high levels.

These problems occur with varying intensity throughout the life cycle of textile and clothing products (*Figure 1*, more information on this subject can be found in [6]).

The main factors responsible for this situation are the globalised structure of the textile and clothing industry and the way it has developed over the centuries. The second half of the 20th century witnessed an unprecedented speed of the relocation of garment manufacturing facilities, as a result of which the early stages of manufacturing were transferred to less developed countries. As a result, a large geographical gap has appeared between the sites where production actually takes place and the markets for the finished products. Transactions are carried out through a complex network of agents, subcontractors and suppliers. The manufacturing end of the clothing industry is so scattered that even the companies awarding production contracts do not always know where garments are made and what the production conditions are.

This situation should be mainly attributed to the low labour costs and flexible labour force in the developing countries, as well as to inducements offered by countries competing for manufacturing contracts, such as tax havens, looser environmental protection standards, the efficiency of modern ICT solutions and

their falling prices, and considerably lower shipment costs.

As a result, garment retailers and established brands have become global agents awarding contracts under which the early stages of production (i.e. the delivery of raw materials, manufacturing, and packaging) are performed by suppliers and contractors comprising a complex network known as 'a global supply chain'. One end of the chain is markets dominated by several leading retailers and renowned brands (the largest brands and chains of clothing retailers control 75% of the clothing market), and the other end is a workforce busily producing garments for minimum wages earned under frequently unacceptable conditions.

Although clothing prices keep falling, firms' profits are steadily rising. This is mainly due to the fast growing number of countries and producers that are ready to deliver products to the stores of large firms. This imbalance gives a lot of power to western retailers and brands that can afford to constantly cut their market prices while demanding that their suppliers produce faster and faster. The pressure of time and cost reductions mainly hurts the producer's workforce i.e. workers' wages keep declining and they have to work longer and longer hours under deteriorating conditions. Moreover, the complexity of garment making makes it possible for many factories producing for renowned firms to conceal all these bad aspects. Labour conditions in the global south countries allow clothing companies to earn large profits in spite of the constantly falling prices and costly sales promotions.

Corporate social responsibility and the textile and clothing sector

Ecological and social problems exert

strongly affect the textile and clothing market. Within the former, the three main concerns are production ecology, human ecology and waste disposal [20, 21]. Some raw materials used in the textile industry are plants that are particularly burdensome for the environment, as their growth frequently involves the use of various fertilisers and pesticides. Besides this the industry's finishing processes (dyeing, printing, and washing) consume

The social problems that the textile and clothing industry has to cope with are particularly acute in the develop-

huge amounts of chemical substances.

Another factor that makes these problems difficult to solve is so-called 'fast fashion'. Because the world today is always on the move, ever-shorter production times, electronic payments and more efficient transport facilities also accelerate the flow of textile and clothing products. Despite the fact that garments are still made manually, new designs are ready for sale within 12 days. Consumption is keeping pace with production — according to the most recent reports, the volume of clothing that consumers have purchased over the last four years has increased by 1/3.

However, the faster production and consumption of goods cannot change some basic factors - fibre still needs the same amount of time to grow (e.g. cotton becomes harvestable after 1 year) and ignores the speed at which products are expected to appear in the market; cleaning, bleaching and dyeing can be neither shortened nor skipped. The time when a product is purchased and then used seems to be unrelated to the making of a finished product. Accelerating production and consumption is very costly. It would not be possible to deliver cheap clothing 'overnight', if the workforce and the natural environment were not exploited [22].

The challenges that the textile and clothing 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 Mark¹⁾.

The ODCE 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 [1]. It was found that textile and clothing manufacturers employ almost all available CSR tools, and they are more successful in doing this than the other sectors of industry (see *Table 1*).

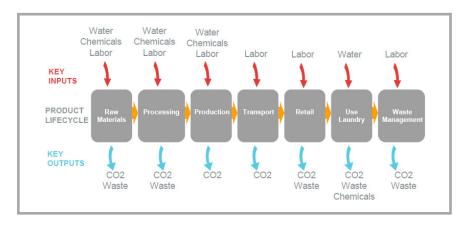


Figure 1. Stages of the textile product life-cycle and impacts; Source: Pruzan-Jorgensen P. M., Sustainability in the European Apparel and Textile Industry, 2010 EURATEX General Assembly, June 10, 2010.

Table 1. Comparison of schemes; **Source**: CSR and trade: informing consumers about social and environmental conditions of globalised production, OECD Trade Policy Working Paper No. 47.

	Fish	Cut flowers	Textiles	Cosmetics
Certificatnion and libelling	several	several (mostly business-to- business)	many (mostly business- to-business)	seldom
CSR reporting	seldom	seldom	frequent	very frequent
General/CSR specialised consumer guides	only some fish guides	very seldom (general guides or CSR guides)	frequent	seldom
Corporate marketing	some	mainly in niche market of organic cut flowers	very frequent	dominant (branding)

Reporting initiatives are very common in the textile and clothing industry, especially compared with other sectors trading globally in products such as fresh fish, cut flowers, and cosmetics. Most of them include reports on working conditions in global supply chains, whose printed as well as downloadable versions are usually available to the public.

The big names in the textile and clothing industry draw up their reports according to various reporting guidelines and invite independent organisations to audit the entire process on which they report to ensure report credibility. Manufacturers apparently wish to respond to the growing expectations of the public and understand very well how important communication and business transparency are in the globalising economy. It is notable that social or environmental reports are a tool for communication (with the company's internal and external stakeholders) and management (allowing companies to structure their approach to sustainable development, progress measurement, formulation of strategies and improvement goals). This trend characterises both the manufacturers of consumer goods and industrial goods [see 23].

Trying to cope with the problem of long and complex supply chains and of controlling each aspect of organisations' relationships with thousands of partners and subcontractors scattered all over the world, some textile and clothing firms have decided to disclose the names and locations of their suppliers.

The ODCE survey additionally revealed that the textile and clothing industry provides buyers with access to a huge number of publications and online information services. Consumer guides such as Ethical Consumer, Ethiscore, Newconsumer, Lift the Label Ethical Directory, and Getethical contain a wealth of information on apparel stores, ethical fashion, organic cotton, fair trade, etc.

Moreover, more and more textile and clothing manufacturers decide to apply for process certification to label their products appropriately (e.g. Clean Clothes Campaign, Rugmark, and No Sweat labels). In a growing number of cases, such labels co-occur with standard labels giving information on raw material composition, the product's country of origin, etc.

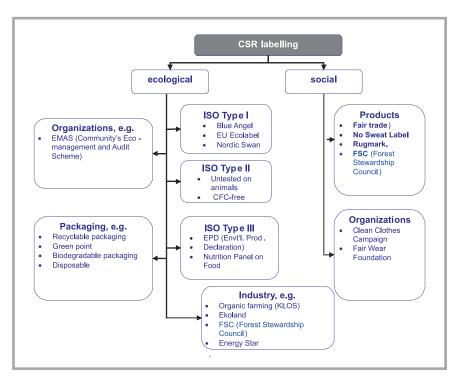


Figure 2. Classification of CSR labels; Source: developed by the author.

Table 2. Comparison of the types of ISO eco-labels; *Source*: developed by the author.

Type	Eco-labelling			
Туре	Type I	Type II	Type III	
Standard	ISO 14024	ISO 14021	ISO 14025	
Third party involvement	yes	no	yes	
Life cycle analysis	simplified	no	yes	
Scope	multi-criterial	selected product traits	parameter categories defined for the sector	
Possibility of differentiating products ecologically within a group of products	yes	no	yes	
Information carrier	a label – graphic mark, logo	graphic mark / word/slogan	numerical data represented by graphs, drawings, text	
Voluntary	yes	yes	yes	
Verifiability/reliability	high	low	high	
Prospects for development	good	weak (low reliability)	average (complex procedure, analysis of a large volume of data)	

An evaluation of textile and clothing manufacturers should not skip, however, a much less favourable picture of the situation that emerges from the research and practices of many NGOs - the declarations that companies make in their reports, codes of conduct, etc., which are frequently illusory and misrepresent the true facts (more on this matter in [7]).

Let us now consider what consumers think about the various sources of information and its content. Why some of the CSR communication tools are more effective than the others?

An average European consumer asked about the most appropriate CSR communication method would point to **informa**

tion affixed directly to products and labels. Respondents also tend to prefer spontaneous and specific informational actions launched by producers, appreciating them much more than regular social reporting, etc. [8]. Furthermore, when asked about the type of information that garment labels should carry to facilitate their buying decisions, 65% of the British surveyed in 2005 pointed to no child labour involved in the making of a product. The other types of important information were the fabric composition in the case of garments (58%), 'not tested on animals' (53%), fair pay for workers (53%), and the producer's country (46%). The 'environmentally-friendly' label was important for 42% of respondents, while 36% appreciated good labour conditions [9].

Although labelling is a generally accepted source of information that can present a company as a socially responsible organisation, its influence on most consumers continues to be relatively weak. Therefore, a more detailed analysis of CSR labelling that applies to textile and clothing products seems especially useful, as well as an evaluation of the role of labelling in product differentiation.

Eco- and social labelling and its role in differentiating textile and clothing products

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 [5].

Recently a huge number of social and eco-labelling systems for certifying products have appeared that meet the criteria prescribed.

Labelling systems can be divided along many lines. One criterion can be their territorial coverage (i.e. national – Germany's Blue Angle, supranational – EU Ecolabel, or international – Fair Trade) or thematic scope (the type of products covered by a label), etc.

Figure 2 shows a general classification of CSR labels that can be subdivided using the aforementioned criteria.

Eco-labelling

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).

Table 3. The most popular eco-labels (For a review of eco-labels used in particular countries see [18]); Source: developed by the author.

Label	Description	Logo	type
Blue Angel Germany	The Blue Angel is the first and oldest environmental label for products and services. It is a voluntary market-oriented instrument of environmental policy which has been designed to emphasise the positive environmental properties of products and services. About 10,000 products and services in 80 product categories carry the Blue Angel eco-label. It extiles categories (carrier bags, cleaning rags, handkerchiefs, mattresses, napkins, textile floor coverings) http://www.blauer-engel.de	BLAUF EMPH	ISO type I
EU Eco-label / EU Marguerite	The European Ecolabel is a voluntary scheme established in 1992 to encourage businesses to market products and services that are kinder to the environment. Products and services awarded the Ecolabel carry the flower logo, allowing consumers - including public and private buyers – to identify them easily. ■ textiles categories: textiles, Mattresses, shoes http://ec.europa.eu/environment/ecolabel/index_en.htm	OPEJSKI HADE	ISO type I
Nordic Swan (Scandinavian countries)	Covers 66 different product groups textiles categories (micro-fibre clothes and mops, textiles, skins and leather) http://www.svanen.nu/		ISO type I
	The Oeko-Tex® Standard 100 was introduced at the beginning of the 1990s in response to the general public's demand for textiles posing no health hazards. "Poison in textiles" and other negative headlines were common at that time and indiscriminately branded all chemicals used in textile manufacturing as negative and dangerous to health. http://www.oeko-tex.com/OekoTex100_PUBLIC/index.asp	TEXTILES VERTRAUPORT OF THE PROPERTY OF THE PR	Industry label for the textile industry
EMAS	The Eco-management and Audit Scheme EMAS is a European instrument that was implemented based on a Regulation of the European Parliament and Council to encourage different organisations (companies, plants, institutions, etc.) to keep improving their environmental performance. Being an EMAS member is equivalent to having a trademark showing that the organisation aims to be perfect. The basic EMAS principle is to distinguish and appreciate those organisations that exceed the minimum legal requirements and never cease to make efforts to improve their environmental performance.	**** EMAS	Organization label

The last 30 years have witnessed many initiatives that were designed to certify products and services that have better environmental properties than those required by the standards in force. To ensure a uniform approach to this type of labelling, the International Organisation for Standardisation has published a series of standards (ISO 14020, ISO 14021, ISO 14024, ISO 14025).

As the ISO classification provides for three types of information describing the environmental advantages of a product or service, three ISO eco-labels have been established. *Table 2* compares the labels and presents the related standards.

The other types of eco-labelling are:

- Industry labelling specific to an industry, e.g. forest exploitation, agriculture, textiles
- Corporate labelling used by organisations manufacturing or selling products. However, it must be remembered that the meeting of some specific environmental requirements by the organisation may not be re-

lated to its product's compliance with other environmental criteria

■ Package labelling – gives information on the packaging and not on the product inside.

Table 3 shows some examples of the most popular eco-labels attached to textile and clothing products.

Social labelling

Social labelling has its roots in the tradeunion 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 mark 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 [2]. 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 [3] (*Table 4* see page 24).

Knowledge of CSR labels among Polish buyers of textiles and clothing

This section of the article presents the results of a survey involving a representative random sample of 981 adults living in Poland, conducted by the author through the Public Opinion Research Centre between 30 November and 8 De-

Table 4. The most popular eco-labels in the textile and clothing industry; Source: developed by the author.

Name	Description	Logo
Name	Attached to specific products	Logo
Fair trade	The FAIRTRADE Mark is now the most widely recognised social and development label in the world. The FAIRTRADE Certification Mark is a registered trademark of Fairtrade Labelling Organisations International (FLO). It certifies that products meet the social, economic and environmental standards set by Fairtrade. The Mark certifies products not companies. It does not cover the companies or organisations selling the products textiles categories: cotton	FAIRTRADE TRANSFAIR Transface diagrad Transface diagrad Transface diagrad Transface diagrad
Rugmark / GoodWeave™	RugMark International e.V. (RMI) is an international non- governmental organisation working to end illegal child labour in the handmade rug industry and offer educational opportunities to children in India and Nepal. The GoodWeave certification label is issued to rug manufacturers that adhere to the RugMark standard, agree to its independent verification and voluntarily join RMI as licensees.	PUCINALIA CONTRACTION DE CONTRACTOR DE CONTR
Global Organic Textile Standard	This standard for organic textiles covers the production, processing, manufacturing, packaging, labelling, exportation, importation and distribution of all natural fibres. The final products may include, but are not limited to, fibre products, yarns, fabrics and clothes. The standards focus on compulsory criteria only. The aim of the standard is to define requirements to ensure the organic status of textiles, from the harvesting of the raw materials, through environmentally and socially responsible manufacturing, to labelling in order to provide a credible assurance to the end consumer.	CONTO COTS . GOTS . GO
Care & Fair-Siegel	An initiative against illegal Child Labour and for the support of people working in carpet production in India, Nepal and Pakistan.	CARE & FAIR
	Fairtrade labelling organizations – labels applying to organisations and not products	
Fairtrade Organization Mark	Introduced by the WFTO (formerly IFAT) in January 2004 during the World Social Forum in Mumbai in India. It is not used for product certification. The WFTO awards this sign to its trading members that meet standards specified in the WFTO monitoring system. Non-trading WFTO members and other organisations are not allowed to use the sign.	FAIR ARPOM ORGANIZATIO
EFTA	EFTA (the European Fair Trade Association) is an association of eleven Fair Trade importers in nine European countries (Austria, Belgium, France, Germany, Italy, The Netherlands, Spain, Switzerland and the United Kingdom). EFTA was established informally in 1987 by some of the oldest and largest Fair Trade importers. It gained formal status in 1990. EFTA is based in the Netherlands and has Dutch Articles of Association.	European Fair Trade Association
Clean Clothes Campaign	The Clean Clothes Campaign is an alliance of organisations in 13 European countries. Members include trade unions and NGOs covering a broad spectrum of perspectives and interests, such as women's rights, consumer advocacy and poverty reduction. http://www.cleanclothes.org	Clean Clothes Campaign
Fair Wear Foundation	FWF is an independent, not-for-profit foundation. Independence is guaranteed by a tripartite (multi-stakeholder) board, in which business associations, trade unions and (labour) NGOs are equally represented. Based in Amsterdam, FWF works internationally with companies all over Europe and in production countries worldwide. http://fairwear.org/	FAIR WEAR FOUNDATION

cember 2010. The sample was drawn from the PESEL system. The interviews utilised face-to-face methodology and CAPI (Computer Assisted Personal Interviewing).

According to the research findings, the best known CSR label is the EU Ecolabel. Every fifth Polish consumer noticed the label attached to textile products. The

Ecolabel was followed in the ranking by the Global Organic Textile Standard, recognised by almost 19% of Polish consumers, and next by the Oeko-Tex Standard (18.2%) – see *Figure 3* (see page 25).

At the same time, almost every fourth Polish consumer bought a textile product with an eco- and/or social label attached to it.

The weak and strong points of labelling as a tool for differentiating socially responsible textiles in the market

A straightforward evaluation of the role of labels in product differentiation is not possible. Eco-labels and social labels are sometimes an effective tool enabling communication with consumers and a major factor driving their purchasing decisions. It is also true, however, that they frequently cause confusion and frustration in the market. Surveys indicate that consumers expect more transparent and clearer information in this area.

The main advantage of labels compared with other means of communication (e.g. reports, codes of conduct, etc.) is that they are simple and visible. In the case of consumer goods, such as textiles and clothing, labels are a particularily useful and efficient instrument providing consumers with information on the properties of products meeting, or not, their social and ecological expectations or preferences. This quality makes them especially useful for consumers who are too busy to seek information about the properties of products or services.

As a means of communication, labelling systems also have a number of weak-nesses: In the first place they cover only a limited number of consumer goods, rarely applying to intermediate products (semi-products).

Products labelled as 'socially responsible' are traded in the **niche markets** and frequently account for less than 2% of goods consumed in the given category. On the other hand, the growing number of labelling systems suggests that they are covering more and more sectors, which may confuse customers having to cope with such a fast growing diversity of marks and labels and make them distrustful.

This lack of transparency followed by the eroding credibility of labels has become one of the major problems affecting labelling systems. A range of surveys and analyses has shown that consumers are frequently sceptical about the credibility of some of the labels and uncertain about their actual message [11]. The author's research confirmed these findings. According to Polish buyers, the purchasing of textile products made by responsible manufacturers is mainly impeded by the unavailability of relevant information (55%), problems with distinguishing one textile from another (32.8%) and by the buyer's limited or non-existent confidence in manufacturers' declarations (22%). The higher prices of such products were ranked only fourth.

Another group of problems arises from the **general level of environmental**



Figure 3. Recognisability of eco- and social-labels among Polish buyers of textiles and clothing; Source: author's research.

awareness, or in broader terms, from corporate social responsibility.

There are also problems caused by fact that it is difficult to award labels when production chains are long, like those in the textile and clothing industry. The Fairtrade label is usually given to unprocessed goods (or low-processed ones), but even simple products such as tea or coffee give rise to many controversies about what auditing and monitoring methods would be the most relevant. Transparent control over the work of thousands of petty farmers, agents and cooperatives scattered all over the world is not easy, even in the case of coffee, which is sold almost unprocessed. Trying to certify the entire garment making process, from cotton growing, fibre processing, dyeing and weaving to cutting and sewing the fabric is much more difficult, not to mention the production of accessories, such as buttons, clasps and sequins [16].

Nowadays we know that eco-labels are also frequently **abused and counter-feited.** The growing popularity of 'false' eco-labels prevents 'real' labels from becoming more credible. Many products are given labels such as flowers, bushes, trees, shrubs, hares and birds, but no modification to the product or its manufacturing is required. Many manufacturers have been misled by companies presenting labels associable with environmental protection.

While media campaigns promoting ecolabelling apparently raise the awareness of consumers and gradually remodel their behaviour, the business community has not made much progress, one reason being certification and licensing costs [10, 14]. Developing countries also complain more and more that they often have to struggle with the huge burden of costs that **significantly impede trade** [15].

With all the weaknesses of present labelling systems, they still seem to be one of the most convenient and consumer-friendly channels of communication that manufacturers can use in this area. The research showed that they are also one of the most effective. For over 70% of Polish consumers noticing any CSR message from textile and clothing manufacturers, this was a label or tag attached to a textile product to confirm its eco-friendly or ethical characteristics.

Two factors determine the success of labelling systems: one is the awareness of consumers and their ability to understand their message, and the other one is the business community's willingness to accept the systems.

Conclusions

The above review of various CSR communication initiatives shows that certification and labelling systems belong to the most effective instruments that can induce positive changes in consumer behaviour. The empirical research findings, showing that consumers prefer information attached to products and labels, corroborate this conclusion.

Another finding is that the role certification and labelling plays in product differentiation is not sufficient. The latent benefits of signs and labels need the following to become fully available:

- 1. transparent standardisation and certification systems,
- 2. the harmonisation and standardisation of existing systems,
- 3. a methodological framework ensuring some *systemisation* of the present diversity of signs and labels.
- 4. a new approach to consumer education and information although product labelling is a simple method for sending complex messages, CSR intricacy calls for a completely new approach to communication strategies.

Textile and clothing companies will have to confront most of these challenges. Although ODCE data show that companies use almost all CSR communication instruments that are available, the communication is still insufficient. Another huge problem that this sector of industry has to solve is the development of effective communication systems that will be able to cope with its long, complicated and barely controllable supply chain.

Editorial note

 The mark only shows that some cotton cultivation and picking rules were respected (e.g. fair pay, workers' rights), but gives no information on how workers involved in the later stages of garment production were treated. Unfortunately, many companies tend to exploit consumers' ignorance of this fact and intentionally mislead them.

Acknowledgment

This work was (partially) supported by structural funds within the framework of the project entitled 'Development of a research infrastructure for innovative techniques and technologies of the textile clothing industry' CLO – 2IN – TEX, financed by Operational Programme Innovative Economy, 2007-2013, Action 2.1.

References

- CSR and trade: informing consumers about social and environmental conditions of globalised production, OECD Trade Policy Working Paper No. 47.
- Dickson M. A, Utility of no sweat labels for apparel consumers: Profiling label users and Predicting Their Purchases, The Journal of Consumer Affairs; Summer 2001.
- Fliess B., Lee Hyung-Jong, Dubreuil O. L., Agatiello O., CSR and Trade: Informing Consumers about Social and Environmental Conditions of Globalised Production OECD Trade Policy Working Paper No. 47 - PART I.
- 4. Green Paper on CSR.
- Hartlieb S., Jones B., Humanising Business Through Ethical Labelling: Progress and Paradoxes in the UK Journal of Business Ethics (2009) 88:583

 –600.
- Madsen, Jacob, Hartlin, Bryan, Perumalpillai, Shahila, Selby, Sarah and Aumônier, Simon. (2007). Mapping of Evidence on Sustainable Development Impacts that Occur in Life Cycles of Clothing: A Report to the Department for Environment, Food and Rural Affairs. Environmental Resources Management (ERM) Ltd. Defra, London.
- Mazur K. CSR w globalnym przemyśle tekstylno-odzieżowym – chwyt PR, dobry interez czy realne zobowiązanie wobec społeczeństwa w: Etyczne dylematy na rynku tekstylno-odziezowym, red: M. Malinowska-Olszowy, Wydawnictwo Adam Marszałek Toruń 2009, ISBN 978-83-7611-536-8
- MORI (Market and Opinion Research International), on behalf of CSR Europe (2000), The first ever European survey of consumers attitudes towards corporate social responsibility, CSR Europe, Brussels, Belgium, November 2000.
- MORI/BITC (Market and Opinion Research International, 1005 adults 16+, July, September 2005.
- OECD (1999), Consumer Policy Contributions to Developing Sustainable Consumption Patterns [DSTI/CP(99)2/ FINAL], Paris.
- OECD (2001), Information and Consumer Decision-Making For Sustainable Consumption
- 12. PN-EN ISO 14020:2003 Etykiety i deklaracje środowiskowe – zasady ogólne

- Pochyluk R., Świętojańska A., Macniak M., Kryteria środowiskowe do stosowania przy przetargach finansowanych ze środków publicznych, Katalog opracowany na zlecenie Ministerstwa Gospodarki, www. eko-net.pl
- Ralph E. Horne, Limits to labels: The role of eco-labels in the assessment of product sustainability and routes to sustainable consumption, International Journal of Consumer Studies 33 (2009) 175–182 ISSN 1470-6423, s. 176
- 15. Rotherhamt T., Labelling for Environmental Purposes. A review of the state of the debate in the World Trade Organization, tkn thematic paper, January 2003.
- Szeniawska K., Fairtrade co się dzieje ze sprawiedliwą modą ,Pomagamy', nr 26, 2007.
- Targosz-Wrona E., Ecolabelling as a Confirmation of the Application of Sustainable Materials in Textiles, FIBRES & TEXTILES in Eastern Europe 2009, Vol. 17, No. 4 (75) pp. 21-25.
- Targosz-Wrona E., Etykiety środowiskowe jako Znaki towarowe w marketingu produktów przyjaznych środowisku w dobie globalizacji. Zeszyty Naukowe. Zarządzanie i Marketing / Wyższa Szkoła Humanitas 2007 Vol. 1. - pp. 87-99.
- The Trade and Environment Effects of Ecolabels: Assessment and Response. -United Nations Environment Programme (2005), http://www.unep.ch/etb/publications/Ecolabelpap141005f.pdf.
- Machnikowski W., Zdrowotne i środowiskowe zagrożenia stwarzane przez wykończone przeciwpalnie wyroby włókiennicze, Zeszyty Naukowe ATH Inżynieria Włókiennicza i Ochrona Środowiska 7 (3); 329-342; 2002.
- Andrzejewska A., możliwość występowania szkodliwych substancji chemicznych w materiałach stosowanych w rękawicach i obuwiu ochronnym, Bezpieczeństwo pracy 5/2006.
- 22. Fletcher K., Slow fashion, ,The Ecologist' 06/2007.
- 23. Koszewska. M. Aspekty społecznej odpowiedzialności biznesu w obszarze tekstyliów ochronnych, Innovatex.
- Received 10.01.2011 Reviewed 10.02.2011



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