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A sustainable consumption index/label to reduce information asymmetry among consumers and producers

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A B S T R A C T

The interest of various stakeholders in environmental issues forces firms, especially those operating in environmentally risky sectors, to undertake certain environmental practices to build an environmentally friendly profile either at their operational or production level. An interesting and extensive debate has been made by many scholars to identify ways to reduce asymmetric information between corporate sustainability efforts and consumers by developing different types of eco-labels. Despite the positive effects of current eco-labels to eradicate asymmetric information, there remains the question of how to do this well when a firm has more than one eco-label, different focus (on operation or on production), single- or multiple-environmental issues, local or global certification system, environmental or sustainability orientation. This paper aims to provide a consumption sustainability index to simplify current eco-labels and transform them under the triple-bottom line approach into a triple-rating-label to demonstrate low, medium or high corporate and product sustainability contribution. It contributes to current literature through the complexity and variety reduction of corporate multi-certifications with different economic, environmental and social labels. Additionally, it focuses on the utilization and transfer of information from other sources of firms (e.g. annual reports, sustainability reports) to a new label. The proposed sustainability evaluation framework was assessed on a sample of firms operating in the coating industry.

Keywords: Sustainable consumption; Sustainability index; Sustainable labels; Information asymmetry

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1. Introduction

Eco-labels and social-labels aim to transfer a well-defined signal from the business community to consumers regarding a firm's environmental and social profile and a product's sustainable status. There are two main trends for products' labels. The first includes labels which are self-regulated initiatives of firms to inform consumers who are willing to pay for environmentally friendly products (van Amstel et al., 2008). The second includes these eco- and social-labels which assure their truth contains and avoids

'green-washing' phenomena (the promotion of a green and social image by firms which actually make less or nothing regarding environment and society) by third independent body certifications (Nilsson et al., 2004). The main scope of eco- and social-labels is to decrease *asymmetric information* from sellers who have adopted environmental practices and buyers with environmental and social sensitivities (Loureiro et al., 2002). Today, a proliferation of eco- and social-labels has arisen for various kinds of products (e.g. seal foods, wood products, electricity) and different environmental and

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social aspects (e.g. eco-labels Type I, Type II, and Type III) (Gallastegui, 2002).

Bratt et al. (2011) point out that the massive rise in eco- and social-labels, in some cases, increases consumers' confusion and diminishes their trust since they do not have the means to identify the differences between these eco- and social-labels. The different eco- and social-labels with which a firm is certified are also puzzling for consumers, such as eco-labels which focus on different environmental aspects or on different firms' operations. There are many examples where firms are certified by discrete labels for their efforts in a range of environmental aspects (e.g. carbon footprint, water footprint, recycling) and different operational or production stages (e.g. ISO 14001, EMAS, European Flower Label). An important distinction indicates that there are firms with eco-labels which focus on product features (e.g. GHG of product, water footprint, European Flower Label). Another crucial trait is that various eco-labels of firms focus mainly on operational processes such as ISO 14001, EMAS and Responsible Care (for chemical industries). These characteristics result in a vital and obvious inquiry as to how easy it is for environmental and socially sensitive consumers to choose products from firms with different labels and a different number of labels. This uncertainty is enhanced when the debate is extending to sustainability topics. For example, there are labels which focus on social aspects such as fair trade and organic product labels (Pivato et al., 2008; Castaldo et al., 2009). Diller (1999) also records a number of socially responsible labels which focus on labor rights, fair trade, and child rights in companies.

The problem becomes more complex when the main scope of eco- and social-labels is introduced into the debate. For example, corporate labels could be classified in two general categories regarding their focus such as those which place emphasis on operational processes and those which seek to assure environmental friendliness of products. The former category mainly includes Environmental Management Systems (EMSs), like ISO 14001, EMAS, BS 7750 and Responsible Care, which provide a set of procedures for preparing a complete and suitable corporate environmental policy to shrink environmental impacts at an operational level (Rondinelli and Vastag, 2000). The latter category of eco-labels offers certain criteria to design products either by reducing the environmental impact of production or by having less environmentally harmful features (e.g. Blue Agents, Blusign[®] standard, and certified pesticide residue free). Here, the question for consumers is what does it mean if firms have only one type of label or another (or both)? Put differently, how can a consumer select a product from a firm which has many of these labels from another homogeneous firm with fewer labels?

Many of these eco- and social-labels are certified by local or national bodies, while some others are certified by international bodies. On the one hand, local certifications meet the growing interest of consumers in buying products with certain local environmental attributes and geographical origin (Brècard et al., 2009; Howard and Allen, 2010), while the international certification schemes (e.g. International Organization of Standardization) seem to be more preferable for the majority of consumers because of their worldwide recognition and reputation (Gulbrandsen, 2006). However, many national and local eco-labels have been designed to facilitate firms to assure specific operational processes and production aspects regarding the environment (e.g. Nordic Swan, German Blue Angel, Green Seal, and EMAS). The

local and national certification eco-label systems have less recognition than global certification systems for firms which have export orientation (Horne, 2009).

Traditional eco-labels mainly address various aspects of sustainability by addressing the needs of present generations with respect to natural resources so that future generations are able to meet their needs (de Boer, 2003). However, the content of sustainability has lately encompassed additional components (economic and social) which are necessary to be introduced into existing eco-labels (Hansmann et al., 2006). According to Horne (2009), another question is in which case does this profusion of eco-labels address 'strong' or 'weak' sustainability goals? This seeks to identify whether the consumption of eco-labeled products contributes to sustainability by maintaining constant the three types of (man-made, human and natural) capital (basic components of sustainability), whereas eco-labels signal sustainability information without any reference to substitution of such types of capital.

Many scholars support that eco- and social-labels assist in decreasing asymmetry information between supply- and demand-side regarding environmental and social issues (Heinzle and Wüstenhagen, 2012; Delmas and Grant, 2014). Even though a large number of studies indicate that different groups of stakeholders are willing to pay for green and socially responsible products, this finding is not really verified (Laroche et al., 2001; Tsakiridou et al., 2008). Indeed, there are 'too many products, too much information, too little time, and a paucity of independent, accessible, readily accessible and understandable information about environmental performance'. (Horne, 2009, p. 180). Heinzle and Wüstenhagen (2012) explain that the limited demand for environmental friendly (energy) products is the consequence of the complexity of current eco-labels. They identify that the expansion of energy labels with three additional classes (A+, A++, A+++), has weakened the vital aim of labels which is to eliminate uncertainty and control information asymmetry. The increase of label scale might enhance the complexity for consumers' choice. This exacerbates the problem of recognition and essential knowledge of consumers regarding eco-labels and make consumers mistrust them. Thøgersen (2002) supports that consumers use eco-labels only in case (of course) they trust them. Additionally, Horne (2009) points out that green purchasing is a very complex procedure which includes, *inter alia*, "awareness, trust, and the complexity and availability of information". Consumers should make options among products with different labels or diverse number of labels, a fact that enhances the complexity of the option.

This paper aims to provide a consumption sustainability index to simplify current eco-labels and transform them under triple-bottom line approach into a triple-rating-label to demonstrate low, medium or high corporate and product sustainability contribution. The aim of this index is to contribute to current literature by reducing the complexity and variety of corporate multi-certifications with different economic, environmental and social labels. It also aims to contribute by utilizing and transferring information from other sources of firms (e.g. annual reports, sustainability reports) to a new label. In particular, the index consists of two general parts. The former offers a set of indicators to estimate economic, environmental and social contribution of products and firms. The second part aims to translate these indexes into a new sustainability label in varying tints of green the low (very light green), medium (light green) and high sustainable

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