Selling only sustainable seafood: Attitudes toward public regulation and retailer policies

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ABSTRACT

This study investigates consumer attitudes toward stores selling only sustainable seafood in

seven European countries. Using a split sample design, half of the respondents were asked if

they would support new *regulations* requiring stores to sell only sustainable labeled seafood.

The other half was asked if they would continue to buy their seafood at their preferred

seafood store if the store implemented a new *policy* of selling only sustainable labeled

seafood. Respondents were on average positive to new sustainability regulations that

increased prices by less than 7%, and would on average not change store unless prices

increased by more than 8%. Country differences are investigated and implications for private

and public policies related to sustainability of seafood discussed.

Keywords:

Corporate social responsibility, Integral regression, Multiple price lists, Sustainable seafood,

Willingness to pay.

1. Introduction

With increased attention to illegal and unsustainable fisheries, sustainable fisheries are becoming certified and labeled. In recent years, the numbers of sustainability certified fisheries and labeled seafood products have increased rapidly (Kalfagianni and Pattberg, 2013), and most retailers in developed countries are now selling a wide variety of sustainable labeled seafood products. Large retailers including Walmart (2015), Tesco (2014), Carrefour (2014), and IKEA (2015) have also begun to include sustainable sourcing of seafood in their corporate social responsibility (CSR) programs. This paper investigate consumer attitudes toward public regulation and retailer policies of selling only sustainable labeled seafood in seven European countries.

According to the Food and Agriculture Organization of the United Nations (FAO, 2014), the proportion of marine fish stocks fished within biologically sustainable limits declined from 90% in 1974 to 71% in 2011. Some authors even claim that the FAO seriously underestimated the number of collapsed stocks and that their numbers give an overoptimistic view of the sustainability situation for seafood (Froese et al. 2012). Environmental organizations and stakeholders in the seafood industry have developed several transnational certification and labeling scheme to foster sustainable fisheries and aquaculture practices worldwide. Kalfagianni and Pattberg (2013) discuss the effectiveness in reaching the overall goal of sustainability in fisheries and aquaculture of the five largest seafood sustainability labeling schemes: Marine Stewardship Council (MSC) (www.msc.org), Friend of the Sea (www.friendofthesea.org), Aquaculture Stewardship Council (ASC) (www.asc-aqua.org), Best Aquaculture Practices (www.gaalliance.org), and Global G.A.P. (www.globalgap.org). They find few measurable environmental improvements, and question the ability of marine and aquaculture certification to deliver effective governance solutions for sustainable seafood.

Nowadays, consumers face a choice between sustainable labeled and unlabeled seafood in most stores. A number of recent studies investigate consumer preferences and willingness to pay (WTP) a premium for sustainable-labeled seafood. Roheim et al. (2011) used UK scanner data, Uchida et al. (2014a) and Uchida et al. (2014b) conducted a choice experiment and experimental auctions in Japan, respectively, Chen et al. (2015) conducted a choice experiment in France, and Hallstein and Villas-Boas (2013) studied a sustainable traffic light advisory implemented by a regional retailer in California. Common to these papers is their focus on consumers' choice between sustainable labeled and unlabeled or unsustainable labeled seafood. While Uchida et al. (2014a) finds that consumers are willing to pay a premium of 26% for sustainability labeled seafood, Hallstein and Villas-Boas (2013) find no effect on the demand for the red-labeled fish. These mixed results indicate that although consumers prefer sustainable seafood, many pay limited attention to sustainability when buying seafood.

If sustainability labeling is not making consumers shy away from unsustainable seafood, governments, organizations, and retailers must look at other possibilities. To reduce the demand for unsustainable seafood, governments can regulate the sales of seafood or retailers can themselves implement store policies of selling only sustainable labeled seafood. None of the previous sustainable seafood studies examine asks people to evaluate public policies limiting the sales of unsustainable seafood. As a result, there is very little knowledge of people's attitudes toward sustainability regulations on the sales of seafood. One question that arises is whether one can interpret the positive WTP for sustainable seafood from consumer studies as support for new sustainability regulations. Earlier studies have shown that peoples might show different preferences when asked to evaluate labeled product than when they are asked to evaluate public regulations on the same issue (see the consumer-citizen duality literature; Hamilton et al., 2003; Vanhonacker et al., 2007; Alphonce et al.,

2014). For example, they might prefer caged eggs if available in stores and at the same time support a ban on caged eggs. Asking about regulation raises other considerations than asking what a consumer would like to buy in a market. Hence, if one want information about people's preferences for regulation, one should ask them about regulation, not about product choices in a choice experiment.

Based on studies that find that consumers are willing to pay more for sustainable labeled seafood, Roheim (2008) argues that sustainability labeling of seafood can have a positive effect on a retailer's public image. However, no previous studies have investigated consumer attitudes to stores that implement sustainable seafood policies. As noted, transferring knowledge from consumers choosing between products to consumers choosing between stores is not straightforward. Retailers might use sustainable seafood as part of their CSR profiling, where they want to give the impression of being a company with high moral, ethical, and social standards. Unfortunately, Ailawadi et al. (2014) find that environmental friendliness is one of the less effective CSR efforts and that a large percentage of consumers might even be turned off by it. Furthermore, Bhattacharya and Sen (2004) note that positive attitudes toward a company as a result of CSR initiatives may not translate into increased WTP, arguing that consumers are reluctant to trade off core product attributes such as price for improved CSR.

Despite the uncertain benefits of CSR initiatives, most large retailers publish yearly reports on their CSR activities, and seafood sustainability is included in most of these reports. Examples of companies using sustainable seafood as a CSR component include IKEA, Walmart, Tesco, and Carrefour. IKEA write in their sustainability report for 2015: "We achieved our goal for the fish and seafood for our restaurants, Bistros, Swedish Food Markets and co-worker restaurants to be either Aquaculture Stewardship Council (ASC) or Marine Stewardship Council (MSC) certified by FY15." In a footnote, they say "Crayfish is an

exception as there are currently no certified fisheries" (IKEA, 2015, p. 7). While IKEA sells only a few types of seafood, making it relatively easy for them to reach their sustainability targets, large food retailers such as Walmart, Tesco, and Carrefour are expected to offer a wide variety of seafood products. Examination of the CSR reports of these large food retailers, shows targets and language that are vaguer than those used by IKEA. In Tesco's society report, they write: "Through our responsible seafood sourcing strategy, we are working with the Sustainable Fisheries Partnership – a fisheries expert NGO – to assess the sustainability of all our fisheries. This will help to ensure that our sourcing practices do not contribute to overuse or destruction of the marine environment" (Tesco, 2014, p. 29). Similar vague language can be found in Carrefour's responsibility report: "Protecting marine resources: When sourcing seafood products, Carrefour considers the sustainability of marine resources through, for example, its choice of species or by relying on certified products that guarantee sustainable fishery. The Group therefore decided to halt the sale of certain deep sea fish and developed fish products certified by the MSC. Carrefour has also supported the efforts of the *From Nord* fishery in France to have its sole product line evaluated by MSC. If successful, it will be the first French sole fishery to become certified" (Carrefour, 2014, p. 46).

The world's largest retailer, Walmart, also includes sustainable seafood in their 2015 Global Responsibility Report. They write that more than 90% of their seafood is sustainably sourced and that they have the following aspiration: "Require 100 percent of fresh, frozen, farmed and wild seafood to be third-party certified by Marine Stewardship Council (MSC) or Best Aquaculture Practices (BAP), or managing a program in accordance with the Principles of Credible Sustainability Programs developed by The Sustainability Consortium, or actively working toward certification or involved in a Fishery Improvement Project or Aquaculture Improvement Project in the U.S., U.K., Canada and Sam's Club U.S." (Walmart, 2015, p.

81). As seen from these reports, none of the large food retailers are currently sourcing only sustainable seafood; they are sourcing sustainably where it does not disrupt supply to their customers, but are also selling unsustainable seafood.

Given this background, a consumer survey of attitudes toward public regulation and retailer policies of selling only sustainable labeled seafood is conducted in seven European countries. To our knowledge, this is the first study of attitudes toward public regulation of sustainable seafood sales and also the first study of attitudes toward store policies on sustainable seafood sales.

The paper proceed in section 2 with a description of the survey data and estimation methods. Sections 3 and 4 provide results and discussion, and section 5 concludes.

2. Data and methods

A web survey of consumer attitudes toward sustainable seafood was conducted by TNS Gallup in seven European countries in February 2016. As part of the survey, two WTP questions were included. Half the participants received a WTP question that asked whether they would support new regulations requiring stores to sell only sustainable labeled seafood; the other half were asked whether they would continue to buy their seafood at their current seafood store if the store implemented a new policy of only selling sustainable labeled seafood.

2.1 Sample

The survey had 3542 respondents from Norway, Germany, England, France, Spain, Italy, and Poland. Of the total sample, 2991 respondents between 18 and 70 years old completed all questions used in this paper. Approximately 500 respondents from each of the seven countries answered the survey. After excluding people who had not been able to

respond consistently to the WTP questions, some who were outside the age range, and the 1% fastest respondents, there are between 413 and 450 respondents per country. A typical answer for someone who was excluded because of inconsistencies was that they went back and forth between supporting and opposing new regulations as the price increased.

Table 1 shows that 52% of respondents were female and that there were no significant differences between the seven countries with respect to gender (Wald (6) = 1.34, p = 0.96). Overall, the mean age was 43 years; Norway stands out with more respondents above 50 years (mean age, 46 years). A Wald test of equality of the seven group means for *Age* is rejected (Wald (6) = 25.81; p = 0.00).

Table 1 here

2.2 WTP questions

A short script was included before the WTP questions to motivate people to behave according to their attitudes. The regulation question asked whether the participants would support or oppose new regulations if it would reduce variety and increase prices. Using six price intervals, respondents were asked to indicate the highest price increase they would accept in the following estimation. For the store policy question, the participants were asked whether they would continue to buy seafood at the same store if the new store policy reduced variety and increased prices. As for the regulation question, also this second question was asked using six price intervals, indicating the highest price increase they would accept in the WTP estimation.

Table 2 presents the two questions, which use two different answering scales, but the same WTP values.

Table 2 here

As can be seen from the question, the respondents were asked to give a WTP response to a regulation or store policy that result in only sustainable fish in the stores, an increase in prices and a reduction in variety. Since many popular fish types are not available as sustainability labeled, a reduction in variety is a highly likely consequence of a new sustainability regulation or store policy. By combining the sustainability regulation or store policy with a reduction in variety, it is not possible to disentangle them in the analysis and estimate a WTP for sustainability without reduction in variety. Hence, the elicited WTP is for sustainability regulation or store policy that result in a reduction in variety.

2.3 Integral regression

The analysis follow common practice used in multiple price list (MPL) studies and estimate an interval regression model (e.g., Andersen et al., 2006; Alphonce and Alfnes, 2014). Integral regression is used because the exact WTP is not known, only an interval around the WTP. The interval regression model is used to investigate how the WTP for sustainability depends on the treatment (regulation vs. store policy), country (UK, Germany, France, Spain, Italy, Poland, and Norway), gender (female, male), and age group (18–35, 36–50, 51–70 years). The model is specified as follows:

$$WTP_i = (\boldsymbol{\alpha'}\boldsymbol{C}_i + \boldsymbol{\gamma'}\boldsymbol{D}_i)S_i + (\boldsymbol{\beta'}\boldsymbol{C}_i + \boldsymbol{\delta'}\boldsymbol{D}_i)R_i + \varepsilon_i \qquad (1)$$

where *WTP* is a latent variable for willingness to pay identified by an upper and lower limit; $\boldsymbol{\alpha}, \boldsymbol{\beta}, \boldsymbol{\gamma}$, and $\boldsymbol{\delta}$ are coefficient vectors; *C* is an effect-coded vector for the seven countries and include a constant; *D* is an effect-coded vector for demographic groups; *S* is dummy for the store policy treatment and R is a dummy for the regulation treatment; and ε is the error term.

Using effect-coded independent variables makes the coefficient for the treatment-specific constant equal to the estimated mean of the WTP for the treatments. The country-specific coefficients give the difference from the mean. For Spain, which is the base, the negative of the sum of all the country-specific coefficients is taken to obtain the difference from the mean. Likewise, the demographic variables are effect coded and the coefficient gives the difference from the mean. Male and the age group 18–35 years are the base and can be recovered by taking the negative of female and the negative of the sum of the two age coefficients, respectively.

2.4 Validity of survey results

There are several well-known problems with surveys such as this one that should be taken into consideration when evaluating the WTP results. First, hypothetical bias is a problem that arises when respondents are asked hypothetical WTP questions with no economic consequences for themselves. This will typically lead to higher WTP estimates than consequential questions (Murphy et al., 2005). Second, social desirability bias typically makes respondents give a positive impression of themselves; in this context, that would likely be by stating a relatively high WTP (Grimm, 2010). Third, the price list effect makes the respondents use the length of the price list as an anchor for their WTP responses (Alphonce and Alfnes, 2016).

The price list for the two treatments was the same, and the seven countries responded to the same questions and the same price list. Hence, the comparisons made in the result sections should be internally valid. However, there is no literature exploring the size of the hypothetical bias, the social desirability bias, or the price list effect in questions about support for public regulations or in questions about store choices. With respect to the external validity

challenges from such biases, it is worth noting that the WTP estimates in this study are at the lower end of WTP estimates for sustainable seafood presented in the literature.

3. Results

Table 3 presents the proportion giving different WTP answers in the seven countries. The recorded number in the table is the highest WTP the respondents supported. To find the total number positive to, for example, 1-5% increase, one need to sum up all groups saying that they would support a 1-5% increase or more. To find those negative to a 1-5% price increase, one need to sum up all those negative to a 1-5% price increase or less.

Starting first with those not willing to pay more. 9% said they would change at a zero price increase in the store policy scenario, and 18% of respondents (9% change at zero price increase + 9% change at 1-5% price increase) say they would change store if the prices increased with 1-5%. The similar numbers for the regulation scenario was 10% and 27% (10% oppose at zero price increase + 17% oppose at 1-5% price increase). In other words, more people oppose the new regulations than would change stores if the retailer introduced a new store policy.

There are relatively large differences between countries. Summing up those that are positive a 1-5% increase in prices or more, 89% of respondents in Norway and Germany would continue buying at their current store if there was a 1-5% increase in prices, while in Spain and France the values are only 76% and 74%, respectively. In Norway, Germany, and Italy, 35%, 31%, and 30% would continue buying at their current store if there was a price increase of 11-20%, while in Spain and France only 16% and 15% would do the same. In Norway and Germany, 82% and 83% of participants would support new regulations even if it resulted in a price increase of 1–5%, while in Poland, Spain, and France only 63%, 65%, and 66% supported the regulation at a price increase of 1–5%. In Norway, Germany, and Italy,

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39%, 27%, and 28% would support new regulations even if it results in a price increase of 11-20%, while in Poland, Spain, and France the corresponding values are only 11%, 9%, and 11%, respectively. Test for significant differences in WTP is later conducted using integral regression.

Table 3 here

A follow-up question was asked to those who said that they would change store or oppose the regulation at zero price increases, and to those that would change store or oppose the regulation at all positive price increases. Table 4 presents the distribution of the responses for the four groups.

Table 4 here

A majority of those who said no to the store policy or regulation at a zero price increase gave the reason that a wide variety in seafood was more important for them than sustainability.[1] The most common response to being positive at a zero price increase, but not at any other price increase was that they could not afford to pay more for their seafood. For regulation, "I disagree with having to pay more for something that should be guaranteed by those selling the seafood" was almost as common as "I cannot afford to pay more for my seafood."

All seven countries and the two treatment samples were pooled to estimate the integral regression model (Table 5).

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[1] As pointed out by a referee, the reduction in variety is likely important for most respondents. An alternative valuation approach separating sustainability from variety, could have elicited how the reduction in variety affects the WTP.

Table 5 here

On average, respondents in the seven countries were willing to pay 8.03% more before changing stores. The most positive respondents were found in Norway and Germany (3.37 and 1.67 percentage points higher than the mean for all seven countries). The least positive were from Spain, France, and the UK (2.18, 2.11, and 1.81 percentage points below the mean).

Respondents were on average willing to support a new regulation increasing the price up to 6.86%. Those from Norway, Germany, and Italy were willing to support the regulation at price increases 4.27, 2.52, and 2.04 percentage points higher than the average of the seven countries, while respondents from Spain, France, and Poland were willing to support the regulation at price increases 2.61, 3.03, and 2.79 percentage points lower than the average.

This difference in mean WTP between store policy and regulation in the seven countries is significant (Wald (1) = 9.22, p = 0.00). Looking at the individual countries, the difference is significant for Poland (Wald (1) = 17.32, p = 0.00), Spain (Wald (1) = 8.77, p = 0.04), and France (Wald (1) = 4.43, p = 0.04), but not for Norway, Germany, or the UK.

For store policy, neither gender nor age is significant; for the regulation question, female is significantly more positive (p < 0.05). Even though the result is statistically significant, the economic consequences of the gender difference are minor. Women on average support new regulation that increases prices by 1% more for than men (0.53 – (– 0.53) = 1.06).

4. Discussion

4.1 Treatment effects

Even though the differences in WTP between the two treatments are statistically significant, the difference between 6.86% and 8.03% is not large in economic terms. However, grocery stores are often relying on large volumes in a market with low profit margins, and small difference in prices can add up to large amounts.

There are at least three possible reasons for the higher acceptance of price increases in the store policy treatment than in the regulation treatment: (1) CSR effect: conducting the sustainability change as a store policy gives an impression of a socially responsible retailer, and consumers want to be associated with such a company; (2) transaction cost: changing store might increase the time needed for shopping, and thereby make changing store unattractive. There is no such cost associated with the regulation treatment; (3) variety: regulation will reduce variation in the market, while a store policy change will only reduce the variety in a specific store. If consumers wanted to buy yellow- or red-listed seafood, they could go to another store for that specific purchase.

Based on the data, it is not possible to distinguish between these three possible reasons for the higher WTP in the store policy treatment than in the regulation treatment.

4.2 Store policy

Even though a majority of consumers are willing to continue buying their seafood at a store that implements a new sustainability seafood policy, it still might be unprofitable for retailers to adopt such a policy. The loss from the minority of consumers who say they would change seafood store might more than offset the gains from those positive to the new policy. As Hallstein and Villas-Boas (2013) point out, it is not given that consumers will simply switch over to sustainable seafood if some seafood is deemed unsustainable. In their case, consumers reduced overall demand for seafood in the stores with the new sustainability policy.

As an example of the challenges of obtaining a wide variety of sustainable fish, Walmart (2015) mention cultivated shrimp production, which is an industry with many small independent farmers. To ensure supply of sustainable labeled cultivated shrimp, the larger stakeholders in the value chain must ensure that the small independent farmers have an economically viable way to achieve compliance with and become certified by a globally recognized sustainability certifier.

Among those with a negative response to new store policies, preferring a wide variety was the most prominent reason. If the retailers are afraid of losing customers, it might be better for them to work for new industry standards, wait for new regulations, or follow a gradual process of working with suppliers and other stakeholders to increase the supply of sustainable seafood.

4.3 Regulation

The majority of respondents in all seven countries that answered the regulation question stated that they supported new regulation that would restrict sales of sustainable seafood even when it reduces seafood variety in stores and resulted in minor price increases. Current political efforts focus mainly on reducing unsustainable catch quotas to sustainable levels and stopping the illegal, unreported, and unregulated fisheries around the world. As discussed by Pramod et al. (2014), the 1995 FAO Code of Conduct for Responsible Fisheries and the 1992 UN Agenda 21 initiated an international framework to address unsustainable fisheries and fishery crime. However, some 20 years later, unsustainable quotas and illegal, unreported, and unregulated fishing is still a significant global problem.

Although the current monitoring, control, and surveillance systems have substantially improved the prospects of addressing illegal, unreported, and unregulated fisheries, more resources to enforce the current regulations are needed (Pramod et al., 2014). Furthermore,

improved chain of custody and traceability controls should make it possible for importers,

distributors, and retailers to obtain more detailed knowledge about the origin of the seafood

they buy. Here, the stakeholders in the seafood value chain could look at the traceability

efforts in place for meat products (Clemens and Babcock, 2015). More monitoring, control,

and surveillance combined with harsher penalties for importers, distributors, and retailers

selling seafood from unsustainable sources can increase the incentives for seafood merchants

to avoid products of dubious origin.

5. Conclusion

The commitment of large retailers to sourcing sustainable labeled seafood provides

incentives to the collaborative efforts by NGOs, the seafood industry, and governments to

ensure the development and enforcement of sustainable fishery and aquaculture practices.

However, large retailers currently still have problems finding sustainable sources for many

types of seafood.

Seafood customers have become accustomed to a wide choice in many stores and not

all are willing to give up variety to secure sustainability. In trying to maintain a wide variety

and sustainability, some retailers have ended up with rather vague definitions of sustainable

seafood.

Our study shows that European consumers are positive toward both store policies and

regulation that ensure that only sustainable seafood is on sale in stores. Even though store

policies are on average more acceptable than regulation, tougher enforcement of current

regulations and implementation of new regulations might be a more efficient way of securing

improved seafood sustainability in the near future. The fear of losing variety-seeking

customers to retailers not implementing the same sustainability store policies is likely to hold

back the largest retailers from implementing sustainable seafood policies on their own.

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Table 1
Sample

Variable	UK	Germany	Poland	Italy	Spain	France	Norway	Total
Female[a]	0.53	0.50	0.51	0.53	0.51	0.52	0.52	0.52
Age[b]	42.99	43.07	42.05	43.15	41.69	43.43	46.14	43.20
Age 18–35[a]	0.37	0.35	0.38	0.29	0.33	0.36	0.30	0.34
Age 36–50[a]	0.31	0.32	0.31	0.42	0.42	0.31	0.25	0.33
Age 51–70[a]	0.32	0.33	0.31	0.24	0.25	0.33	0.44	0.33
#Regulation[c]	217	207	209	217	220	214	205	1489
#StorePolicy[c]	196	217	217	207	230	216	219	1502
#Total[c]	413	424	426	424	450	430	424	2991

Notes: [a] Dummy variables. [b] Continuous variable from 18 to 70. [c] Number of respondents in the two treatments and total.

Table 2

Questions

Store Policy: Consider the store where you currently buy most of your seafood. Would you still buy your seafood there if the store implemented a new policy of selling only sustainable labeled seafood, and this reduces the variety and increases the price of seafood at the store? Please indicate if you would still buy your seafood at the store at each of these price increases.

SCALE: (1) Buy seafood at the same store; (2) Change to a different store

Regulation: Would you support or oppose new *regulations* requiring stores to sell only sustainable labeled seafood, if this reduces the variety and increases the price of seafood at your local store? Please indicate if you would support or oppose the new regulations at each of these price increases.

SCALE: (1) Support; (2) Oppose

0% no price increase
1%–5% more than today
6%–10% more than today
11%–20% more than today
21%–30% more than today
Over 30% more than today

Table 3

Proportions giving the different WTP answers in the seven countries.

WTP	UK	Germany	Poland	Italy	Spain	France	Norway	Total
Responses to Store Policy Question								
No to 0%	0.06	0.06	0.10	0.11	0.10	0.14	0.05	0.09
Yes to 0%	0.11	0.05	0.08	0.07	0.14	0.12	0.06	0.09
Yes to 1–5%	0.43	0.27	0.34	0.26	0.36	0.35	0.20	0.32
Yes to 6–10%	0.23	0.31	0.25	0.27	0.23	0.23	0.33	0.27
Yes to 11–20%	0.11	0.18	0.10	0.16	0.09	0.05	0.16	0.12
Yes to 21–30%	0.02	0.06	0.02	0.05	0.03	0.04	0.07	0.04
Yes to over 30%	0.04	0.07	0.11	0.08	0.04	0.06	0.12	0.08
Responses to Regulation Question								
No to 0%	0.08	0.08	0.14	0.08	0.09	0.12	0.12	0.10
Yes to 0%	0.20	0.09	0.23	0.16	0.27	0.22	0.05	0.17
Yes to 1–5%	0.31	0.27	0.32	0.30	0.34	0.43	0.16	0.30
Yes to 6–10%	0.23	0.29	0.20	0.18	0.22	0.12	0.27	0.22
Yes to 11–20%	0.08	0.11	0.05	0.10	0.04	0.06	0.19	0.09
Yes to 21–30%	0.05	0.05	0.01	0.06	0.02	0.02	0.09	0.04
Yes to over 30%	0.05	0.11	0.04	0.12	0.03	0.03	0.12	0.07

Notes: In the store policy treatment, yes means that they would continue to buy at their current seafood store and no means that they would change store. In the regulation treatment, yes means that they would support the regulation and no means that they would oppose the regulation.

Table 4
Reasons for no positive WTP.

Response	Reason	Share
Store policy		
No to 0%	I oppose their policy of sustainability labeling	0.13
(n = 132)	When buying seafood, a wide variety in the store is more important for me than sustainability	0.58
	Other reason	0.30
Yes to 0%,	I cannot afford to pay more for my seafood	0.54
otherwise no	I am not willing to pay more for sustainable seafood than other seafood	0.23
(n = 136)		
	I disagree with having to pay more for something that should be guaranteed by those selling the seafood	0.22
	Other reason	0.01
Regulation		
No to 0%	I oppose the regulation of sustainability labeling	0.21
(n = 150)	When buying seafood, a wide variety in the store is more important for me than sustainability	0.54
	Other reason	0.25
Yes to 0%,	I cannot afford to pay more for my seafood	0.42
otherwise no	I am not willing to pay more for sustainable seafood than other seafood	0.19
(n = 260)		
	I disagree with having to pay more for something that should be guaranteed by those selling the seafood	0.36
	Other reason	0.03

Notes: In store policy treatment, yes means that they would continue to buy at their current seafood store and no means that they would change store. In the regulation treatment, yes means that they would support the regulation and no means that they would oppose the regulation.

Table 5
WTP for regulation and store policy.

Variable[a]	Coef.[b]	Std. Err.	P>z	[95% CI]	
Store policy					
Store Policy	8.03	0.26	0.00	7.52	8.55
UK	−1.77	0.66	0.01	−3.07	−0.48
GE	1.68	0.64	0.01	0.43	2.92
PO	0.20	0.64	0.75	−1.05	1.45
IT	0.80	0.65	0.22	−0.48	2.08
FR	−2.06	0.64	0.00	−3.32	−0.81
NO	3.36	0.64	0.00	2.11	4.61
Female	−0.14	0.26	0.60	−0.65	0.38
Age40[c]	0.37	0.37	0.31	−0.35	1.10
Age60[d]	0.16	0.38	0.68	−0.58	0.90
Regulation					
Regulation	6.86	0.26	0.00	6.35	7.38
UK	−0.43	0.63	0.50	−1.67	0.82
GE	2.55	0.65	0.00	1.27	3.82
PO	−2.81	0.65	0.00	−4.08	−1.53
IT	1.91	0.64	0.00	0.65	3.16
FR	−2.93	0.64	0.00	−4.19	−1.67
NO	4.36	0.66	0.00	3.07	5.65
Female	0.53	0.26	0.05	0.01	1.05
Age40[c]	0.25	0.38	0.50	−0.48	0.99
Age60[d]	−0.64	0.37	0.09	−1.37	0.09

Notes: Wald chi^2 (20) = 1806.50; Prod > chi^2 = 0.00. [a] Country and demographic variables are effect coded so that the variables *Store Policy* and *Regulation* represent the mean WTP for store policy and regulation, respectively. The demographic and country-specific coefficients represent the deviation from the mean. Spain's deviation from the mean is found by summing the negatives for all other countries, the same for male, and the age group 18–35 years. [b] Significant parameters in bold. [c] *Age40* is the age group 36–50 years. *Age60* is the age group 51–70 years.