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# Can Ecolabels Influence Firms' Sustainability Strategy and Stakeholder Behavior?

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## Abstract

Ecolabels are policies and programs that are designed to signal information to stakeholders about a product's sustainability attributes and reduce stakeholder uncertainty about the validity of green product claims. However, f*or ecolabels to be successful at addressing information asymmetries external stakeholders must perceive them as being credible*. We assess the prospects of different sorts of ecolabels to influence firms' sustainability strategies and stakeholder behavior based on the credibility of their institutional construction. We then describe important areas for future ecolabel research, and analyze connections between these future reseach areas and the articles that form this issue. Finally, we emphasize the importance of collaborative stakeholder initiatives in advancing sustainability strategy and how accurate information is vital to the success of these initiatives.

## Keywords

ecolabels, stakeholders, environmental information, certification, collaboration, editorial.

Imagine shopping for a new cell phone. Your electronics store stocks half a dozen brands that meet your criteria for price and quality. You notice that on one package there is a label that conveys multidimensional information about the product's sustainability attributes. The label is similar to a common nutrition label seen on most food products in the United States, Canada, Australia, New Zealand, Korea, and parts of Western Europe. Instead of calories and fat, the label lists the quantities of resources and energy used to manufacture the cell phone, in addition to greenhouse gases and toxic waste produced. It also includes information related to the energy required and waste created during both utilization and disposal. Now image that as you gaze about the store you see that *all* cell phone packages have this multidimensional label, as do *all* other products. Consider how the availability of this information might affect firms' sustainability strategies and firms' relationship with their external stakeholders.[1]

History has shown that requiring firms to provide external stakeholders with sustainability-oriented information can encourage them to seek innovative ways to proactively manage their sustainability activities. For instance, when U.S. food manufacturers were required in 2006 to report the trans fat content of their processed foods, they began to voluntarily limit their trans fat ingredients because of heightened awareness among their external stakeholders about

its potential harm to human health (Langfield, 2013). Similarly, when manufacturing companies in North America, Europe, and Japan were first required to publicly report their toxic chemical releases, the outcome was systematic and sustained reductions in firms' volumes of toxic chemicals that came with significant changes in their environmental strategies (Gamper-Rabindran, 2006).

However, outside of these few examples, mandatory requirements for firms to publicly disclose sustainability information are limited. External stakeholders therefore generally lack information about product sustainability even though many firms have access to the information. Information asymmetries of this sort can reduce market efficiencies (Alchian & Demsetz, 1972) because they often lead to suboptimal purchasing decisions for consumers who would prefer to purchase environmentally friendly products, and investors who would prefer to support firms that are more sustainable. They also slow the growth of sustainability-oriented markets because firms are more reluctant to invest strategically in developing eco-friendly products if there is no mechanism to differentiate their products from those that are less sustainable. While some firms have attempted to address these problems by issuing corporate statements about their proactive sustainability strategy, external stakeholders—and especially consumers—typically disregard such statements because they believe that companies do "not tell the whole story" about their environmental impacts (Oates et al., 2008). Similarly, environmental nongovernmental organizations (NGOs) often suggest that firms exaggerate their environmental claims (Zara, 2013). Regulatory stakeholders note that these concerns may have some validity in that, within the United States, the Federal Trade Commission (U.S. FTC) has acknowledged widespread concerns of firms making untruthful and deceptive statements about the environmental attributes[2] of their products (U.S. FTC, 2012). While the FTC has authority to issue warnings against companies that mislead consumers about their green product claims, in the more than 2 years since revising its guidelines for green advertising, only a handful of companies per year have been warned (U.S. FTC, 2012). Combined, these factors pose a substantial impediment for companies wishing to brand themselves as being more sustainably focused, and receive market recognition for their differentiated operating strategies.

To address these concerns, some firms have chosen to rely on ecolabels to inform external stakeholders about their sustainability activities and the sustainability impacts of their products.

## Ecolabels: Categories and Limitations

Ecolabels are policies and programs that are designed to signal information to stakeholders about a product's sustainability attributes (Cashore, 2002). They attempt to reduce stakeholder uncertainty about the validity of green product claims (Pedersen & Neergaard, 2006) because most ecolabels rely on external certification, and thus are more likely to ensure greater conformance to specific sustainability standards (Darnall, Ji, & Potoski, 2014).

Two broad categories of sustainability product labels exist in the market place, the first being one-dimensional ecoseals/ecolabels. These labels consist of rudimentary logos that firms use voluntarily to indicate that a product has attained a specific environmental and/or social standard or attribute. These sorts of ecolabels are becoming increasingly more prevalent, with more than 450 existing worldwide (Ecolabel Index, 2014). Within the U.S., examples include the Department of Agriculture's Certified Organic label, the Environmental Protection Agency's (EPA) Green Lights label, and EPA's WaterSense. These ecolabels focus on a specific type of sustainability impact that might include pollution prevention, habitat conservation, fair trade, organic production, biodegradability, sustainable seafood harvesting, and energy consumption.

In spite of their overarching goal to reduce information asymmetries, these labels have several limitations. First, while one-dimensional ecolabels offer some environmental and/or

social information, they are generally constrained by the number of sustainability attributes that they promote. This situation is problematic because external stakeholders are often unaware that a product might have other (unknown) desirable sustainability qualities. In order for a company to obtain differentiation advantages related to those attributes, it would need to apply for multiple ecolabels—one for each attribute. However, multiple certifications can be costly, and cause confusion among external stakeholders. Another option may be for firms to self-disclose their sustainability information, however, as mentioned earlier external stakeholders tend to distrust this sort of corporate self-promotion.

A second limitation of one-dimensional ecolabels is that by providing information about only one environmental attribute, external stakeholders may be misguided into believing that a firm is operating more sustainably than its competitors. However, firms that use one-dimensional ecolabels may still have significant environmental and social impacts. Moreover, these impacts may span across multiple geographic boundaries (Perey, 2014). For instance, a New Zealand produce farmer who does not use pesticides and chemical fertilizers can obtain a U.S. Department of Agriculture's Certified Organic ecolabel and subsequently market its produce in the United States as being more environmentally friendly than nonorganic New Zealand produce. However, the label does not require that the same grower disclose information about the carbon emissions associated with shipping its produce from New Zealand to the United States, which may make the produce less environmentally friendly than food that is grown closer to the point of sale. For this reason, some scholars (e.g., Forrer & Mo, 2013) suggest that labeling should cover the entire supply chain rather than specific processes within the firm.

A third shortcoming of one-dimensional ecolabels is that many products qualify for multiple competing labels. Within the textile industry, for example, there are more than 100 ecolabels and standards that address aspects of sustainability (EcoTextileLabels, 2014). However these competing labels tend to vary significantly, with some being more substantive in their institutional requirements while others are more symbolic. For instance, more rigorous ecolabels expect firms to improve their products' environmental impacts over time, publicly report on their improvements, and obtain external certification, while more symbolic labels may only expect that firms collect data on specific environmental metrics (Darnall et al., 2014). The existence of these competing (and varied) labels is likely to create confusion among external stakeholders because the market lacks an institutional mechanism that ranks ecolabels for their institutional credibility (Clarren, 2009). Similarly, variations also exist among competing ecolabels in that industry sponsored ecolabels tend to use weaker environmental standards than ecolabels designed by other sponsors (Darnall et al., 2014). This situation fuels stakeholders' distrust of corporate sustainability messages and potentially undermines all ecolabels because stakeholders have difficulty differentiating among them (Clarren, 2009).

A second type of product label—the multidimensional label—is relevant to all types of consumer goods and services. Multidimensional labels include rankings, percentages, or scores, and are more effective at conveying complex environmental information (Teisel, Peavey, & O'Brien, 2001). Examples include numerical information about pounds of greenhouse gases, toxic air pollutants, and hazardous waste, in addition to gallons of water consumption. These labels are not prevalent in the market in large part because—to be most effective—these labels have to be legislated, and lack of political will prevents their promulgation. By virtue of their mandatory nature, all firms would report the same product information contained in the multidimensional ecolabel. Firms that otherwise would prefer to avoid using an ecolabel therefore would be required to publicly disclose information about their products' sustainability impacts. The outcome of such a policy is increased transparency across all products and firms' sustainability strategies. These labels necessarily expose firms that produce products in a less sustainable way, and create a foundation for companies to obtain more widespread recognition in the market for their broader sustainability strategies. They also encourage more firms to

proactively invest in environmental innovations. Equipped with more information, external stakeholders would have the choice to respond by adjusting their behaviors related to consumption, investing, and other factors. Such changes may also shape societal norms, and influence some individuals who otherwise would not have considered the sustainability attributes of their purchasing decisions.

## *Future Research Directions*

Whether one-dimensional or multidimensional, for ecolabels to be successful at addressing information asymmetries stakeholders must perceive them to be credible in their ability to deliver accurate sustainability information. When considering our role as Organization and Environment (O&E) scholars, recognizing these perceptions will be important toward understanding stakeholders' willingness to rely on the information conveyed in any ecolabel. Prospective research should consider these issues to a greater degree so that ecolabel credibility can be strengthened. For instance, while industry ecolabels may tend to have weaker institutional structures, it could be that ecolabels are designed in a more robust way when industry associations collaborate with environmental NGOs to develop their ecolabels. Such collaborations may encourage more widespread industry use of the label because of the legitimacy these ecolabels have within their professional networks, while meeting environmental NGOs' sustainability objectives. Future research might also explore if alternative organizational forms, including as hybrid organizations that combine for profit and nonprofit entities (Haigh & Hoffman, 2014), might be more effective at designing ecolabels with more robust institutional structures.

Additionally, researchers need to move beyond studies examining a single ecolabel and think more broadly about what external and organizational conditions are necessary for product labels to influence firms' sustainability strategies and stakeholder behavior. In so doing, we should draw on the knowledge that is developing within application areas outside of the *O&E* setting. For instance, in addition to the nutrition labels mentioned earlier, the U.S. Occupational Safety and Health Administration's chemical information label, EPA's fuel efficiency labels, and the U.S. Food and Drug Administration's over-the-counter drug facts label are well-established labels within the U.S. market. Although not directly related to environmental concerns, they do address broader sustainability issues, and *O&E* researchers might be able to learn from them. For instance, previous research on the food industry's labels suggests that the success of voluntary labeling relates to whether (1) leading companies take part, (2) standards deter opportunism and apply globally, (3) rules are transparent, and (4) conformance is ensured (Sharma, Teret, & Brownell, 2010). These ideas parallel concerns expressed by researchers studying firms' strategic responses to information-based environmental policies and programs (e.g., Darnall, Potoski, & Prakash, 2010; Delmas & Keller, 2005; Kim & Lyon, 2011; Potoski & Prakash, 2005; Rivera & deLeon, 2004, 2008). They are likely to have important implications for research related to ecolabeling as well.

Related to one-dimensional ecolabels, other relevant questions for *O&E* researchers to ask relate to the timing in which firms use these labels. For example, early adopters of these ecolabels may incur greater risk because the labels lack market recognition, which diminishes early adopters' differentiation advantages. However, late adopters are likely to limit their differentiation opportunities because competing firms will also use the label. While these timing concerns may be less relevant to firms that use mandatory multidimensional ecolabels, users of multidimensional labels may face other difficulties because these labels are necessarily more complicated visually. Firms therefore may need to invest additional resources toward engaging their external stakeholders such that interested parties understand the multifaceted labeling information and arrive at informed purchase/investment decisions. Prospective

research would benefit from considering what forms of stakeholder engagement are most effective.

Finally, prior research has suggested that the overall proportion of consumers' ecolabeled purchases remains modest (Clark & Russell, 2005), most likely due to a lack of credible market information and consumers' limited environmental knowledge (Darnall, Ponting, & Vazquez-Brust, 2012). However, in spite of consumers' relatively modest eco-purchases, some evidence suggests that it would only take a small proportion of consumers who actively purchase ecolabeled products to create incentives for the broader population of businesses to strategically shift their production decisions in a way that is more sustainable (Capon & Lutz, 1983; Moorman, 1998). Pressures from other external stakeholders (e.g., investors and environmental NGOs) may create additional incentives that accelerate this strategic shift. A logical set of questions to ask therefore includes the following: What proportion of consumers must be persuaded to purchase ecolabeled products before this sort of green production revolution occurs? To what extent do ecolabels influence sustainability-oriented investors and reduce environmental NGO pressures? What sort of labeling information might be more effective at persuading behavioral changes in across all stakeholder groups?

Addressing the research items described above necessarily requires that *O&E* scholars look beyond the parameters that typically define environmental strategy research. In so doing, we should consider burgeoning research produced by scholars in psychology, marketing, communication, and public policy because each of these fields have considered aspects of the question: all else equal, is the behavior of external stakeholders influenced by the presence of ecolabels? By drawing on this knowledge, *O&E* researchers may be in a unique position to more fully understand the potential crosscutting relationships between firms' sustainability strategy and their external stakeholders.

## Stakeholders, Environmental Information, and the Potential of Collaboration

While this regular issue of *O&E* was not specifically designed to illustrate issues related to ecolabels, it is particularly interesting to see that many observations identified by our regular contributors are congruent with our editorial discussion above. We offer four general reflections.

First, all the articles in this *O&E* issue (including this editorial) emphasize the importance of stakeholders in the field of sustainable management. Among *O&E* scholars, this interest is not particularly new, however, all the authors suggest that additional insights are needed. One of the most common and general definitions of stakeholders is provided by Freeman (1984), who describes stakeholders as those groups and individuals who can affect or be affected by the actions connected to value creation and trade. In this issue, Hörisch, Freeman, and Schaltegger (2014) hone this description by developing a theoretical framework that links stakeholder theory to the sustainability arena. Similarly, our editorial discussion describes how specific tools enable firms to enhance their interactions with stakeholders.

The three other articles in this *O&E* issue focus on several stakeholders that have received relatively minor attention in previous literature, and use innovative empirical analyses to explore their importance. Two of the articles are related to the broad topic of sustainable investments. Paetzold and Busch (2014) assess the relationship between wealthy private investors and sustainable investments. Nikolakis, Nelson, and Cohen (2014) examine the connection between a sample of socially responsible investment mutual funds and indigenous peoples. Finally, Lin (2014) analyzes firms' decisions to collaborate with government in the environmental arena developing formal partnerships.

The second general refection that we offer is that all the articles in this issue emphasize the importance of environmental information toward enabling firms to pursue their sustainability agendas. Stakeholders need relevant, clear, and verifiable information about firms' sustainability activities in order to make appropriate decisions. Investors, indigenous peoples, governments, environmental NGOs, and other stakeholders increasingly are demanding trustworthy information about firms' sustainability activities, The absence of this information prevents individuals from selecting appropriate socially responsible investments (Nikolakis et al., 2014), inhibits greater commitments by wealthy private investors (Paetzold &Busch, 2014), and increases risk within business–government partnerships (Lin, **2014**). While ecolabels are important information tools that help inform relevant stakeholders about firms' sustainability activities, additional institutional mechanisms are needed.

Our third reflection relates to the fact that while all the articles highlight the potential importance of collaborative, voluntary agreements, they all consider that the government (and coercive regulation) must play some role. Hörisch et al. (2014) are particularly clear when they argue for education, regulation, and sustainability-based value creation for stakeholders in order to reinforce the potential to make a difference in the sustainability arena. Similarly, our editorial discussion advocates for the use of mandatory ecolabeling policies to increase the transparency of firms' sustainability activities, and create incentives for additional environmental innovations.

Fourth, each of the articles are realistic about the mixed altruistic and egotistical motivations of the agents participating in sustainability issues. Paetzold and Busch's (2014) study of wealthy private investors is particularly useful in understanding this situation. Wealthy investors show a "generally high interest in sustainable investing," but they are not inclined to allocate resources toward sustainability investments because of their perceptions regarding the high volatility of these investments, in combination with a short investment time horizon and recent financial losses. In other words, they have a preference for sustainable investments—but only if these investments are also financially competitive (see Albertini, 2013 for a recent meta-analytical review of the relationship between financial performance and environmental management). The tensions between financial profitability and sustainability pursuits are similarly seen in fund managers' decisions about the breadth of socially responsible mutual funds (Nikolakis et al., 2014) and in firms' decisions to use ecolabels.

## This Issue

Beyond these common features, each article in this *O&E* issue promises its own research contributions. We now briefly outline the main contributions of each article.

Hörisch et al. (2014) examine links, similarities, and dissimilarities between stakeholder theory and sustainability management. The authors identify three challenges of managing stakeholder relationships for sustainability: strengthening the particular sustainability interests of stakeholders, creating mutual sustainability interests based on these particular interest, and empowering stakeholders to act as intermediaries for nature and sustainable development. We particularly like the emphasis of this article in that the unit of analysis is not the company itself but the relationships between an organization and its stakeholders.

Paetzold and Busch (2014) conduct interviews with private wealthy investors to assess their perception and interest related to sustainable investments. The authors show that while these investors may allocate resources toward sustainable investments, or are interested in sustainable investments, they generally do not understand what it means to invest in firms that pursue sustainability objectives. Among individuals who have greater clarity, their investment objectives seem more diverse than a purely financial or sustainability-oriented goals. In instances where wealthy investors openly disdain sustainable investment, these individuals still invest in some sustainable products and consider (to some extent) the

sustainability/ethical aspects of their investment decisions. The article therefore highlights that significant potential may exist for more sustainable investment if better information was available and if a balanced combination of financial and socioenvironmental qualities were to exist.

Nikolakis et al. examine the extent to which indigenous peoples and their rights are being recognized by non–state market-driven governance mechanisms meant to promote more sustainable business practices, illustrated in this case by North American socially responsible investment mutual funds. Using survey data, and a review of secondary internal documentation, the authors show that socially responsible investment funds that consider impacts on indigenous people are limited. Moreover, those that exist have different investment orientations than funds that do not consider impacts on indigenous people, and especially those that emphasize environmental factors. These results inform previous observations indicating that socially responsible investment funds tend to emphasize environmental criteria over other social issues—and investment funds that focus on environmental criteria tend to ignore indigenous people and the broader social context in which these people are often embedded.

Finally, Lin (2014) uses resource dependence theory to systematically explain what types of firms are likely to partner with governments to address environmental challenges via government–business partnerships. The government–business partnerships are voluntary collaborations between governments and businesses to share the resources, risks, and mutual benefits in their pursuit of a common set of goals (e.g., a myriad of environmental issues as diverse as energy, waste, or toxins). The author uses interesting data from 377 environmental alliances formed between 1985 and 2013 to empirically assesses firms' likelihood of choosing government–business partnerships for environmental improvements rather than selection of other cross-sector and interfirm partnerships. Her results suggest that the government–business partnerships are likely to form when firms are in vulnerable strategic positions, such as when their survival relies substantively on receiving government support. They are also likely to form when firms have strong resource or social positions that allow them to leverage governmental power in the development of strategic opportunities related to environmental improvements.

Taken together, the collection of articles that form this issue shows the importance of how collaborative initiatives can advance sustainability strategy, and extend previous literature by discussing how accurate information is vital to these interactions.

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## Notes

1. External stakeholders are individuals who are influenced by an organization but is not a member of it (Freeman 1984). These stakeholders include customers, investors, environmental nongovernment organizations (NGOs), regulators community members, among others.
2. The FTC refrained from addressing issues of misleading statements related to sustainability more broadly.

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