



Analysis

Determinants of demand for green products: An application to eco-label demand for fish in Europe

Dorothee Brécard^{a,*}, Boubaker Hlaimi^b, Sterenn Lucas^a, Yves Perraudou^a, Frédéric Salladarré^a

^a Université de Nantes, LEMNA, Institut d'Économie et de Management de Nantes, IAE, Chemin de la Censive du Tertre, BP 52231, 44322 Nantes Cedex 3, France

^b Université de Rennes 1, LEST, IUT Saint Malo, Chemin de la Croix Désilles, 35400 Saint Malo, France

ARTICLE INFO

Article history:

Received 3 November 2008

Received in revised form 22 July 2009

Accepted 25 July 2009

Available online 31 August 2009

Keywords:

Environmental preferences

Eco-label

Seafood

ABSTRACT

In this paper, we confront the theoretical motivations of the consumption of eco-friendly products and the factors influencing the European perceptions regarding the fact that “fish caught using an environmentally friendly technique may carry a special label”. We take advantage of the recent integration of non-economic elements in the microeconomic analysis of consumers' behavior in order to highlight the factors leading to their demand for green products. Thanks to an original European survey on seafood product carried out on more than 5000 consumers, we test the influence of intrinsic motivation, information, localization and socio-economic factors on the demand for an eco-label for fish.

Our results show a significant connection between the desire for eco-labeling and seafood features, especially the freshness of the fish, the geographical origin of the fish and the wild vs farmed origin of the fish. Moreover, we prove the major role played by the fish price. We also demonstrate that the ecological issue regarding fisheries is highly connected to consumer information, intrinsic motivation and socio-economic status: the typical “green fish consumer” is a young woman, well educated, well informed on the state of marine resources and not very trusting of the regulation of the fisheries. Consumers who are aware of the importance of marine resource preservation have the same profile.

© 2009 Elsevier B.V. All rights reserved.

1. Introduction

The rise in consumers' ecological consciousness in recent years has increased their willingness-to pay for green products (OECD, 2002b). OECD (2002a) points out that 27% of consumers in OECD countries can be labeled “green consumers” due to their strong willingness-to-pay and strong environmental activism. 10% of these are “green activists” with high environmental activism but lower willingness-to-pay. The others are “latent greens” (40%) or “inactive” (23%). In its 2005 paper on the effects of eco-labeling schemes, OECD compiles several studies revealing greater consumer willingness-to-pay for eco-labeled products. The 2008 Eurobarometer shows that 75% of Europeans are “ready to buy environmentally friendly products even if they cost a little bit more.” However, only 17% of these declare having recently bought such “products marked with an environmental label (European Commission, 2008).” A reason may be the inability of 42% of them to discriminate environmentally friendly products from other products even with an eco-label. Another reason can arise from the fact that some of them think that responsible consumption is synonymous with a lower consumption, like 75% of French people questioned by Ademe/Ethicity (2008). The question of the determinants of demand for “green products” is thus particularly significant.

In a standard microeconomic approach, the willingness-to-pay more for a green product than for a “brown” one reflects a higher marginal utility when buying a green product rather than a brown one. It also reveals the consumer's environmental preferences. However, there are several factors to take into account when depicting such preferences. First of all, the individual decision-making process can be influenced by psychological, moral and cultural factors. Frey and Stutzer (2006) associate economic and psychological approaches in order to study “environmental morale and motivation.” They argue that individuals are driven by altruism, social norms and reciprocal fairness, internalized norms (related to high principles inducing self-evaluations) and intrinsic motivation (i.e. the willingness to pursue an activity for the welfare it induces in itself). Berglung and Matti (2006) add that individual decisions depend on ethical values and beliefs, customs, culture and several kinds of social, political and moral values, and also on institutional settings which are likely to shape such attitudes by encouraging or discouraging some behaviors and attitudes. Similarly, Torgler and García-Valiñas (2007) show that political interest and political awareness are major determinants of the Spanish' attitude towards preventing environmental damage. Individuals' economic behavior regarding environmental issues is also justified by their civic values. The representation of consumers' environmental preferences through their utility functions should also reflect more or less accurately these multiple non-economic determinants.

* Corresponding author. Tel.: +33 2 40 14 17 35; fax: +33 2 40 17 49.
E-mail address: dorothee.brecard@univ-nantes.fr (D. Brécard).

Other important factors explaining pro-environment attitudes are individual socio-economic characteristics. Several studies, reviewed by [Torgler and García-Valiñas \(2007\)](#), point out differences in preferences according to age, gender, marital status, occupational status, geography and especially income and education. The consumer is indeed confronted with budget constraints that may limit expenditure, particularly on green products. The education level may also impact on consumer attitude in their knowledge of environmental issues and their treatment of eco-information.

The role of information diffusion and absorption has been clearly highlighted in studies dealing with eco-labels. The eco-labels are indeed an instrument used by firms and governments in order to raise awareness of the higher ecological quality of a given product with respect to unlabeled goods. Since the environmental consequences of the production and the consumption of a product are generally unobservable, the eco-label is the only way for consumers to collect such information. Firms draw use eco-labels to win market share thanks to a differentiation strategy surfing the wave of consumers' ecological awareness. Governments' goals are the improvement of the environment through a substitution of green for brown products. The success of such a policy depends on consumer reaction to this environmental information. [OECD \(2005\)](#) argues that consumers are often prepared to pay more for eco-labeled products and that the premium they are prepared to pay depends on their confidence in the certifying organization, their levels of education, their environmental involvement, and the type of additional information available. These results have been recently confirmed, for "greener" vehicles, by [Teisl et al. \(2008\)](#) and, for "green" electricity, by [Ek and Söderholm \(2008\)](#) and [Salmela and Varho \(2006\)](#). Moral and social norms play also an important role in electricity choices ([Kotchen and Moore, 2007](#); [Wiser, 2007](#); [Ek and Söderholm, 2008](#)).

The impact of seafood product eco-labeling on consumer behavior is an important issue. The state of the world fisheries and aquaculture is deeply worrying in spite of international regulation, such as the conservation measures adopted for the European Common fisheries policies and by the regional fisheries organizations or the FAO's code of conduct for responsible fisheries. According to the 2007 FAO report, about half of the world fisheries are fully exploited, 17% are over-exploited and 7% are depleted ([FAO, 2007](#)). It must be remembered that fishing has the distinctive feature of being a harvest economics, since the marine resources remain renewable if they are harvested at a lower rate than they are naturally replenished. Fish eco-labeling may contribute to reaching sustainable fish exploitation if producers change their fishery management and consumers turn towards eco-friendly seafood. Several seafood eco-labels, recently analyzed by [Washington \(2008\)](#) for the FAO, have been developed by non-governmental organizations and a few retailers and seafood industry bodies. The Marine Stewardship Council (MSC) eco-label for fisheries, created in 1997 by WWF, is the most well-known and the extensive one. While the MSC has adjusted its criteria and procedures in light of FAO guidelines, it remains criticized for not incorporating the particular circumstances of developing countries ([Washington, 2008](#)) and for not including the overall environmental impact of the life cycle of seafood products ([Thrane et al., 2009](#)). [Thrane et al. \(2009\)](#) emphasize that wild-caught seafood not only have a direct effect on the targeted fish stock, but also on the overall marine eco-system (on other species, birds, seafloor, etc.) and the external environment (particularly on global warming). They call for an expansion of the criteria used by the MSC for eco-labeling and recommend the inclusion of energy use and chemicals, similarly to the Swedish KRAV label. Since 2005, the European Commission has been debating adopting its own label guidelines and taking into consideration other criteria than mere ecological sustainability ([Guillotreau et al., 2008](#)). Thus, there is no consensus over either sustainability criteria or even certification procedures. Furthermore, the most popular label, the MSC, only covers less than 1% of the global fish trade. This raises the

question of the influence of such a label on seafood consumption. There are a number of papers dealing with the issue of consumer reaction to seafood eco-labeling. [Wessels et al. \(1999\)](#) analyze individual preferences between labeled and unlabeled seafood products and emphasize the importance of education, knowledge of and sensitivity to environmental and marine resource issues all of which favor pro-label preferences. [Teisl et al. \(2002\)](#) estimate the effects of dolphin-safe labels on canned tuna consumption and show the beneficial impact of label introduction on long-term demand. Once again, the information available to consumers seems to have strongly influenced their attitudes.

Our paper intends to provide new insights into the consumer demand for eco-label on seafood products. We make the assumption that determinants for consumption of labeled seafood products are the same as those for the desire for eco-labeling. Accordingly, we analyze all the determinants for demand for green products set out by microeconomics and economic psychology. We also infer socio-economic and psychological factors explaining the eco-label demand.¹ We also attempt to compare the socio-economic characteristics of consumers who declare to be pro-label and those who claim to pay attention to the marine resources level, in order to determine if those consumers are one and the same.

In order to assess these theoretical and empirical statements, we undertake an econometric analysis of European consumer demand for eco-label in the seafood sector. We define green demand as the demand for "fish caught with an environmentally friendly technique, and which may carry a special label". This study is based on a European survey about seafood products carried out on more than 5000 consumers in Belgium, Denmark, France, Italy and the Netherlands ([Europêche/ETF, 2008](#)). Although the main focus of this survey is the image of the European fishing industry, several questions deal with environmental information and concerns as well as purchase criteria for seafood. Combining the responses to these questions with the consumers' socio-economic characteristics allows us to carry out an analysis of the determinants of green seafood demand.

Our results show a significant connection between the acceptability of eco-labeling and other parameters such as the product form, the geographical origin of the fish and the wild vs farmed origin of the fish. Moreover, the consumers who are in favor of an eco-labeling policy pay more attention to prices when buying fish, tend to consider that fishing is likely to reduce fish stock over time and believe to a certain extent that fisheries are not sufficiently regulated. The sociological profile of a green fish consumer is a young, well educated woman.

The remainder of the paper is structured as follows. In [Section 2](#), we analyze theoretical determinants of demand for green products. In [Section 3](#), we introduce the database and the econometric method. In [Section 4](#), we analyze our empirical results and compare them with theoretical predictions. [Section 5](#) brings the paper to a conclusion.

2. Determinants of green demand

In this section, we provide an overview of theoretical factors encouraging and discouraging green demand. Our analysis rests on the assumption that consumption of green products and demand for eco-labeling are two sorts of the so-called 'green demand' and have thus the same determinants. These factors may be classed into three categories: the intrinsic consumer motivation, consumer preference and consumer constraint. We do not seek here to develop an original theoretical model encompassing all these factors, but rather take advantage of the existing literature for an as exhaustive as possible analysis of green demand.

¹ But we are not able to provide an estimation of the willingness-to-pay for the eco-label with our qualitative data.

Download English Version:

<https://daneshyari.com/en/article/5050879>

Download Persian Version:

<https://daneshyari.com/article/5050879>

[Daneshyari.com](https://daneshyari.com)