

Deliverable Report

Deliverable No:	D29.6		Delivery Month:	40						
Deliverable Title		dentification of the o	uct mock-ups in the fiv ptimal intrinsic-extrins							
WP No:	29	V	VP Lead beneficiary:	P11. AU						
WP Title:	Socioeconomics – C	ocioeconomics – Consumer value perceptions and behavioural change								
Task No:	29.3	Task Lead beneficiary: P11. A								
Task Title:	Optimization of intr	rinsic-extrinsic attribut	e combinations							
Other beneficiaries:	P38. HRH									
Status:	Delivered		Expected month:	36						

Lead Scientist preparing the Deliverable: Banovic, M. (AU)

Other Scientists participating: Krystallis, A. (HRH)

Objective: The objective of this Deliverable was to report on the experimentation with product mockups in the five countries investigated (i.e. Germany, France, Italy, Spain and the UK) and the identification of the optimal intrinsic-extrinsic product quality profiles for the target segments (i.e. the "involved innovators" and the "involved traditionals"), established in Deliverable 29.2.

Specifically, this report provides the results of a number of experimental set-ups (i.e., Discrete Choice models) developed in Deliverable 29.5 and established on-line to test the product prototypes developed in WPs 28 & 29 (reported in Deliverables 28.1, 28.2, 28.3, 28.4, 29.2, 29.3 and 29.4).. The experiments run on consumer samples (approximately n=100 per country) with participants belonging to the cross-national segments with the highest/best value perceptions per product defined above (i.e. "involved innovators" and "involved traditionals", Action 29.1.1), in order to achieve a best match possible between ideal extrinsic/intrinsic attribute combinations and high-potential market segments.

Deliverable D29.6 contains the following information: 1) methodology and experimental design of the consumer choice experiments; 2) results of the consumer choice experiments; and 3) conclusions and recommendations for the policy makers and aquaculture industry.

Deviations: This report has been delayed by two months due to equivalent delay in the physical product development and consumer sensory trails (Deliverable 29.4) on which this study builds.

Table of Contents

1. C	bjective	3
2. N	laterial and methods	3
2.1	Product idea selection for the development of the product mock-ups	3
2.2	Experimental design	5
2.3	Recruitment of participants	8
2.4	Consumer choice experiments and product mock-up set-up	12
2.5	Data analysis	14
3. R	esults	14
3.1	EU consumers beliefs towards farmed and wild fish	14
3.2	Manipulation check	17
3.3	Results from choice experiments	21
4. C	onclusion and recommendations	30
Refere	nces	32
Appen	dix 1. Recruitment criteria	34
Appen	dix 2. Example of the online questionnaire for the fresh fish steaks	38
1 1	dix 3. Socio-demographic, buying, and consuming profile of the recruited participant gated product across countries and market segments	ts per 62
Appen	dix 4. Beliefs about the farmed fish and wild fish across countries and market segments	86
	dix 5. Overall liking and perceived expected quality of the product mock-ups after violation of the physical product	visual 92
	dix 6. Overall liking and perceived expected quality of the product mock-ups after vion of the packaging and labelling	visual 98
Appen	dix 7. Familiarity with the fish species across countries and market segments	104
Appen	dix 8. Likelihood (share) of choices for newly developed mock-ups	109

1. Objective

The objective of this Deliverable is to report on the experiments run with product mock-ups in the five countries investigated (i.e., Germany, France, Italy, Spain and the UK) for the identification of optimal intrinsic-extrinsic product quality profiles for the target segments (i.e. the "involved innovators" and the "involved traditionals") established in Deliverable 29.2. This report provides the results of a number of experimental set-ups (i.e., Discrete Choice models) developed in Deliverable 29.5 and established on-line to test the product prototypes developed in WPs 28 & 29 (reported in Deliverables 28.1, 28.2, 28.3, 28.4, 29.2, 29.3 and 29.4). The experiments run on consumer samples (n=100 per country) with participants belonging to the cross-national segments with the highest/best value perceptions per product defined above (i.e. "involved innovators" and "involved traditionals", Action 29.1.1), in order to achieve a best match possible between ideal extrinsic/intrinsic attribute combinations and high-potential markets/segments.

2. Material and methods

A discrete choice experimental approach is selected as the most suitable method to achieve the above-described objectives. The process of developing the experimental set-up is explained in Deliverable 29.5. However, some adjustments to the experimental design (Section 3.4 in Deliverable 29.5) have been further made to accommodate and balance inputs from DIVERSIFY partners involved (CTAQUA, APROMAR). These adjustments are explained in detail below. Further, details of product idea selection (based on Deliverable 29.4), data collection, and summary of results are provided in the following subsections.

2.1 Product idea selection for the development of the product mock-ups

Final product idea selection has been based on the results of consumer sensory perception tests of six product (see Table 1) across the five EU target countries (i.e., Germany, France, Italy, Spain and the UK; for a more detailed explanation of these tests refer to Deliverable 29.4). On the basis of the outcomes of the consumer sensory perception study, two fish species and three product prototypes have been selected for the development of product mock-ups and consumer choice experiments in the five EU target countries: *Greater amberjack*, with corresponding *Idea 34: Fresh fish steak for grilling in the pan* (with low processing level); and *Grey mullet*, with corresponding *Idea 33: Ready-made fish fillets in olive oil* (with medium processing level) and *Idea 2: Thin smoked fillets* (with medium processing level). The above three products score higher in terms of sensory profile attributes (see Deliverable 29.4), but also in terms of overall liking after visual inspection of the product and final purchase intention across the five EU countries, see Figure 1 (based on the data from Deliverable 29.4; see Deliverables D28.2 and D28.4 for a detailed description of each product).

Table 1. Products used for sensory profiling (in bold products selected for choice experiments).

Fish species	Product ideas and developed product prototypes
Meagre	Idea 6: Fish burgers shaped as fish (H)
	Idea 4: Ready to eat meal: salad with fish (L)
Pikeperch	Idea 9: Fish spreads/pate (H)
Grey mullet	Idea 2: Thin smoked fillets (M)
	Idea 33: Ready-made fish fillets in olive oil (M)
Greater Amberjack	Idea 34: Fresh fish steak for grilling in the pan (L)

L: low processing; M: medium processing; H: high processing.

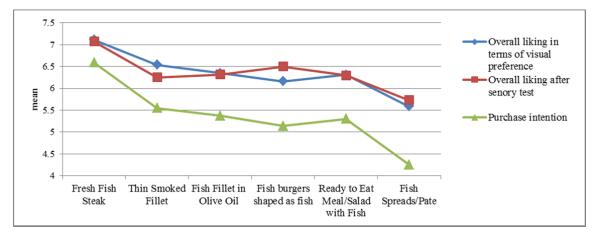


Figure 1. Consumer preference of the six products after sensory profiling tests¹.

Based on the above input, mock-ups have been developed for the three products selected thought the following steps (for more information see Deliverable 29.5):

- i) Pictures have been taken of the developed physical product prototypes in the proper packaging and without any labelling information, to resemble to final products as much as possible (i.e. D28.1, D28.2, D29.3-4). These images have been provided by partners IRTA and CTAQUA, who were in charge of development of the physical product prototypes, see example in Figure 2.
- ii) A literature review of previous consumer studies that involved experimental set-ups with fish products (i.e. Conjoint or Discrete Choice experiments) has been undertaken to cease the most important product attributes and their levels (e.g. country of origin: domestic/imported; claims: organic yes/no, etc.) (e.g. Claret et al., 2012; Davidson, 2012; Uchida et al., 2014, etc.) (D29.5, Table 2).

Deliverable Report – D29.6 Report on the experimentation with product mock-ups

¹Scale for overall liking varied from 1 – I think I would not like it extremely to 9 - I think I would like it extremely, while purchase intention scale varied from 1- No chance, almost no chance (1 in 100) to 10 - Certain, practically certain (99 chances in 100). For more explanation, refer to D29.4.

iii) A crosscheck of the findings from the previous studies with existing secondary data on new fish product launches has been undertaken based on datasets from the Mintel's Global New Products Database (GNPD) (D29.5, Section 3.3).

Based on the above, an experimental design with product attributes and attribute versions has been proposed across the developed product concepts (D29.5, Section 3.4), that has been further adapted to three selected products.

The final experimental design and explanation of adjustments made from D29.5 have been described in depth in the next section.

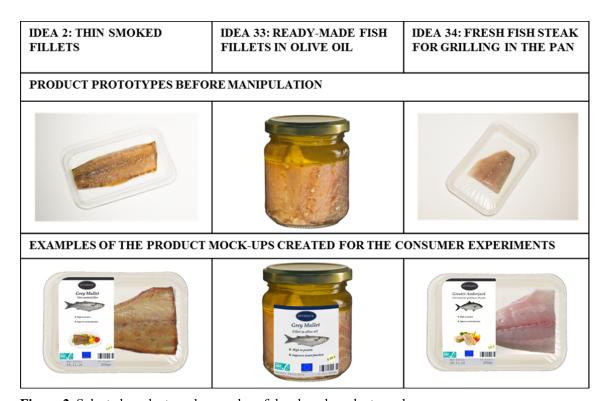


Figure 2. Selected products and examples of developed product-mock ups.

2.2 Experimental design

The experimental design has been primarily adjusted from D29.5 to decrease the number of attribute levels and possible combinations, so that other attitudinal and perception variables could be implemented and the consumer ultimately does not get overwhelmed with the questionnaire (Hair et al., 2010; Train, 2003). This is also done to be able to get feedback and compare some of the consumer insights regarding beliefs about farmed and wild fish, as well as overall liking of the products with the previous studies (see D29.4 and D29.2), thus better understand consumer final choices of the products. Consequently, same attributes from Deliverable 29.5 (Section 3.4) have been used, albeit grouped to decrease the number of variations (Train, 2003). Additionally, price premium levels were also adjusted as per recommendation from partners using as a reference price average prices from Deliverable 29.5 (Section 3.3). The adjusted attribute levels are shown in Table 2.

Table 2. Attribute and attribute levels for each product idea

Attribute	Attribute levels								
Country of Origin (COO)	no, produced in EU, produced in own country								
Price	0%, 15%, 30% of average price ²								
Nutrition claim	no, Omega 3, high in protein								
Health claim	no, improves heart function, improves brain function								
Aquaculture Stewardship Council (ASC) logo	no, yes								

As average prices for selected products did not vary significantly across the five EU target countries (see D29.5), it has been decided to use the lowest average price per product as reference price, and two premiums of +15% and +30% on top of the reference price. The suggested prices and their feasibility levels have been also cross-checked with DIVERSIFY's industrial partners. It has been also decided that the average weight of the products should be 300gr. Thus, the final prices per 300gr of weight of selected products and across the five countries were as follows:

- Idea 2: Thin smoked fillet: 5.31€ (reference price), and two premiums 6.11€ (15%) and 6.90€ (30%).
- Idea 33: Ready-made fish fillets in olive oil: 6.69€ (reference price), and two premiums 7.69€ (15%) and 8.70€ (30%)
- Idea 34: Fresh fish steak for grilling in the pan: 5.73€ (reference price), and two premiums 6.59€ (15%) and 7.45€ (30%).

As mentioned above, the same attributes and their levels have been used for all selected products, except for price, which was adjusted according to the product. Selected attributes and their levels were varied according to a 2^1x3^4 orthogonal design in SAS statistical software as recommended by Addelman (1962) and Hair (2009), which produced 36 experimental sets. The design was further partitioned into 12 versions of choice set size of three (see Table 3) (Train, 2009).

²Average price for each product idea based on the Deliverable 29.5, see Section 3.3.

Table 3. Experimental design

Stimuli	Country of origin	Nutrition claim	Health claim	ASC logo	Price	Choice
1	produced in EU	high in protein	improves heart function	ASC logo	30%	C1
2	produced in own country	Omega 3	improves brain function	no	0%	C1
3	No	No	No	ASC logo	15%	C1
4	No	high in protein	improves heart function	no	0%	C2
5	produced in own country	No	improves brain function	ASC logo	15%	C2
6	produced in EU	Omega 3	No	no	30%	C2
7	produced in own country	Omega 3	improves brain function	ASC logo	30%	C3
8	No	No	No	ASC logo	0%	C3
9	produced in EU	high in protein	improves heart function	no	15%	C3
10	No	high in protein	improves brain function	ASC logo	15%	C4
11	produced in EU	Omega 3	improves heart function	ASC logo	0%	C4
_12	produced in own country	No	No	no	30%	C4
13	produced in own country	Omega 3	improves heart function	ASC logo	15%	C5
14	produced in EU	high in protein	No	no	0%	C5
15	No	No	improves brain function	no	30%	C5
16	No	Omega 3	improves brain function	no	0%	C6
17	produced in own country	high in protein	No	ASC logo	30%	C6
18	produced in EU	No	improves heart function	ASC logo	15%	C6
19	No	Omega 3	No	no	15%	C7
20	produced in EU	No	improves brain function	ASC logo	30%	C7
_21	produced in own country	high in protein	improves heart function	ASC logo	0%	C7
22	produced in own country	Omega 3	No	ASC logo	0%	C8
23	produced in EU	high in protein	improves brain function	no	30%	C8
24	No	No	improves heart function	no	15%	C8
25	produced in own country	high in protein	improves brain function	no	15%	C9
26	produced in EU	No	No	no	0%	C9
27	No	Omega 3	improves heart function	ASC logo	30%	C9
28	produced in own country	high in protein	No	no	15%	C10
29	produced in EU	No	improves brain function	ASC logo	0%	C10
30	No	Omega 3	improves heart function	no	30%	C10
31	produced in own country	No	improves heart function	no	30%	C11
32	produced in EU	Omega 3	No	ASC logo	15%	C11
33	No	high in protein	improves brain function	ASC logo	0%	C11
34	produced in EU	Omega 3	improves brain function	no	15%	C12
35	produced in own country	No	improves heart function	no	0%	C12
36	No	high in protein	No	ASC logo	30%	C12

2.3 Recruitment of participants

Approximately one hundred participants have been recruited in each of the five EU target countries and for each of the selected products (i.e. fresh fish steak, thin smoked filets, and fish fillets in olive oil). Thus, roughly one thousand five hundred participants have been recruited (i.e. \sim 100 participants x 5 EU countries x 3 products), about 300 per product.

The main recruitment criteria was that 50% of the individuals per country belong to each of the two target segments (i.e. Involved innovators and Involved traditional, D29.2) to be possible early adopters of the products tested. Further, only consumers who consume fish on a regular basis (both farmed and wild at least once a month) and are responsible for food shopping in their household have been taken into account. Age, gender, income and marital status were also balanced across countries and products, taking under consideration respective averages in the investigated countries (see Appendix 1 for more details on the recruitment criteria).

Data acquired from the recruited participants through an online questionnaire (see Appendix 2) are presented in the following sections to characterize differences per country and selected product, as well as per segment (i.e. socio-demographics, category involvement, domain-specific innovativeness, subjective knowledge, fish consumption, and beliefs towards farmed and wild fish). The overall demographic profile of the recruited participants and per selected product is shown in Table 4.

The screening of participants on different socio-demographic, fish consumption and buying behaviour criteria allowed for the comparison of different samples per country and product. As seen in Table 4, 5 and 6, no significant differences appeared between the overall samples per product in relation to participants' socio-demographic profile, fish consumption and buying behaviour criteria, as well as their levels of general involvement in, innovativeness towards and subjective knowledge of the fish category. Additional information on the socio-demographic profile and other characteristics of the recruited participants per investigated product across countries and market segments can be found in Appendix 3, which shows that differences across countries and segments mainly occur due to the segmentation criteria as previously planned by recruitment criteria (see Q9, Appendix 1).

Table 4. Socio-demographic profile of the recruited participants per product

Characteristics	Total (N=1596)	Fresh fish steaks (N=532)	Fillet in olive oil (N=536)	Thin smoked fillet (N=528)	Sig.*
Age					
(mean in years)	40.9	41.1	40.5	41.1	.572
Age group					
(20-40)	49.7	49.8	50.0	49.4	
(41-60)	50.3	50.2	50.0	50.6	.982
Gender					
(male)	50.4	49.8	51.3	50.2	.879
Marital status					
(Married/co-habiting)	64.7	63.5	64.4	66.1	
(Single at parents' home)	11.2	10.3	12.5	10.8	
(Single, living independently)	16.9	18.4	16.2	16.1	.909
(Separated/divorced)	6.4	6.7	6.3	6.1	
(Widowed)	0.8	0.9	0.6	0.9	
Children					
(yes)	53.3	53.6	52.1	54.9	.643
Children at home					
(yes)	84.3	85.3	84.3	83.4	.826
Number of children-below 18					
None	13.9	14.0	12.6	15.2	
1-2 children	35.6	35.9	34.1	36.9	
3 and more	3.9	3.3	5.5	2.9	.166
Number of children-above 18					
None	33.3	33.1	34.2	32.4	
1-2 children	17.1	16.3	16.1	19.1	
3 and more	3.0	3.8	1.9	3.5	.260
Level of education					
(Primary school)	4.3	3.4	3.9	5.7	
(Secondary school)	20.2	20.6	19.4	20.6	
(Higher education-not university)	30.1	33.0	29.5	30.9	.511
(University- first degree, BSc)	30.9	29.8	33.8	29.0	
(University Post graduate, PhD)	32.9	13.3	13.4	13.8	
Income					
(more than average)	13.5	13.3	14.7	13.4	
(average)	65.5	65.0	64.4	67.0	.836
(less than average)	20.7	21.6	20.9	19.5	

Table 5. Consumption and buying profile of the recruited participants per product (%)

		Total (N=1596)	Fresh fish steaks (N=532)	Fillet in olive oil (N=536)	Thin smoked fillet (N=528)	Sig.*
Main decision maker:					(11-220)	
	es, I am the main	76.9	76.3	77.5	76.9	
Yes, I am a joint alor		23.1	23.7	22.5	23.1	.905
Purchase of Farmed fish	ingside my rammy		23.1	22.3	23.1	.,,,,,,
	a week or more	23.1	21.6	23.1	20.3	
	imes a month	28.2	27.6	25.9	27.5	
	e a month	17.5	17.1	19.6	18.6	.908
	than once a	31.3	33.7	31.3	33.7	.908
month	than once a	31.3	33.1	31.3	33.1	
Purchase of Wild fish	,	·				
	ce a week or					
		14.9	12.6	16.8	15.3	
moi		24.1	24.6	25.4	22.2	
	times a month	24.1	24.6	25.4	22.3	550
	ce a month	21.4	23.3	19.6	21.2	.558
	s than once a	20.6	• • •	•••		
month		39.6	39.5	38.3	41.1	
Purchase of Seafood						
	e a week or more	15.2	15.4	16.8	13.4	.439
Purchase of Frozen fish						
Onc	e a week or more	23.1	22.0	24.6	22.7	.967
Purchase of Whole fish						
	e a week or more	17.0	17.5	17.9	15.5	.901
Purchase of Processed fish						
Onc	e a week or more	19.5	18.0	20.0	20.6	.222
Purchase of Farmed fish			,			
Onc	e a week or more	23.1	24.1	23.3	21.8	
2-3	times a month	28.2	26.9	31.0	26.7	
	ce a month	17.5	17.9	16.4	18.2	.671
	s than once a					
month		25.4	25.0	23.3	27.8	
		5.9	6.2	6.0	5.5	
Purchase of Wild fish	_					
	e a week or more	16.0	15.2	18.3	14.4	
	times a month	26.6	25.0	28.5	26.3	
	ce a month	23.0	24.2	20.7	24.1	.345
Les month	s than once a	27.4	29.1	26.3	26.9	
month		7.0	6.4	6.2	8.3	
Consumption of Seafood		7.0	U.T	0.2	0.5	
	e a week or more	16.9	17.1	18.5	15.0	.587
Consumption of Frozen fish	C a WCCK OI IIIOIC	10.7	1 / . 1	10.3	13.0	.501
	e a week or more	25.9	23.3	28.0	26.3	771
	c a week of filore		23.3	∠o.U	20.3	.771
Consumption of Whole fish	e a week or more	18.4	17.5	10.6	10.0	.349
	e a week or more	184	1/5	19.6	18.0	.349
Consumption of Processed fish		10.1	17.0			

^a Membership percentage in each segment based on the cross-tabulation. *Results from the chi-square test

Table 6. Involvement, innovativeness, and subjective knowledge in the fish category

	Total (1596)	Fresh fish steaks (N=532)	Fillet in olive oil (N=536)	Thin smoked fillet (N=528)	Sig.*
Involvement					_
I am very concerned about what fish products I purchase	5.12	5.03	5.16	5.18	0.118
I care a lot about what fish products I consume	5.52	5.45	5.55	5.56	0.131
Generally, choosing the right fish products is important to me	5.61	5.53	5.67	5.62	0.080
Innovativeness					
In general, I am among the last in my circle of friends to purchase new fish products	4.17	4.13	4.18	4.20	0.773
Compared to my friends, I do little shopping for new fish products	4.08	4.06	4.05	4.12	0.741
In general, I am the last in my circle of friends to know the names of the latest new fish product trends	4.06	4.04	4.04	4.10	0.772
Subjective knowledge					
I consider that I know more about fish than the average person	4.58	4.53	4.61	4.59	0.541
I have a lot of knowledge about how to prepare fish	4.76	4.71	4.80	4.77	0.490
I have a lot of knowledge about how to evaluate the quality of fish	4.78	4.75	4.82	4.79	0.644

^{*}Results from the F- test, all non-significant at p > 0.05

2.4 Consumer choice experiments and product mock-up set-up

A total of three on-line surveys (i.e. choice experiments) were undertaken in each of the EU target countries (i.e. France, Germany, Italy, Spain and the UK). The questionnaire for the on-line survey was prepared in English and translated by professional translators in the four domestic languages (see Appendix 2 for more information on the questionnaire used). The online survey including the choice experiment lasted approximately 30 min and consisted of three main parts.

Firstly, the survey was initiated by the introductory part, which informed participants about the main objective of the experiment and how to use the computers for answering to the questions. This was followed by a cheap talk script, in order to lower the hypothetical bias in the subsequent choice experiment (Carlsson et al., 2005; Cummings & Taylor, 1999; Lusk, 2003; Van Wezemael et al., 2014). Further, the choice experiment started with asking the participant to imagine standing in front of the supermarket shelf and decide which of the products would be "most (and least) likely to choose to purchase for a dinner on a typical day". Both "most likely" and "least likely" options were added to the choice experiments to make the purchase environment in the experiment more realistic (Lockshin et al., 2006; Louviere & Hensher, 1983; Louviere et al., 2000), thus, allowing participant the option that some products would be unlikely to meet their purchase requirements³. Thus, product mock-up stimuli were shown in a visual shelf simulation mimicking realistic purchase decision (see example of the simulation for each of the selected products in Figure 3).

Secondly, a price manipulation check was undertaken to examine if participants have noticed the price of the products in the experimental sets (i.e. if the price was placed on the *left* or *right* hand side of the label) (Biswas et al., 2013; Biswas & Blair, 1991). If answered correctly, participants were further asked if they considered these prices - *too high* (vs. *too low*) - and price differences between the product options – *too large* (vs. *too small*) - on a 1-7 scale respectively. Subsequently, participants were asked for their preference and quality expectations after seeing the physical product unpacked, and its packaging and labelling (without the physical product contained). This was followed by participants' stating their preference for and familiarity with the fish species the relevant product in the experiment came from, after visual inspection of the species' high-resolution picture.

Thirdly, participants' beliefs and attitudes towards wild and farmed fish were accessed next, followed by their involvement in the category and consuming and purchasing behaviour related to seafood in general. The survey closed with socio-demographic questions (see recruitment criteria in Appendix 1).

Worth mentioning here that even though statistically significant differences were found between the two target segments (i.e. 'involved innovators' and 'involved traditional', see section 3.2) in relation to their beliefs towards farmed and wild fish, overall liking and perceived quality of investigated product mock-ups (see Tables in Appendix 4 through 6), later choice analyses revealed no significant differences between the two segments (see section 3.3.).

-

³This was done to allow for the participant possibility that some of the options are not meeting the purchase requirements and to make the purchase situation more real, but the option is not used in the analysis (Louviere et al., 2000).



Figure 3. Example of the product mock-up stimuli used in the choice experiments

2.5 Data analysis

The discrete choice data has been analysed by using a discrete choice analysis (conditional logit model, (McFadden, 1974). Discrete choice analysis is a powerful analytic method that can be used to estimate the probability of participants choosing a particular alternative from a set of presented alternatives. The conditional logit model is an extended multinomial logit (MNL) that assumes preference heterogeneity, which may arise in choice models. It is preferred to MNL model that assumes homogeneous preferences across individuals, which in turn can bias the results if preference heterogeneity occurs in a sample (Louviere et al., 2000). Thus, an extended multinomial logit model (MNL)⁴ has been used to estimate the probability of making a specific choice as a function of choice attributes and individual characteristics (predictors). The estimated parameters from the extended MNL model thus identify consumer utility of choosing specific alternative in a specific choice occasion. In this case, utility is observed as the level of satisfaction an individual receives from a chosen alternative with specific set of attributes, as determined by the parameter estimates in the choice model. Willingness-to-pay (WTP) estimates were also derived for an attribute of a certain alternative as the ratio of the marginal utility of the attribute on the marginal utility of its cost, that is, the ratio between attribute coefficient and the cost coefficient. The parameter estimates and WTPs for each attribute level have been estimated first across countries on the pooled sample, and then separately for each individual country.

3. Results

In this section, results from the choice experiments with product mock-ups in the five EU target countries have been presented and discussed, together with the manipulation check and consumer preferences/expected quality of the physical product and packaging and labelling, as well as consumer's beliefs and attitudes in general towards wild and farmed fish.

First, EU consumers' beliefs and attitudes towards wild and farmed fish in general are presented. This is followed by manipulation check on physical product, packaging and labelling, as well as prices and fish species per tested product mock-up. Finally, the results on choice experiments and willingness to pay are presented per tested product-mock up. Consumes' general beliefs and attitudes have been presented across three tested products jointly at the beginning of this section, while differences between countries and segments can be found in the Appendix 4.

3.1 EU consumers beliefs towards farmed and wild fish

In terms of different beliefs and attitudes towards wild and farmed fish, no significant differences have been found across the three product samples, except for the belief that framed fish is cheaper than wild fish, and that wild fish tastes better than farmed fish (p < 0.05). Besides, EU consumers' beliefs about farmed and wild fish were in general homogeneous, thus allowing for comparison across the products investigated (see Table 7).

⁴ Latent Gold 5.1 was used for all the choice model analysis.

Table 7. Beliefs about the farmed fish and wild fish across products, mean scores

Beliefs	Total (N=1596)	Fresh fish steak (N=532	Fillets in olive oil (N=536	Thin smoked fillet (N=528	Sig.
Farmed fish					
Farmed fish is less affected by marine pollution than wild fish	4.47	4.50	4.43	4.48	.646
Farmed fish is healthier than wild fish	4.09	4.09	4.08	4.10	.979
Farmed fish is more fresh than wild fish	4.09	4.04	4.08	4.14	.473
Farmed fish is cheaper than wild fish	5.05	5.00^{a}	5.16 ^b	4.98^{a}	.047
Farmed fish provides more guarantees than wild fish	4.43	4.43	4.40	4.45	.803
Farmed fish is easier to find than wild fish	5.24	5.28	5.20	5.23	.553
Wild fish					
Wild fish is safer to consumer than farmed fish	4.43	4.42	4.44	4.42	.934
Wild fish lives a better life than farmed fish	5.17	5.15	5.20	5.16	.783
Wild fish is better quality than farmed fish	5.03	4.97	5.09	5.03	.260
Wild fish is more nutritious than farmed fish	4.76	4.69	4.80	4.80	.233
Wild fish is more firm than farmed fish	4.58	4.51	4.68	4.55	.070
Wild fish tastes better than farmed fish	5.13	5.11 ^a	5.23 ^b	5.05^{a}	.044

^e The scale for the statements was 1 = Strongly agree, 7 = Strongly disagree

This was somewhat different when looking on the separate basis per investigated product (see Appendix 4). Results show that there are some differences across the segments and countries when looking at the different beliefs. This is especially true for the beliefs related to farmed fish. Specifically, for the two segments: *involved innovators* and *involved traditional*, both overall and across investigated countries, four items related to farmed fish beliefs and across investigated products have been find to differ significantly. *Involved innovators* considered farmed fish healthier and fresher than wild fish, when compared to the *involved traditionals* segment. On the other hand, the *involved traditionals* considered farmed fish cheaper and easier to find than wild fish, when compared to the *involved innovators* (see Appendix 4 for more information).

Principal Component Analysis (PCA) has also been performed overall across products and per investigated product (see Table 8). Thus, four PCA analyses have been undertaken to look at the beliefs and attitudes of the EU consumers. PCA analyses on the overall level and per product showed three distinct constructs, namely: "farmed fish quality", "wild fish quality", and "price and convenience sensitivity". The farmed fish quality construct consisted of those beliefs pointing to a higher quality of a farmed fish over wild fish, while the opposite was observed for the wild fish quality construct. The price and convenience sensitivity construct related to the belief that farmed fish is cheaper and easier to find than wild fish.

^{*}Results from the ANOVA; all values in italic significant at p < .05

^{a, b,} Tukey HSD post hoc test, superscripts indicate post-hoc paired comparisons

Table 8. PCA analyses for beliefs about farmed and wild fish across products

		Overall			Fresh fisl	n steak	Fish fillet in olive oil					Thin smoked fillet			
	WF* quality	FF ** quality	P/C *** sensitivity	WF quality	FF quality	P/C sensitivity	WF quality	FF quality	P/C sens	itivity	WF quality	FF q	uality	P/C sensitivity	
Farm fish is less affected by marine pollution than farmed fish	1	.740	22222	4	.728		4		38		4		.758	222222	
Farmed fish is healthier han wild fish		.851			.848			.8	75				.819		
Farmed fish is fresher than wild fish		.809			.816			.8	18				.807		
Farmed fish provides more guarantees than wild fish		.777			.745			.8	25				.722		
Wild fish is safer to consume than farmed fish	.805			.748			.859)				.772			
Wild fish lives a better life han farmed fish	.629			.652			.627	,				.616			
Wild fish is of better quality than farmed fish	.763			.772			.728	;				.795			
Wild fish is more nutritious than farmed fish	.738			.767			.685	i				.735			
Wild fish tastes better than farmed fish	.598			.630								.651			
Farmed fish is cheaper than wild fish			.760			.782				.790				.710	
Farmed fish is easier to find than wild fish			.827			.815				.814				.826	
Summary statistics															
Cronbach α	.831	.821	.698	.820	.8	13 .687		.832	.843	.693		.839	.803	.720	
Total variance explained		64.43%			65.04	1%			66.55%				63.	61%	
KMO Measure of Sampling		.861			.82	7			.851				3.	59	
Bartlett's Test of Sphericity; χ(df), <i>p</i>		7375.167 (66) ^a		2440.221	(66) ^a		27	28.056 (66) ^a				2396.9	91(66) ^a	

Sphericity; $\chi(df)$, pFactors: *Wild fish quality; ** Farmed fish quality; ***Price/convenience sensitivity

a Significant at p < 0.001

3.2 Manipulation check

As mentioned above, manipulation check has been undertaken to lower the confirmation bias, assure that estimated utility and willingness-to-pay values in the choice experiments are not interpreted based on pre-existing beliefs, and that equal consideration is given to alternative possibilities (Nunes & Boatwright, 2004).

3.2.1 Overall liking and perceived quality of the product mock-ups after visual inspection of the physical product

The overall liking and perceived quality of the visual appearance of the product per country revealed that *fresh fish steaks* have higher preference levels among target consumers than *thin smoked fillet* and *fillets in olive oil* (p<0.05 for both overall liking and all items for expected quality, Figure 4 and Figure 5). Hence, low-processed product had higher liking and expected quality scores than medium-processed products. On a country basis and per product, *fresh fish steaks* were preferred in Spain, Italy, Germany and the UK than in France; *fillets in olive oil* were preferred in Spain, while *thin smoked fillet* in the UK. No significant differences have been observed between the two target segments (i.e. the *involved innovators* and the *involved traditionals*). Similar incidences occurred for *thin smoked fillet* and *fillet in olive oil* regarding the two segments (see Tables in Appendix 5).

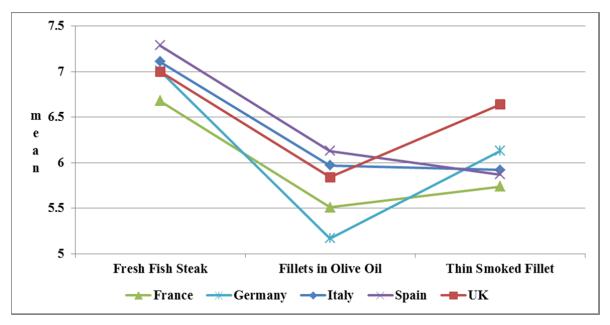


Figure 4. Overall liking of the product mock-ups after visual inspection of the physical product; scale from 1 – Dislike it extremely to 9 - Like it extremely.

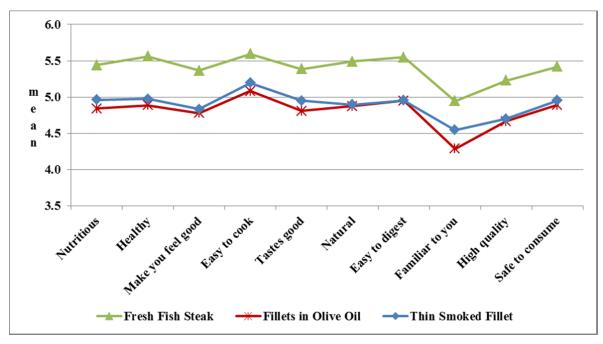


Figure 5. Perceived expected quality of product mock-ups after visual inspection of the physical product; scale from 1 – Strongly disagree to 7 - Strongly agree.

3.2.2 Overall liking and perceived expected quality of product mock-ups after visual inspection of the packaging

In terms of overall liking of the packaging and labelling, once more, *fresh fish steaks* got higher scores across target countries and considered readily available, credible, trustworthy, good value for money, inexpensive and known (p<0.05, Figure 6 and Figure 7). However, these differences were not so pronounced as for the physical end-product (i.e. packaged fish). Having in mind that packaging and labelling for each product has been developed in the same manner, one can argue that the higher consumer perceptions and expectations about the physical end-product had some influence on consumer perceptions of packaging and labelling of the products. Again similarities occurred across the two target segments *involved innovators* and *involved traditionals* and the selected products in terms of overall liking and perceived quality after visual inspection of packaging (see Tables in Appendix 6).

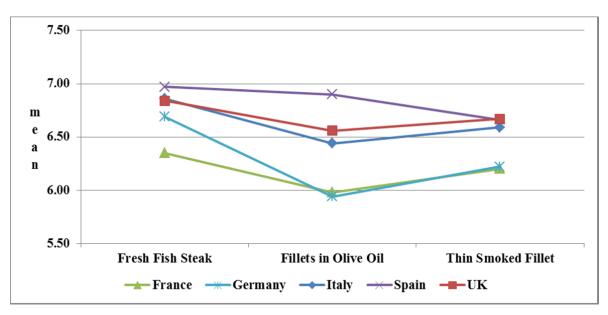


Figure 6. Overall liking of the product mock-ups after visual inspection of the packaging and labelling; scale from 1 – Dislike it extremely to 9 - Like it extremely.

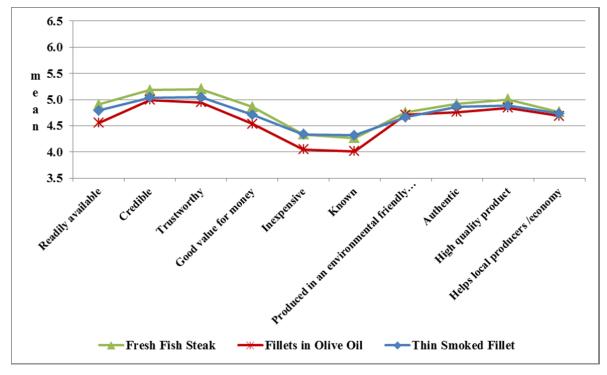


Figure 7. Perceived expected quality* of product mock-ups after visual inspection of the packaging; scale from 1 – Strongly disagree to 7 - Strongly agree.

3.2.3 Fish species familiarity

Images of two fish species were presented on the label of the product-mock ups, that is *Grater Amberjack* for *fresh fish steak* and *Grey Mullet* for *thin smoked fillet* and *fillets in olive oil*, see Table 1. Manipulation check was undertaken to account for the influence of familiarity with the fish species on the choice experiment outcome. Results show that across all three products and for all target countries, the level of familiarity, experience and knowledge with both *greater amberjack* and *grey mullet* was moderately low (see Appendix 7). However, the level of liking and preference of having the products from these fish species based on their images was high.

3.2.4 Prices

Approximately 85% of the participants overall and per investigated product responded correctly to the question if the price tag was located on the left hand side or the right hand side of the label. The remaining 15% of participants were excluded from further analysis of the choice experiment results. Participants were further asked about their perception of presented prices. That is, if the prices are too high/too low for the presented product quality and if price difference among various products, for their quality is too large/too small (sees Figure 8 and 9). Consumers considered that the given prices are slightly higher and that the price difference between various products is also slightly large (see Figure 8 and Figure 9). For *fresh fish steaks*, no significant differences have been found across the investigated countries (on both items, p > 0.05). However, for *fillets in olive oil* differences have been observed for overall prices (see Figure 8, F(4) = 2.958, p = 0.020), which were regarded as not that high in Italy when compared to France and Germany. In the case of *thin smoked fillet*, significant differences have been detected for the item explain price difference between the products (see Figure 9, F(4) = 4.080, p = 0.003), where consumers in Spain considered that the price differences are not that large when compared to consumers in Germany, France and the UK.

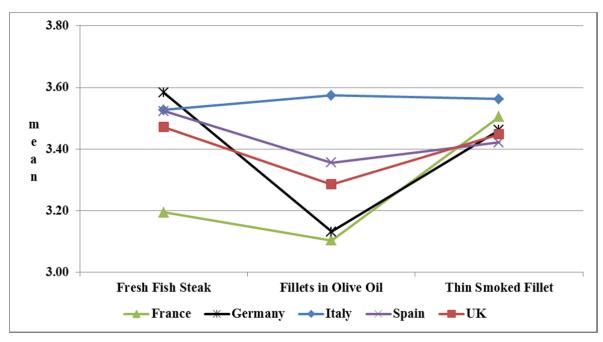


Figure 8. The price of the product you just saw, for its quality, is overall: too high/too low; scale from 1 - too high to 7 - too low.

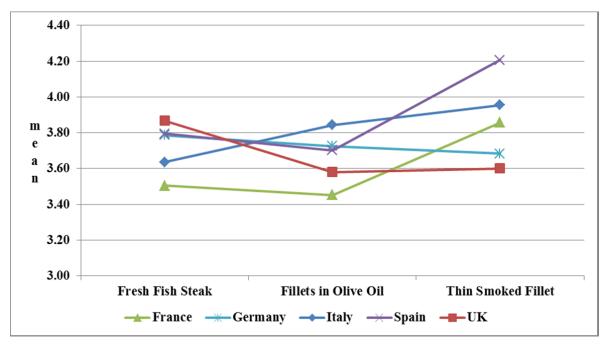


Figure 9. The price difference among various products, for their quality is: too large/too small; scale from 1 – too large to 7 – too small.

3.3 Results from choice experiments

The results of the choice analyses are described per product at two levels: the overall sample and per investigated country. The reason for this is the fact that choice analyses across the two investigated segments *involved innovators* and *involved traditionals* did not show any significant differences, suggesting that they could be considered as an overall sub-sample of fish "involved" consumers. Hence, the two levels of analyses mentioned above have been considered for further explanation of target consumer preferences and willingness to pay for the three products selected and explained in the subsequent sections.

3.3.1 European consumer preferences for logos and claims in low and medium processed products

Each of the estimated models for all three products and across countries showed good fit, as indicated by higher simulated log-likelihood, respective lower values of BIC and AIC, as well as lower classified errors and R² between 0.2 and 0.4 (Louviere et al., 2000). The separate models indicated homogeneous preferences across target countries and supported the assumption of an MNL model. Results from the estimated models are presented in subsequent Table 9, 10 and Table 11.

The most relevant attributes for all three investigated products were 'Country of Origin (COO)' and 'Price', followed by 'Existence of an ASC logo', 'Existence of a nutrition claim' and 'Existence of a health claim' (see Figure 10).

In all countries and -as expected- for all three products, the negative price coefficients confirmed consumer preferences for lower over higher prices (Table 9, 10 and 11). Higher price sensitivity across the investigated countries has been observed for the case of *fish fillets in olive oil* when compared to other two products. This was especially evident for France and Germany (see Table 11).

Results further suggested an increasing probability of choosing a fish product that has been 'produced in own (domestic) country'. Furthermore, fish product alternatives possessing an 'ASC logo' also increased the probability of choice. However, consumer preferences for nutrition and health claims varied across products and countries.

Nutrition claims worked much better than health claims across the selected products. Specifically, nutrition claims were insignificant only for *fresh fish steaks* in Spain and *fillets in olive oil* in Germany, while in all other cases nutrition claims worked quite well. The nutrition claim 'Omega 3' carried the highest utility and has been the most attractive claim across all products and countries.

On the other hand, health claims were insignificant across the three products in Germany. In France and Italy, health claims were insignificant for *fresh fish steaks* (Table 9), while for *fillets in olive oil* were insignificant in France and Spain (Table 11). Interestingly, in France and for *thin smoked fillet*, no health claim was preferred. However, in Spain and the UK, when significant, health claims with highest levels of utilities were attached in the case of *fresh fish steaks* and *fillets in olive oil*, to 'improve heart function'. This is somewhat different for *thin smoked fillets* and *fillets in olive oil*, where the more attractive health claim for consumers was 'improves brain function' in Italy and the UK, while in Spain this claim was less attractive for *thin smoked fillets*.

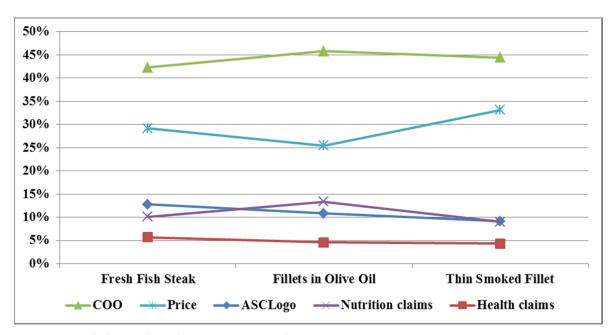


Figure 10. Relative attribute importance per product.

3.3.2 European consumer willingness-to-pay for logos and claims in low and medium processed products

Results on willingness-to-pay (WTP) per product for the overall samples and per country are presented in Tables 12, 13 and 14. The values of WTP estimates in the mentioned Tables are rather comparable to the reference (average) prices of the investigated products. This fact points to the conclusion that cheap talk script made participants aware of the possibility of overestimating prices when hypothetical contexts are involved. As seen from the estimated cost coefficients (price part-worth utilities, see Table 9, 10 and 11), at an overall level, target consumers were willing to pay more for *thin smoked fillets* than for *fresh fish steaks*

and *fillets in olive oil*. This was confirmed also by WTP results (Tables 12, 13 and 14). Results show that the difference between the reference price and the variation of WTPs for different attribute levels was higher for *thin smoked fillet* compared to *fillets in olive oil*, where this difference was the lowest. For all three products and at the overall level, target consumers were willing to pay more for a product that is 'Produced in own (domestic) country' compared to 'Produced in the EU'. In terms of nutrition claims, target consumers were willing to pay more for 'Omega 3' when compared to 'High in protein'. Moreover, 'Improves heart function' created significantly higher WTP than 'Improves brain function'. Finally, target consumers would rather pay for a product that carries 'ASC certification'.

Within products, clear differences in WTP values for different COO and nutrition and health claims also existed.

For *fresh fish steaks*, the French, German and Italian consumers were willing to pay significantly higher than the reference price, compared to the Spanish and the UK consumers. For the same EU countries, the nutrition claim 'Omega 3' created higher willingness to pay than the claim 'High in protein'. Further, French and Italian consumers were willing to pay more for products 'Produced in own (domestic) country' than for 'Produced in the EU'. Finally, German consumers were willing to pay more for the 'ASC certification' compared to consumers in the other four countries.

For *thin smoked fillet*, the French, Italian and Spanish consumers were willing to pay higher premiums when the product is 'Produced in own (domestic) country'. These premiums were higher than in Germany and the UK. Spanish consumers were willing to pay more for the 'Omega 3' nutrition claim, while for German consumers the existence of the 'ASC certification logo' increased their willingness to pay more than in the other four countries.

For *fillets in olive oil*, Italian consumers' willingness to pay was much higher than in the other EU countries studied when the product is 'produced in own (domestic) country' compared to 'Produced in the EU'. Spaniards' WTP estimates for COO were also significantly different and, like Italian consumers, Spanish consumers were also willing to pay more for a 'produced in own (domestic) country' product. Finally, WTP for the 'Omega 3' nutrition claim was also significantly higher than for other nutrition claims in Italy.

At the country level, differences in WTP values are observed mainly for the nutrition and health claims.

French consumers were willing to pay more for all three investigated products when product carries nutrition claim 'Omega 3'. However, French would prefer health claim 'improves heart function' for *fresh fish steaks* and *fillets in olive oil*, while in the case of *thin smoked fillet* willingness to pay is higher if no health claim is used. Similar findings have been observed in other countries for nutrition claims. However, it is worth mentioning that in Spain willingness to pay for a nutrition claim 'Omega 3' in the case of *thin smoked filet* is much higher than in other countries. Another interesting finding is that UK consumers' willingness to pay for nutrition claims 'Omega 3' and 'high in protein' for the *fresh fish steak* quite similar, as well as willingness to pay for health claims 'improves hearth function' and 'improves brain function' for the *thin smoked fillet*.

3.3.3 Likelihood (share) of choices for newly developed mock-ups

Given the nature of discrete choice analysis, we can produce 'likelihood of choice' or 'share of choice' and assess what is the probability of different product mock-ups being chosen by the consumer. In this way, it is possible to study interaction between different attributes at the respondent or aggregate level and see how the value of a product is perceived among consumers, and what attribute levels weigh more in the choice decision. The likelihood of choice is calculated as the ratio between the number of times a product is chosen and the number of respondents, or by assessing respondents' first choice. This output differs from 'share of market' usually assessed in conjoint analysis, due to different assumptions about awareness, distribution, and retention (Louviere, 2010).

Results show that higher likelihood of choice at the aggregate level, across countries and products, have products that carry own country of origin, ASC logo and lowest price, where claims may vary (i.e. product numbers 21 and 22, see Tables in Appendix 8). This finding is quite consistent with previous results regarding estimated utilities and WTPs in prior sections. One must bear in mind that when studying a market scenario assessed through a discrete choice experiment, companies may be interested in comparing the predicted shares of choice of the current market scenario to the ones existing on the market, as output form discrete choice analysis is in much idealized condition where all consumers have a perfect information about the products, all products are available and consumer choice is driven by the features of the product rather than promotions, advertisement and so on. Nevertheless, even though market shares cannot be predicted, discrete choice analysis provides valuable results of the probability of these new products being chosen by the consumers when launched at the market.

Table 9. Parameter estimates for fresh fish stakes

	Overall		France		Germany		Italy		Spain		UK	
Attribute levels	Coef.	p										
Country of origin (COO)		0.000		0.000		0.000		0.000		0.000		0.000
No COO	-0.592		-0.627		-0.474		-0.727		-0.698		-0.464	
Produced in EU	-0.097		-0.205		-0.172		-0.136		0.112		-0.086	
Produced in own country	0.688		0.832		0.646		0.863		0.586		0.550	
Nutrition claim		0.000		0.000		0.000		0.000		0.069		0.000
No claim	-0.151		-0.139		-0.164		-0.137		-0.105		-0.224	
Omega 3	0.155		0.183		0.244		0.191		0.067		0.120	
High in protein	-0.004		-0.045		-0.080		-0.054		0.038		0.105	
Health claim		0.000		0.510		0.058		0.330		0.000		0.006
No claim	-0.083		-0.031		0.008		-0.058		-0.190		-0.141	
Improves hearth function	0.089		0.054		0.088		0.061		0.136		0.098	
Improves brain function	-0.007		-0.023		-0.096		-0.003		0.054		0.043	
Logo		0.000		0.002		0.000		0.000		0.000		0.000
No logo	-0.193		-0.110		-0.345		-0.180		-0.204		-0.138	
ASC logo	0.193		0.110		0.345		0.180		0.204		0.138	
Price		0.000		0.000		0.000		0.000		0.000		0.000
	-0.442		-0.402		-0.432		-0.415		-0.541		-0.454	
Summary statistics												
N	19224		3708		3888		3960		3924		3816	
LL	-5737.58		-1073.63		-1148.53		-1113.82		-1137.49		-1190.20	
AIC (LL)	11491.16		2163.26		2313.06		2243.63		2290.98		2396.41	
BIC (LL)	11525.41		2184.34		2334.51		2265.24		2312.37		2417.72	
$R^2(0)$ R^2	0.207		0.236		0.217		0.260		0.211		0.162	
\mathbb{R}^2	0.179		0.203		0.196		0.227		0.180		0.136	

Table 10. Parameter estimates for thin smoked fillets

	Overall		France		Germany		Italy		Spain		UK	
Attribute levels	Coef.	p										
Country of origin (COO)		0.000		0.000		0.000		0.000		0.000		0.000
No COO	-0.602		-0.660		-0.532		-0.755		-0.597		-0.504	
Produced in EU	-0.095		-0.206		-0.006		-0.057		-0.024		-0.165	
Produced in own country	0.697		0.866		0.539		0.812		0.622		0.669	
Nutrition claim		0.000		0.000		0.000		0.000		0.000		0.000
No claim	-0.185		-0.059		-0.217		-0.221		-0.234		-0.239	
Omega 3	0.195		0.064		0.240		0.254		0.243		0.198	
High in protein	-0.010		-0.005		-0.023		-0.033		-0.009		0.042	
Health claim		0.001		0.000		0.100		0.007		0.001		0.002
No claim	-0.077		0.057		0.012		-0.136		-0.171		-0.164	
Improves hearth function	0.053		-0.029		0.077		0.033		0.112		0.073	
Improves brain function	0.025		-0.028		-0.089		0.103		0.060		0.091	
Logo		0.000		0.000		0.000		0.099		0.000		0.000
No logo	-0.153		-0.098		-0.352		-0.055		-0.116		-0.163	
ASC logo	0.153		0.098		0.352		0.055		0.116		0.163	
Price		0.000		0.000		0.000		0.000		0.000		0.000
	-0.361		-0.401		-0.492		-0.340		-0.242		-0.376	
Summary statistics												
N	19008		3780		3744		4032		3672		3780	
LL	-5751.57		-1091.52		-1113.54		-1171.72		-1148.56		-1144.52	
AIC (LL)	11519.14		2199.05		2243.07		2359.44		2313.12		2305.03	
BIC (LL)	11553.29		2220.28		2264.23		2381.19		2334.12		2326.27	
$R^2(0)$ R^2	0.195		0.234		0.208		0.229		0.161		0.196	
R^2	0.166		0.198		0.177		0.193		0.145		0.172	

Table 11. Parameter estimates for fillets in olive oil

	Overall		France		Germany		Italy		Spain		UK	
Attribute levels	Coef.	p										
Country of origin (COO)		0.000		0.000		0.000		0.000		0.000		0.000
No COO	-0.589		-0.700		-0.521		-0.704		-0.687		-0.384	
Produced in EU	-0.214		-0.268		-0.298		-0.209		-0.140		-0.146	
Produced in own country	0.803		0.968		0.818		0.913		0.827		0.529	
Nutrition claim		0.000		0.000		0.190		0.000		0.012		0.000
No claim	-0.143		-0.185		-0.040		-0.183		-0.125		-0.212	
Omega 3	0.139		0.149		0.089		0.178		0.116		0.186	
High in protein	0.004		0.036		-0.049		0.005		0.009		0.026	
Health claim		0.001		0.400		0.300		0.001		0.093		0.050
No claim	-0.060		0.011		0.009		-0.132		-0.093		-0.097	
Improves hearth function	0.075		0.051		0.059		0.153		0.011		0.094	
Improves brain function	-0.014		-0.062		-0.068		-0.022		0.082		0.002	
Logo		0.000		0.004		0.000		0.050		0.001		0.000
No logo	-0.143		-0.103		-0.257		-0.065		-0.115		-0.185	
ASC logo	0.143		0.103		0.257		0.065		0.115		0.185	
Price		0.000		0.000		0.000		0.000		0.000		0.000
	-0.519		-0.632		-0.664		-0.400		-0.453		-0.502	
Summary statistics												
N	19296		3816		3816		4140		3744		3780	
LL	-5532.87		-1014.15		-1050.32		-1155.34		-1075.10		-1167.78	
AIC (LL)	11081.75		2044.31		2137.96		2326.69		2166.20		2351.56	
BIC (LL)	11116.02		2065.61		2264.23		2348.65		2187.36		2372.79	
$R^2(0)$ R^2	0.244		0.299		0.270		0.271		0.242		0.178	
\mathbb{R}^2	0.220		0.273		0.246		0.249		0.220		0.156	

Table 12. Estimated willingness-to-pay (WTP) above (below) reference price ^a of fresh fish steak

	Overall	France	Germany	Italy	Spain	UK
Attribute levels						
Country of origin (COO)						
No COO	-1.33	-1.56	-1.10	-1.75	-1.29	-1.02
Produced in EU	-0.22	-0.51	-0.40	-0.33	0.21	-0.19
Produced in own country	1.55	2.07	1.49	2.08	1.08	1.21
Nutrition claim						
No claim	-0.34	-0.35	-0.38	-0.33	-0.19	-0.49
Omega 3	0.34	0.46	0.56	0.46	0.12	0.26
High in protein	0.00	-0.11	-0.19	-0.13	0.07	0.23
Health claim						
No claim	-0.18	-0.08	0.02	-0.14	-0.35	-0.31
Improves hearth function	0.20	0.13	0.20	0.15	0.25	0.22
Improves brain function	-0.02	-0.06	-0.22	-0.01	0.10	0.09
Logo						
No logo	-0.44	-0.27	-0.80	-0.44	-0.38	-0.30
ASC logo	0.44	0.27	0.80	0.44	0.38	0.30

^a Reference price for Fresh Fish Steaks: 5.73€ per 300gr of weight

Table 13. Estimated willingness-to-pay (WTP) above (below) reference price ^a of thin smoked fillet

	Overall	France	Germany	Italy	Spain	UK
Attribute levels						
Country of origin (COO)						
No COO	-1.67	-1.64	-1.08	-2.22	-2.46	-1.34
Produced in EU	-0.26	-0.51	-0.01	-0.17	-0.10	-0.44
Produced in own country	1.93	2.16	1.09	2.39	2.57	1.78
Nutrition claim						
No claim	-0.51	-0.15	-0.44	-0.65	-0.97	-0.64
Omega 3	0.54	0.16	0.49	0.75	1.00	0.53
High in protein	-0.03	-0.01	-0.05	-0.10	-0.04	0.11
Health claim						
No claim	-0.21	0.14	0.02	-0.40	-0.71	-0.44
Improves hearth function	0.15	-0.07	0.16	0.10	0.46	0.19
Improves brain function	0.07	-0.07	-0.18	0.30	0.25	0.24
Logo						
No logo	-0.42	-0.25	-0.71	-0.16	-0.48	-0.43
ASC logo	0.42	0.25	0.71	0.16	0.48	0.43

^a Reference price for Thin Smoked Fillets: 5.31€ per 300gr of weight

Table 14. Estimated willingness-to-pay (WTP) above (below) reference price ^a of fillets in olive oil

	Overall	France	Germany	Italy	Spain	UK
Attribute levels						
Country of origin (COO)						
No COO	-1.13	-1.11	-0.78	-1.76	-1.52	-0.76
Produced in EU	-0.41	-0.42	-0.45	-0.52	-0.31	-0.29
Produced in own country	1.55	1.53	1.23	2.28	1.82	1.05
Nutrition claim						
No claim	-0.28	-0.29	-0.06	-0.46	-0.28	-0.42
Omega 3	0.27	0.24	0.13	0.45	0.26	0.37
High in protein	0.01	0.06	-0.07	0.01	0.02	0.05
Health claim						
No claim	-0.12	0.02	0.01	-0.33	-0.20	-0.19
Improves hearth function	0.14	0.08	0.09	0.38	0.02	0.19
Improves brain function	-0.03	-0.10	-0.10	-0.05	0.18	0.00
Logo						
No logo	-0.27	-0.16	-0.39	-0.16	-0.25	-0.37
ASC logo	0.27	0.16	0.39	0.16	0.25	0.37

^aReference price for Fillets in Olive Oil: 6.69€ per 300gr of weight

4. Conclusion and recommendations

The results from this report have implications for food policy makers and the aquaculture industry interested in using different marketing solutions in terms of country of origin, nutrition and health claims and logos. The insights from this study regarding EU consumer reactions to different COO, ASC logo and claims are very relevant for food policy makers, especially in light of the current campaigns towards healthier food choices and overwhelming amount of products carrying nutrition claims as 'high in protein' (Banovic, 2016). Use of a country of origin (COO) indication in general, and 'Produced in own (domestic) country' in particular stimulates EU consumer to think more positively about the product besides increasing the probability of its purchase (Balabanis & Diamantopoulos, 2004; Chryssochoidis et al., 2007; Roth & Romeo, 1992). The importance of COO and especially of the 'Produced in own (domestic) country' indication could be also related to the fact that consumers make stronger association between product quality and COO in fresh and perishable products, where there is a higher perceived risk for health and safety issues (Claret et al., 2012; Tsiros & Heilman, 2005; Verbeke et al., 2007). Further, this points also to the role of 'freshness' and its importance in EU consumers' quality associations, making a product more probable to be selected if its COO is domestic *vs* produced somewhere in the EU (Banović et al., 2016).

Moreover, aquaculture companies may consider relying more on responsibility logos, e.g. the ASC logo, in their marketing differentiation to signal their customers that their products come from a "controlled", certified and responsible aquaculture source, as our results show that consumers do notice ASC logo and that use of a certification logo increases the probability of consumers considering the product, as well as trusting it (Krystallis & Chryssohoidis, 2005). Besides the fact that the ASC logo currently does play an important role in consumers' fish product choices, results show that future use of quality certification labels could depend on the extent to which consumers' general concern about sustainability of fish sources and responsible aquaculture farming can be turned into actual behaviour.

This study further shows that, with some country- or product-related exceptions, use of nutrition and health claims are not considered by consumers in our sample, who are generally higher-than-average involved in the fish category, as important as COO and the responsibility claims. Nevertheless, this could be also due to the fact that these claims are not properly used in the aquaculture sector even though they could constitute a marketing opportunity if used properly (Pieniak et al., 2007; Verbeke et al., 2007). This should be especially considered in new product development initiatives, where the aquaculture industry could focus more on those fish products that could actually fulfil criteria for the use of these claims. Moreover, as not all claims are in the same way appealing to consumers from different EU countries, fish companies should consider tailoring labelling of their products to a country specific needs and exercising in that way more effective marketing. For the general public, the use of nutrition and health claims would actually help EU consumer making more informed choices, aligned with their preferences, stimulating health-related behaviour (Kozup et al., 2003).

Overall, it is possible to create new products targeting similar segments across all big EU fish markets, as similar choice patterns has been observed in consumers' decision making. The higher probability and chances for the investigated products to succeed in the marketplace will depend on the proper use of labelling. Specifically, country of origin, lower price followed by quality certification (i.e. ASC logo) have a higher impact on the consumer, while nutrition/health claims appear to have varying albeit typically small impact. Aquaculture companies, as mentioned above, should take into account that a certain degree of customisation is needed across low- and medium-processed products and across countries, as results show that these are both product- and country-dependent.

Worth mentioning here is that, even though statistically significant differences were found between the two target segments (i.e. 'involved innovators' and 'involved traditional', see section 3.2) in relation to their beliefs towards farmed and wild fish, overall liking and perceived quality of the investigated products (see Tables in Appendix 4 through 6), later choice analyses revealed no

significant differences between the two segments (see section 3.3.). This is of great importance for the experts in the aquaculture sector, as it points to the fact that even though different segments exist on the market in terms of their motivations (i.e. engagement in and/or ability to learn) towards new fish products, consumer involvement actually overrules consumers' motivations and beliefs when it comes to the final choice of new fish products. The homogeneous nature of this occurrence across investigated EU countries and products just confirms this behavioural pattern pointing to the fact that by joining these two segments, one targets essentially the early adopters of the new fish products, which after all is the main aim of DIVERSIFY and WP29 in particular.

Lastly, even though the estimated data show the homogeneous nature across the investigated countries, further (or different, e.g. behavioural) segmentation of the data could bring forward some hidden heterogeneity and differences in consumer preferences across the investigated countries.

References

- Balabanis, G., & Diamantopoulos, A. (2004). Domestic country bias, country-of-origin effects, and consumer ethnocentrism: a multidimensional unfolding approach. *Journal of the Academy of Marketing Science*, 32(1), 80.
- Banovic, M. (2016). Consumers as co-creators in engineering of protein enriched products. In, *IFA Webinars*: ISEKI Food Association.
- Banović, M., Krystallis, A., Guerrero, L., & Reinders, M. J. (2016). Consumers as co-creators of new product ideas: An application of projective and creative research techniques. *Food Research International*, 87, 211-223.
- Biswas, A., Bhowmick, S., Guha, A., & Grewal, D. (2013). Consumer evaluations of sale prices: role of the subtraction principle. *Journal of Marketing*, 77(4), 49-66.
- Biswas, A., & Blair, E. A. (1991). Contextual effects of reference prices in retail advertisements. *The Journal of Marketing*, 1-12.
- Carlsson, F., Frykblom, P., & Lagerkvist, C. J. (2005). Using cheap talk as a test of validity in choice experiments. *Economics Letters*, 89(2), 147-152.
- Chryssochoidis, G., Krystallis, A., & Perreas, P. (2007). Ethnocentric beliefs and country-of-origin (COO) effect: Impact of country, product and product attributes on Greek consumers' evaluation of food products. *European Journal of Marketing*, 41(11/12), 1518-1544.
- Claret, A., Guerrero, L., Aguirre, E., Rincón, L., Hernández, M. D., Martínez, I., et al. (2012). Consumer preferences for sea fish using conjoint analysis: Exploratory study of the importance of country of origin, obtaining method, storage conditions and purchasing price. *Food Quality and Preference*, 26(2), 259-266.
- Cummings, R. G., & Taylor, L. O. (1999). Unbiased value estimates for environmental goods: a cheap talk design for the contingent valuation method. *The American Economic Review*, 89(3), 649-665.
- Davidson, K., Pan, M., Hu, W., & Poerwanto, D. (2012). Consumers' willingness to pay for aquaculture fish products vs. Wild-caught seafood a case study in hawaii. *Aquaculture Economics & Management*, 16, 136–154.
- Hair, J. F., Anderson, R. E., Babin, B. J., & Black, W. C. (2010). *Multivariate data analysis: A global perspective*: Pearson Upper Saddle River, NJ.
- Kozup, J. C., Creyer, E. H., & Burton, S. (2003). Making healthful food choices: the influence of health claims and nutrition information on consumers' evaluations of packaged food products and restaurant menu items. *Journal of Marketing*, 67(2), 19-34.
- Krystallis, A., & Chryssohoidis, G. (2005). Consumers' willingness to pay for organic food: Factors that affect it and variation per organic product type. *British Food Journal*, 107(5), 320-343.
- Lockshin, L., Jarvis, W., d'Hauteville, F., & Perrouty, J.-P. (2006). Using simulations from discrete choice experiments to measure consumer sensitivity to brand, region, price, and awards in wine choice. *Food Quality and Preference*, 17(3–4), 166-178.
- Louviere, J. J., & Hensher, D. A. (1983). Using Discrete Choice Models with Experimental Design Data to Forecast Consumer Demand for a Unique Cultural Event. *Journal of Consumer Research*, 10(3), 348-361.
- Louviere, J. J., Hensher, D. A., & Swait, J. D. (2000). Stated choice methods: analysis and applications: Cambridge University Press.
- Lusk, J. L. (2003). Effects of cheap talk on consumer willingness-to-pay for golden rice. *American Journal of Agricultural Economics*, 85(4), 840-856.
- McFadden, D. (1974). Conditional logit analysis of qualitative choice behaviour. In P. Zarembka, *Frontiers in econometrics*. New York: Academic Press.
- Nunes, J. C., & Boatwright, P. (2004). Incidental prices and their effect on willingness to pay. *Journal of Marketing Research*, 41(4), 457-466.

- Pieniak, Z., Verbeke, W., Scholderer, J., Brunsø, K., & Olsen, S. O. (2007). European consumers' use of and trust in information sources about fish. *Food Quality and Preference*, 18(8), 1050-1063.
- Roth, M. S., & Romeo, J. B. (1992). Matching product catgeory and country image perceptions: A framework for managing country-of-origin effects. *Journal of international business studies*, 23(3), 477-497.
- Train, K. (2003). Discrete choice methods with simulation: Cambridge university press.
- Tsiros, M., & Heilman, C. M. (2005). The effect of expiration dates and perceived risk on purchasing behavior in grocery store perishable categories. *Journal of Marketing*, 69(2), 114-129.
- Uchida, H., Onozaka, Y., Morita, T., & Managi, S. (2014). Demand for ecolabeled seafood in the Japanese market: A conjoint analysis of the impact of information and interaction with other labels. *Food Policy*, 44, 68-76.
- Van Wezemael, L., Caputo, V., Nayga, R. M., Chryssochoidis, G., & Verbeke, W. (2014). European consumer preferences for beef with nutrition and health claims: A multi-country investigation using discrete choice experiments. *Food Policy*, 44, 167-176.
- Verbeke, W., Vanhonacker, F., Sioen, I., Van Camp, J., & De Henauw, S. (2007). Perceived importance of sustainability and ethics related to fish: A consumer behavior perspective. *AMBIO: A Journal of the Human Environment*, 36(7), 580-585.

Appendix 1. Recruitment criteria

Key Criteria: (aim at 100 per country and per selected product)

- Must be main or joint decision maker when grocery shopping (Q1)
- Must consume farmed fish and wild fish (Q2)
- Quota on gender 50/50%: male/female (Q3)
- Quota on age 50% below 41 years of age; 50% above 41 years of age (Q4)
- Ensure a spread of age, range: +/- 20 years around 41, i.e. 21-61 (Q4)
- Aim for good demographic mix (Q5-8)
- 50%/50% of participants belonging to the segment "traditional" and segment "innovators" according to their responses in Q6 and the segmentation criteria given in Q9

Q1. Thinking about grocery shopping, are you the main decision maker?

Yes, I'm the main decision maker	1	Continue
Yes, I am the joint decision maker alongside other family member	2	Continue
No, someone else in my family is main decision maker	3	Close

MUST BE MAIN OR JOINT DECISION MAKER WHEN GROCERY SHOPPING

Q2. How often would you say you consume each of the following?

	Once a week or more	2 -3 times a month	Once a month	Rarely than once per month	Never
Farmed fish	1	2	3	4	5
Wild fish	1	2	3	4	5
Sea food	1	2	3	4	5
Frozen fish	1	2	3	4	5
Whole fish	1	2	3	4	5
Processed fish	1	2	3	4	5

IF FARMED FISH = 5 AND WILD FISH = 5 THEN STOP

Q3. Record gender		
Female	1	A: 6 1- / 6 1- 500/ /500/
Male	2	Aim for male / female 50% /50%
	ı	I
Q4. Age (record specific age):	<u></u>	
Under 20	1	Close
20-29	2	
30-39	3	GOOD SPREAD OF AGES
40-49	4	GOOD SI KEAD OF AGES
50-59	5	
60 years & over		Close
	ı	
Q5. What is your marital status?		
Single, at parental home	1	
Single, living independently	2	
Married / Co-habiting	3	GOOD MIX
Separated / Divorced	4	
Widowed	5	
Q6. Have you got any children living with you at hom	e?	
Yes, kids living at home	1	Record for info only
No, no kids living at home	2	
	ı	
Q7. What is your level of education?		
Secondary school without qualifications	1	
Higher education (not university)	2	GOOD MIX
University (first degree, BSc)	3	
University (higher degree, postgraduate as MSc, PhD)	4	
Q8. What is your level of income?		
Less than Average	1	
Average	2	GOOD MIX
More than average	3	-

Q9.We are interested to understand your views regarding your buying and consumption of fish products.

Please listen to the following statements, and answer on a scale of 1 to 7, where 1 means strongly agree and 7 means strongly disagree ...

	Strongly agree						Strongly disagree
	1	2	3	4	5	6	7
CONSUMER INVOLVMENT							
a) I am very concerned about what fish products I purchase	1	2	3	4	5	6	7
b) I care a lot about what fish products I consume	1	2	3	4	5	6	7
c) Generally, choosing the right fish products is important to me	1	2	3	4	5	6	7
DOMAIN SPECIFIC INNOVATIVENESS							
d) In general, I am among the first in my circle to purchase new fish products.	1	2	3	4	5	6	7
e) In general, I would consider buying new fish products	1	2	3	4	5	6	7
f) In general, I am among the first in my circle to know the latest fish product trends.	1	2	3	4	5	6	7
SUBJECTIVE KNOWLEDGE							
g) I consider that I know more about fish than the average person	1	2	3	4	5	6	7
h) I think that I know more about fish than most of my friends	1	2	3	4	5	6	7
i) I have a lot of knowledge about how to prepare fish	1	2	3	4	5	6	7
j) I I have a lot of knowledge about how to evaluate the quality of fish	1	2	3	4	5	6	7

CLASSIFICATION TO SEGMENTS / SEGMENTATION CRITERIA

Respondents are classified to segments according to their ranking sum in each of the above group of statements.

THE SCREENER CRITERIA FOR THE SEGMENTS BASED ON THE ABOVE STATEMENTS (Q6) IS AS FOLLOWS:

CI = Consumer involvement (Q6,a+b+c)	CI<7	1	
C1 Consumer involvement (Q0,u-0-0)	CI>6	2	CLOSE
	SI<7	1	SEGMENT 2 (INNOVATORS)
DSI = Domain Specific Innovativeness (Q6,d+e+f)	SI>6 & SI<15	2	CLOSE
	SI>14	3	SEGMENT 1 (TRADITIONALS)
SK = Subjective Knowledge (Q6,h+i+j)	SK<13	1	
	SK>12	2	CLOSE

Appendix 2. Example of the online questionnaire for the fresh fish steaks



1

Dear participant,

Thank you very much for your willingness to participate in the present study,

This study is a part of the research project DIVERSIFY, founded by the European Union's Framework Programme for research, technological development and demonstration.

This survey is entirely anonymous and thus responses will not be linked to any particular people.

Remember that you:

- Need to provide an answer in order to move to the next question.
- Cannot go back to see or change your previous answers.

The whole survey will take approximately 30 minutes to be completed.

Thank you very much in advance for your participation.

NEXT

We are aware from former consumer studies that people sometimes reply in one way but act differently in a real-life purchase situation. In consumer studies, people do not actually have to pay money for a product when indicating a particular choice, and they often tend to state a higher willingness to pay than what they would be actually willing to pay in the store. One of the reasons is that, in the study, they do not consider how big impact would this extra cost have on their available budget. People are generous when they do not have to pay for it. In the store and a real-life purchase situation, people might act and think differently: the allocated money on one product cannot be spent on other products.

Imagine that you want to purchase <u>fresh fish steaks</u> for dinner on a typical day.

Imagine that you are standing in front of the supermarket shelf, having different product options to choose from. In the following screens, different fish products will be presented to you.

We ask you to carefully examine all information of all products and respond to each of the questions about which of those products you would choose just exactly as you would if you were in a real store and had to pay for your product.

NEXT

You are standing in front of the supermarket shelf.	
Which one of the following three products would you MOST LIKELY CHOOSE and LEAST LIKELY CHOOSE to purchase for dinner on a typical day?	Ī
Please answer by ticking in the relevant boxes below your choice.	
NEXT	4



Were the prices o	on the ne	aduct valu	eaw locat	ted on the	left band	eide or th	e right	hand side of the
label?	л спе рі	oduct you	_	Left	_	ight	ie ngrit	nana side or the
In your opinion, th	e price o	lifference	among the	e various p	oroducts yo	ou saw, for	their qu	uality, was:
Too large								Too small
In your opinion, th	e prices	of the pro	duct you s	aw, for the	eir quality,	were:		
Too high								Too low
NEXT								

Now you are going to evaluate the product itself and fish species, as it would look after you unwrap it from the package shown to you in the pictures before.

We ask you to respond to each of the following questions just exactly as you would if you were at home and had paid to buy this product.

Please keep this in mind when answering the questions.

Please, follow the instructions provided in your computer screen.



Please answer by ticking in the relevant box.
9 I think I would like it extremely
8 I think I would like it very much
7 I think I would like it moderately
6 I think I would like it slightly
5 I do not think I would like it or dislike it
4 I think I would dislike it slightly
3 I think I would dislike it moderately
2 I think I would dislike it very much
1 I think I would dislike it extremely
NEXT



Is nutritious	Strongly disopree	Disogree	Hoderately disagree	Neither disagree nor agree			Strongli
Is familiar to you	0 0 0		0 0 0	0	0	000	000

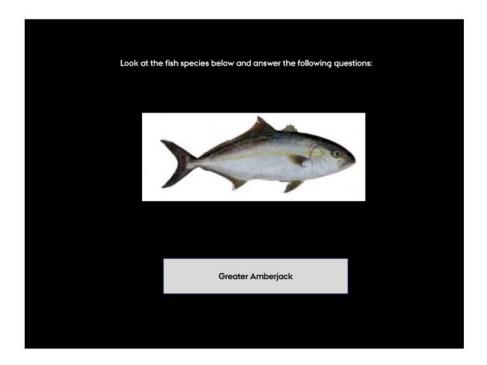


Please	answer by ticking in the relevant box.	
	9 I think I would like it extremely	
	8 I think I would like it very much	
	7 I think I would like it moderately	
	6 I think I would like it slightly	
	5 I do not think I would like it nor dislike it	
	4 I think I would dislike it slightly	
	3 I think I would dislike it moderately	
	2 I think I would dislike it very much	
	1 I think I would dislike it extremely	
NEXT		13





Is readily available			Hoderstely discoree	Neither disagret nor open control of the control of			
----------------------	--	--	---------------------	--	--	--	--

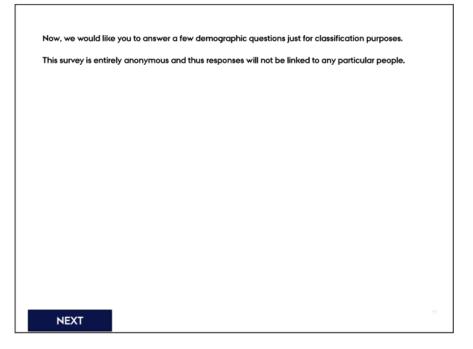


	1 Unfamiliar	2	3	4	5 (S Fe	7 amiliar			
					0 (
i	1 Inexperience	2 ed	3	4	5 6		7 erienced			
				0	0 0	ם י				
No	1 t knowledge	2 able	3	4	5	5 Know	7 ledgeable			
lmagine h	ow much v	would you l	ike this fish	species:						
	1 Would DISLIKE it Extremely	2 Would DISLIKE it Very much	3 Would DISLIKE it Moderately	4 Would DISLIKE it Slightly	5 Would not DISLIKE or LIKE it	LIKE it	7 Would LIKE it Moderately	8 Would LIKE it Very much	9 Would LIKE it Extremely	

In terms of buying and consuming fish products	, would yo	u say the	ic.				
	1 Strongly disagree	2 Disagree	3 Moderately disagree	4 Neither disagree nor agree	5 Moderately agree	6 Agree	7 Strongly agree
You know more about fish than other people do You have a lot of knowledge about how to prepare fish You have a lot of knowledge about how to evaluate the quality of fish	0	000	0	0 0	0	0 0 0	0 0
When in the store, you usually check whether or not the fish product you buy comes from farmed or wild fish	0		0	0	0	0	0
NEXT							16

	1 Strongly disagree	2 Disagree	3 Hoderately disagree	4 Neither disagree nor agree	5 Hoderately agree	Agree	7 Strongt agree
/ild fish is safer to consumer than farmed fish							
arm fish is less affected by marine pollution than wild fish							
/ild fish lives a better life than farmed fish							2
armed fish is healthier than wild fish							
/ild fish is of better quality than farmed fish		0					
armed fish is fresher than wild fish		0					
/ild fish is more nutritious than farmed fish							
armed fish is cheaper than wild fish							Ċ
/ild fish is more firm than farmed fish							Ċ
armed fish provides more guarantees than wild fish	Ö	ö		ö		0	Ċ
/ild fish tastes better than farmed fish	Ö	Ö	ö	Ö		Ö	_
armed fish is easier to find than wild fish	U	U	U	U	U	U	_

low often do you <u>purchase</u> the following fish products?	2-3 times a week or mare	2 Once a week or more	3 2-3 times a month	4 Once a month or less
Farmed fish (aquaculture)				
Wild fish				
Seafood				
Frozen fish				
Whole fish				
Processed fish (e.g. fish fingers)				
low often do you <u>consume</u> the following fish products?	1 2-3 times a week or mon	2 Once a week o ormore	3 2-3 times a month	4 Once a month or less
Farmed fish (aquaculture)				
Wild fish				
Seafood				
Frozen fish				
Whole fish				
Processed fish (e.g. fish fingers)				
hinking about grocery shopping, are you the main decisi	on maker:			
res, I'm the main decision maker				
res, I am the joint decision maker alongside other family member				
No, someone else in my family is main decision maker				
NEXT				



Age: [write	in]					
Marital status:						
Married/co-habiting Single at parents home Single, living independently Separated/divorced Widowed						
Do you have children?	□ No	☐ Yes				
		If yes, how	many children do you ho	ove:		
		Below 18:	[write in]			
		Above 18:	[write in]			
		Are they liv	ng with you at home?	□ No	☐ Yes	
What is your level of educe Primary school Secondary school Higher education (not univ University (first degree, BSc University (higher degree, p	ersity)	te as MSc, PhD)	0000			
What is your level of incom	e?					
			Н			
More than average Average						







Appendix 3. Socio-demographic, buying, and consuming profile of the recruited participants per investigated product across countries and market segments

Table 15 Socio-demographic profile of the *Fresh fish steak* sample across countries, %

Characteristics	Total (N=532)	France (N=103)	Germany (N=108)	Italy (N=108)	Spain (N=107)	UK (N=106)	Sig.*
Age	,		,	,			
(mean in years)	41.1	41.5	42.1	40.1	39.6	42.1	.303
Age group							
(20-40)	49.1	48.5 ^a	49.1	51.9	50.5	49.1 ^a	
(41-60)	50.9	51.5	50.9	48.1	49.5	50.9	.989
Gender							
(male)	49.6	48.5	49.1	49.1	51.4	50	.995
Marital status							
(Married/co-habiting)	63.5	61.2	55.6	58.3	72.9	69.8	
(Single at parents home)	1.3	10.7	3.7	21.3	12.1	3.8	.000**
(Single, living independently)	18.4	16.5	33.3	13.0	11.2	17.9	.000
(Separated/divorced)	6.8	10.7	5.6	5.6	3.7	8.5	
(Widowed)	0.9	1.0	1.9	1.9			
Existence of children							
(yes)	53.4	54.4	52.8	47.2	62.6	50	.210
Existence of children at home							
(yes)	45.5	47.6	34.3	43.5	60.7	41.5	.000
Number of children-below 18							
(0 children)	14.0	11.7	17.6	10.2	11.2	20.0	
(1 - 2 children)	35.9	40.8	31.4	34.25	44.9	28.0	.126
(3 or more children)	3.3	1.9	3.7	2.8	6.5	2.0	
Number of children-above 18							
(0 children)	33.1	35.0	30.6	32.4	45.8	22.4	
(1 - 2 children)	16.3	14.5	19.4	12.0	15.0	20.4	.080
(3 or more children)	3.8	4.9	2.75	2.75	1.9	7.1	
Level of education							
(Primary school)	3.4	1.0	13.9	-	1.9	-	
(Secondary school)	20.7	18.4	35.2	7.4	13.1	29.2	
(Higher education-not	32.9	30.1	23.1	49.1	34.6	27.4	
university)	29.7	30.1	18.5	34.3	37.4	28.3	.000
(University- first degree, BSc)	13.3	20.4	9.3	9.3	13.1	15.1	.000
(University Post							
graduate,PhD)							
Income							
(more than average)	13.3	9.7	17.6	2.8	15.9	20.8	
(average)	65.0	67.0	62.0	74.1	69.2	52.8	.002
(less than average) aMembership percentage in each segment				23.1	15.0	26.4	.002

^aMembership percentage in each segment based on the cross-tabulation

^{*}Results from the chi-square test **All values in italic significant at p < .05

Table 16. Socio-demographic profile of the Fresh fish steak sample across segments, %

Characteristics	Total (N=532)	Involved innovators (N=167)	Involved traditionals (N=365)	Sig.*
Age				
(mean in years)	41.1	43.1	40.1	.004**
Age group				
(20-40)	49.8	41.9 a	53.4	
(41-60)	50.2	58.1	46.6	.014
Gender				
(male)	49.6	49.1	49.9	.871
Marital status				
(Married/cohabiting)	63.5	67.1	61.9	
(Single at parents home)	10.3	8.4	11.2	
(Single, living independently)	18.4	14.4	20.3	.172
(Separated/divorced)	6.8	8.4	6.0	
(Widowed)	0.9	1.8	0.5	
Existence of children				
(yes)	53.4	58.7	51.0	.097
Existence of children at home				
(yes)	45.5	47.9	44.4	.218
Number of children-below 18				
(0 children)	14.1	19.2	11.7	
(1 - 2 children)	35.9	36	36	.211
(3 or more children)	3.5	3.6	3.4	
Number of children-above 18		<u> </u>		
(0 children)	33.4	33.6	33.2	127
(1 - 2 children)	16.2	20.2	14.4	.427
(3 or more children)	3.9	4.9	3.4	
Level of education				
(Primary school)	3.4	3.0	3.6	
(Secondary school)	20.7	25.1	18.6	
(Higher education-not university)	32.9	32.9	32.9	.479
(University- first degree, BSc)	29.7	26.3	31.2	
(University Post graduate, PhD)	13.3	12.6	13.7	
Income		Ψ		
(more than average)	13.3	17.4	11.5	
(average)	65.0	63.5	65.8	.156
(less than average)	21.6	19.2	22.7	

^aMembership percentage in each segment based on the cross-tabulation *Results from the chi-square test ** All values in italic significant at p < .05

Table 17. Socio-demographic profile of the *Fresh fish steak* sample across segments per country, %

		France			Germany			Italy			Spain			UK	
Characteristics	Involved innovators (N=13)	Involved traditionals (N=90)	Sig.*	Involved innovators (N=46)	Involved traditionals (N=62)	Sig.*	Involved innovators (N=36)	Involved traditionals (N=72)	Sig.*	Involved innovators (N=37)	Involved	Sig.*	Involved innovators (N=35)	Involved traditionals (N=71)	Sig.*
Age	42.08	41.46	.273	43.4	41.1	.267	42.6	38.9	.114	40.8	39.0	.864	46.1	40.1	.017**
(mean in years)	42.08	41.40	.2/3	43.4	41.1	.207	42.0	38.9	.114	40.8	39.0	.804	40.1	40.1	.01/***
Age group (20-40)	38.5ª	50.0		43.5 a	53.2		47.2ª	54.1		43.2ª	54.3		34.3a	56.3	
(41-60)	61.5	50.0	.437	56.5	46.8	.316	52.8	45.9	.501	56.8	34.3 45.7	.277	65.7	43.7	.033
Gender (41-00)	01.3	30.0	.437	30.3	40.8	.510	32.8	43.9	.501	30.8	43.7	.411	03.7	43.7	.033
(male)	53.8	47.8	.682	50.0	48.4	.868	44.4	52.7	.416	59.5	47.1	.225	40.0	54.9	.148
Marital status		47.0	.002	30.0	40.4	.000		32.1	.410	39.3	47.1	.443	40.0	34.7	.140
(Married/co-habiting)	84.6	57.8		56.5	54.8		66.7	55.4		70.3	74.3		71.4	69.0	
(Single at parents home)	-	12.2		4.3	3.2		19.4	21.6		13.5	11.4		71.4	5.6	
(Single, living independently)	-	18.9	.212	28.3	37.1	.470	5.6	16.2	.556	10.8	11.4	.904	14.3	19.7	.217
(Single, fiving independently) (Separated/divorced)	15.4	10.0	.212	6.5	4.8	.470	5.6	5.4	.550	5.4	2.9		14.3	5.6	
(Widowed)	-	1.1		4.3	-		2.8	1.4		J.¬	2.7		-	J.0 -	
Existence of children															
(yes)	53.8	54.4	.968	60.9	46.8	.147	58.3	43.2	.137	64.9	61.4	.727	51.4	49.3	.836
Existence of children at home					10.0			13.2			01.1	,			
(yes)	46.1	47.8	.879	67.9	62.1	.647	52.8	40.5	.659	64.9	58.5	.283	34.3	45.1	.023
Number of children-below 18															
(0 children)	7.7	12.2		19.5	16.1		19.4	5.4		13.5	10.0	2.60	19.2	11.7	154
(1 - 2 children)	38.5	41.1	.250	39.2	25.9	.526	38.9	32.4	.102	40.6	47.1	.368	36.0	36.0	.174
(3 or more children)	7.7	1.1		2.2	4.8		-	5.4		5.4	4.2		3.6	3.4	
Number of children-above 18												,			
(0 children)	-	33.3		32.6	29.0		36.1	32.4		45.9	-	1.50	33.6	33.2	005
(1 - 2 children)	46.1	15.6	.416	23.9	16.2	.727	16.7	9.4	.556	13.5	45.7	.153	20.2	14.4	.087
(3 or more children)	7.7	5.6		4.4	1.6		5.6	1.3		5.5	15.7		4.9	3.4	
Level of education															
(Primary school)	-	1.1		8.7	17.7		-	-		2.7	1.4		-	-	
(Secondary school)	15.4	18.9		39.1	32.3		5.6	8.1		24.3	7.1	0.4644	31.4	28.2	660
(Higher education-not university)	46.2	27.8	.750	23.9	22.6	.697	55.6	45.9	.813	27.0	38.6	.046**	22.9	29.6	.660
(University- first degree, BSc)	23.1	31.1		17.4	19.4		30.6	36.5		27.0	42.9		34.3	25.4	
(University Post graduate, PhD)	15.4	21.1		10.9	8.1		8.3	9.5		18.9	10.0		11.4	16.9	
Income															
(more than average)	23.1	7.8	.040**	19.6	16.1		2.8	2.7		16.2	15.7	.955	28.6	16.9	.359
(average)	76.9	65.6	.040**	60.9	62.9	.896	72.2	74.3	.972	70.3	68.6	.933	45.7	56.3	.339
(less than average)	-	26.7		19.6	21.0		25.0	23.0		13.5	15.7		25.7	26.8	

^aMembership percentage in each segment based on the cross-tabulation

^{*}Results from the chi-square test

^{**}All values in italic significant at p < .05

Table 18. Purchase and consumption behaviour of the *Fresh fish steak* sample across countries, %

	Total (N=532)	France (N=103)	Germany (N=108)	Italy (N=108)	Spain (N=107)	UK (N=106)	Sig.*
Main decision maker:	,	,	,	,			
(Yes, I am the main)	76.9	77.7 a	77.8	75.0	77.6	76.4 ^a	
(Yes, I am a joint alongside my family)		22.3	22.2	25.0	22.4	23.6	.987
Purchase behaviour							
Farmed fish							
(Once a week or more)	21.6	9.7	9.3	31.5	36.4	20.8	
(2-3 times a month)			22.2				
` `	=7.0	28.2		27.8	29.0	31.1	.000**
(Once a month)		14.6	18.5	15.7	14.0	22.6	
(Less than once a month)		38.8	32.4	19.4	15.0	22.6	
Wild fish (Never)	8.1	8.7	17.4	5.6	5.6	2.8	
	12.6	0.7	7.4	12.0	21.5	10.4	
(Once a week or more)		9.7	7.4	13.9	21.5	10.4	
(2-3 times a month)		27.2	22.2	21.3	30.8	21.7	014
(Once a month)		24.3	31.5	21.3	18.7	20.8	.014
(Less than once a month)		32.0	32.4	28.7	22.4	40.6	
(Never)	8.3	6.8	6.5	14.8	6.5	6.6	
Seafood	15.4	10.7	2.7	12.0	17.0	21.1	000
(Once a week or more)	15.4	10.7	3.7	13.9	17.8	31.1	.000
Frozen fish							
(Once a week or more)	22.0	11.7	16.7	24.1	33.6	23.6	.000
Whole fish							
(Once a week or more)	17.5	8.7	4.6	21.3	36.4	16.0	.000
Processed fish							
(Once a week or more)	18.0	15.5	15.7	15.7	22.4	20.8	.107
Consumption behaviour							
Farmed fish							
(Once a week or more)	24.1	11.7	8.3	32.4	40.2	27.4	
(2-3 times a month)		27.2	25.0	27.8	25.2	29.2	
(Once a month)		17.5	21.3	19.4	15.9	15.1	.000
(Less than once a month)		38.8	30.6	18.5	13.1	24.5	
(Never)		4.9	14.8	1.9	5.6	3.8	
Wild fish							
(Once a week or more)	15.2	7.8	9.3	17.6	28.0	13.2	
(2-3 times a month)		27.2	22.2	23.1	31.8	20.8	
(Once a month)		25.2	27.8	24.1	21.5	22.6	.001
(Less than once a month)		34.0	33.3	25.6	14.0	38.7	
(Never)		5.8	7.4	9.3	4.7	4.7	
Seafood	· · · · · · · · · · · · · · · · · · ·		/			,	
(Once a week or more)	17.1	7.8	6.5	16.7	23.4	31.1	.000
Frozen fish	17.1	7.0		10.7	23.1	31.1	.000
(Once a week or more)	23.3	13.6	12.0	23.1	41.1	26.4	.000
Whole fish		13.0	12.0	23.1	71.1	20.7	.000
(Once a week or more)	17.5	7.8	9.3	21.3	34.6	14.2	.000
Processed fish	1 /.3	1.0	9.3	41.3	34.0	14.2	.000
	22.4	15.5	105	22.1	25 5	100	012
(Once a week or more) Membership percentage in each segment based on the cre		15.5	18.5	23.1	35.5	18.9	.013

^aMembership percentage in each segment based on the cross-tabulation. *Results from the chi-square test ** All values in italic significant at p < .05

Table 19. Purchase and consumption behaviour of the Fresh fish steak sample across segments, %

		Total (N=532)	Involved innovators (N=167)	Involved traditional (N=365)	Sig.*
Main decision maker:					
	(Yes, I am the main)	76.9	80.2 a	75.3	
	(Yes, I am a joint alongside my family)	23.1	19.8	24.7	.214
Purchase behavior	(
Farmed fish					
	(Once a week or more)	21.6	34.1	15.9	
	(2-3 times a month)	27.6	29.9	15.9	
	(Once a month)	17.1	15.0	18.1	.000**
	(Less than once a month)	25.6	15.6	30.1	
	(Never)	8.1	5.4	9.3	
Wild fish					
	(Once a week or more)	12.6	15.0	11.5	
	(2-3 times a month)	24.6	27.5	3.3	
	(Once a month)	23.3	25.1	22.5	.214
	(Less than once a month)	31.2	24.6	34.2	
	(Never)	8.3	7.8	8.5	
Seafood					
	(Once a week or more)	15.4	15.6	15.3	.004
Frozen fish					
	(Once a week or more)	22.0	28.7	18.9	.065
Whole fish					
	(Once a week or more)	17.5	22.8	15.1	.066
Processed fish	` '				
	(O nce a week or more)	18.0	19.8	17.3	.346
Consumption behavior					
Farmed fish					
	(Once a week or more)	24.1	34.7	19.2	
	(2-3 times a month)	26.9	30.5	25.2	
	(Once a month)	17.9	16.8	18.4	.000
	(Less than once a month)	25.0	15.0	29.6	
	(Never)	6.2	3.0	7.7	
Wild fish					
	(Once a week or more)	15.2	18.6	13.7	
	(2-3 times a month)	25.0	26.9	24.1	
	(Once a month)	24.2	25.1	23.8	.279
	(Less than once a month)	29.1	23.4	31.8	
	(Never)	6.4	6.0	6.6	
Seafood					
	(Once a week or more)	17.1	21.0	15.3	.011
Frozen fish	(
	(Once a week or more)	23.3	28.7	20.8	.092
Whole fish	(
	(Once a week or more)	17.5	23.4	14.8	.047
Processed fish	(= ====================================				

^aMembership percentage in each segment based on the cross-tabulation. *Results from the chi-square test ** All values in italic significant at p < .05

FP7-KBBE-2013-07, DIVERSIFY 603121

Table 20. Purchase and consumption behaviour of the Fresh fish steak sample across segments per country, %

		France		Germany				Italy		Spain			UK		
	Involved innovators (N=13)	Involved traditional s (N=90)	Sig.*	Involved innovators (N=46)	Involved traditionals (N=62)	Sig.*	Involved innovators (N=36)	Involved traditionals (N=72)	Sig.*	Involved innovators (N=37)	Involved traditional s (N=70)	Sig.*	Involved innovators (N=35)	Involved traditional s (N=71)	Sig.*
Main decision maker:															
(Yes, I am the main)	69.2 a	78.9	42.4	82.6 a	74.2	•••	80.6^{a}	73.0		81.1 ^a	75.7		80.0^{a}	74.6	
(Yes, I am a joint alongside my family)	30.8	21.1	.434	17.4	25.8	.298	19.4	27.0	.386	18.9	24.3	.527	20.0	25.4	.542
Purchase behaviour															_
Farmed fish															
(Once a week or more)	23.1	7.8		15.2	4.8		44.4	24.3		54.1	27.1		31.4	15.5	
(2-3 times a month)	46.2	25.6	.097	23.9	21.0	.259	33.3	25.7	.023**	21.6	32.9	.094	37.1	28.2	.091
(Once a month)	15.4	14.4	.097	17.4	19.4	.239	13.9	17.6	.023	8.1	17.1	.094	20.0	23.9	.091
(Less than once a month)	15.4	42.2		32.6	32.3		2.8	27.0		10.8	17.1		11.4	28.2	
(Never)	-	10.0		10.9	22.6	5.6	5.4		5.4	5.7		-	4.2		
Wild fish					•	_									-
(Once a week or more)	15.4	8.9		4.3 9.	9.7		19.4	10.8		32.4	15.7		5.7	12.7	
(2-3 times a month)	46.2	24.4	2.52	4.3 39.1	19.4	0.004.4	16.7	23.0	.292	24.3	34.3	261	20.0	22.5	501
(Once a month)	15.4	25.6	.373	26.1	25.8		30.6	17.6	.292	18.9	18.6	.361	28.6	16.9	.531
(Less than once a month)	15.4	34.4		23.9	37.1		22.2	32.4		18.9	24.3		37.1	42.3	
(Never)	7.7	6.7		6.5	11.3		11.1	16.2		5.4	7.1		8.6	5.6	
Consumption behaviour					•										•
How often do you consume Farmed fish					•			•							
(Once a week or more)	23.1	10.0		10.9	6.5		47.2	24.3		54.1	32.9		37.1	22.5	
(2-3 times a month)	46.2	24.4	1.65	34.8	17.7	155	25.0	29.7	1.50	24.3	25.7	22.4	31.4	28.2	0.224
(Once a month)	15.4	17.8	.165	19.6	22.6	.175	13.9	23.0	.153	10.8	18.6	.234	22.9	11.3	.022*
(Less than once a month)	15.4	42.2		26.1	33.9		13.9	20.3		8.1	15.7		8.6	32.4	
(Never)	-	5.6		8.7	19.4		-	2.7		2.7	7.1		-	5.6	
How often do you consume Wild fish					,			*							
(Once a week or more)	15.4	6.7		8.7	9.7		22.2	16.2		32.4	25.7		14.3	12.7	
(2-3 times a month)	38.5	25.6		37.0	11.3		19.4	24.3		29.7	32.9		14.3	23.9	
(Once a month)	23.1	25.6	.487	23.9	11.3 30.6	30.6	20.3	.574	18.9	22.9	.861	28.6	19.7	.431	
(Less than once a month)	15.4	36.7		23.9	30.6 40.3	22.2	28.4		16.2	12.9		34.3	40.8		
(Never)	7.7	5.6		6.5	8.1		5.6	10.8		2.7	5.7		8.6	2.8	

^aMembership percentage in each segment based on the cross-tabulation. *Results from the chi-square test ** All values in italic significant at p < .05

Table 21. Involvement, innovativeness and subjective knowledge of the Fresh fish steak sample across countries, mean scores

	Total (N=532)	France (N=103)	Germany (N=108)	Italy (N=108)	Spain (N=107)	UK (N=106)	Sig.*
Involvement							
I am very concerned about what fish products I purchase ^f	5.03	5.03 ^b	5.01 ^b	4.22ª	5.75°	5.16 ^b	.000
I care a lot about what fish products I consume	5.45	5.10 ^a	5.56 ^{bc}	5.29 ^{ab}	5.89 ^c	5.40^{ab}	.000
Generally, choosing the right fish products is important to me	5.54	5.31 ^a	5.51 ^a	5.44ª	5.98 ^b	5.44ª	.000
Innovativeness							
In general, I am among the last in my circle of friends to purchase new fish products	4.13	4.74 ^b	3.82^{a}	3.94ª	4.12 ^a	4.07 ^a	.000
Compared to my friends, I do little shopping for new fish products	4.05	4.61 ^b	3.73 ^a	3.99^{a}	4.08^{a}	3.88^{a}	.001
In general, I am the last in my circle of friends to know the names of the latest new fish product trends	4.04	4.53 ^b	3.75 ^a	3.94^a	4.06 ^a	3.94 ^a	.006
Subjective knowledge							
I consider that I know more about fish than the average person	4.53	4.41	4.45	4.55	4.43	4.79	.202
I have a lot of knowledge about how to prepare fish	4.71	4.34^{a}	4.93^{b}	4.59ab	4.78^{ab}	4.90^{b}	.008
I have a lot of knowledge about how to evaluate the quality of fish	4.75	4.60	4.86	4.56	4.86	4.86	.185

Table 22. Involvement, innovativeness and subjective knowledge of the Fresh fish steak sample across segments, mean scores

	Total (N=532)	Involved innovators (N=167)	Involved traditional (N=365)	Sig.*
Involvement				
I am very concerned about what fish products I purchase ^b	5.03	5.10	5.00	.482
I care a lot about what fish products I consume	5.45	5.82	5.28	.000
Generally, choosing the right fish products is important to me	5.54	5.95	5.35	.000
Innovativeness				
In general, I am among the last in my circle of friends to purchase new fish products	4.13	2.66	4.80	.000
Compared to my friends, I do little shopping for new fish products	4.05	2.38	4.82	.000
In general, I am the last in my circle of friends to know the names of the latest new fish product trends	4.04	2.45	4.77	.000
Subjective knowledge				
I consider that I know more about fish than the average person	4.53	4.99	4.32	.000
I have a lot of knowledge about how to prepare fish	4.71	5.25	4.46	.000
I have a lot of knowledge about how to evaluate the quality of fish	4.75	5.24	4.52	.000

^b1 = Strongly disagree, 7 = Strongly agree

f 1 = Strongly disagree, 7 = Strongly agree

a,b,c Tukey HSD post hoc test, countries without common superscripts differ significantly

^{*}Results from the ANOVA

^{**} All values in italic significant at p < .05

^{*}Results from the t- test

^{**} All values in italic significant at p < .05

Table 23. Involvement, innovativeness and subjective knowledge of the Fresh fish steak sample across segments per country, mean scores

		France		Germany			Italy			Spain		UK			
	Involved innovators (N=13)	Involved traditionals (N=90)	Sig.*	Involved innovators (N=46)	Involved traditionals (N=62)	Sig.*	Involved innovators (N=36)	Involved traditionals (N=72)	Sig.*	Involved innovators (N=37)	Involved traditionals (N=70)	Sig.*	Involved innovators (N=35)	Involved traditionals (N=71)	Sig.*
Involvement															
I am very concerned about what fish products I purchase ^b	5.23	5.00	.455	5.02	5.00	.935	3.58	4.54	.001	6.27	5.47	.000	5.46	5.01	.027
I care a lot about what fish products I consume	5.15	5.09	.793	5.93	5.29	.000	5.58	5.14	.009	6.30	5.67	.001	5.66	5.27	.037
Generally, choosing the right fish products is important to me	5.62	5.27	.202	5.93	5.19	.000	5.83	5.24	.001	6.38	5.77	.001	5.77	5.28	.016
Innovativeness															
In general, I am among the last in my circle of friends to purchase new fish products	3.23	4.96	.001	2.46	4.84	.000	2.33	4.74	.000	3.14	4.64	.000	2.57	4.80	.000
Compared to my friends, I do little shopping for new fish products	2.38	4.93	.000	2.33	4.77	.000	2.36	4.81	.000	2.81	4.76	.000	2.00	4.80	.000
In general, I am the last in my circle of friends to know the names of the latest new fish product trends	2.85	4.78	.000	2.39	4.76	.000	2.64	4.60	.000	2.41	4.93	.000	2.23	4.79	.000
Subjective knowledge															
I consider that I know more about fish than the average person	4.85	4.34	.147	4.67	4.29	.108	5.17	4.24	.000	4.97	4.14	.002	5.29	4.55	.004
I have a lot of knowledge about how to prepare fish	4.92	4.26	.038	5.43	4.55	.000	4.92	4.43	.085	5.35	4.47	.002	5.37	4.66	.007
I have a lot of knowledge about how to evaluate the quality of fish	5.15	4.52	.054	5.28	4.55	.001	4.94	4.36	.038	5.46	4.54	.000	5.29	4.65	.011

b 1 = Strongly disagree, 7 = Strongly agree
*Results from the t- test

^{**} All values in italic significant at p < .05

Table 24. Socio-demographic profile of the Fish fillet in olive oil sample across countries, %

Characteristics	Total (N=536)	France (N=106)	Germany (N=106)	Italy (N=115)	Spain (N=104)	UK (N=105)	Sig.*
Age							
(mean in years)	40.7	41.6	41.5	39.6	39.7	39.9	.452
Age group			,				
(20-40)	50.0	50.9 a	49.1	49.6	50.0	50.5	
(41-60)	50.0	49.1	50.9	50.4	50.0	49.5	.999
Gender			,				
(male)	51.3	50.9	51.3	54.8	50.0	49.5	.942
Marital status			·				
(Married/co-habiting)	64.4	64.2	61.3	56.5	79.8	61.0	
(Single at parents home)	12.5	10.4	3.8	26.1	8.7	12.4	
(Single, living independently)	16.2	17.0	25.5	13.0	7.7	18.1	.000**
(Separated/divorced)	6.3	7.5	9.4	3.5	2.9	8.6	
(Widowed)	0.6	0.9	-	0.9	1.0	-	
Existence of children							
(yes)	52.1	46.2	50.9	44.3	72.1	47.6	.000
Existence of children at home							
(yes)	43.9	35.8	34.0	39.1	69.2	41.9	.000
Number of children-below 18			·				
(0 children)	12.6	16.0	20.8	9.6	7.7	8.9	
(1 - 2 children)	44.1	25.5	26.4	28.7	56.7	33.8	.009
(3 or more children)	5.5	4.7	3.8	6.1	7.7	5.0	
Number of children-above 18			÷				
(0 children)	34.2	27.4	28.3	31.3	56.7	27.4	
(1 - 2 children)	16.1	15.1	18.9	13.1	14.5	19.2	.031
(3 or more children)	1.9	3.8	3.8	-	1.0	1.0	.001
Level of education			,				
(Primary school)	3.9	_	13.2	_	3.8	2.9	
(Secondary school)	19.4	25.5	38.7	7.8	11.5	14.3	
(Higher education-not	29.5	23.6	21.7	44.3	29.8	26.7	
university)	33.8	34.9	18.9	38.3	37.5	39.0	.000
(University- first degree, BSc)	13.4	16.0	7.5	9.6	17.3	17.1	
(University Post graduate, PhD)		10.0	,	2.0	1,.0	- /	
Income							•
(more than average)	14.7	18.9	17.9	6.1	9.6	21.9	
(average)	64.4	61.3	58.5	65.2	76.0	61.0	.003
(less than average)	20.9	19.8	23.6	28.7	14.4	17.1	•000
^a Membership percentage in each				20.7		- /	

^aMembership percentage in each segment based on the cross-tabulation *Results from the chi-square test

^{**} All values in italic significant at p < .05

Table 25. Socio-demographic profile of the *Fish fillet in olive oil* sample across segments, %

Characteristics	Total (N=536)	Involved innovators (N=180)	Involved traditional (N=356)	Sig.*
Age				
(mean in years)	40.5	41.3	40	.197
Age group				
(20-40)	50.0	46.1 ^a	52.0	
(41-60)	50.0	53.9	48.0	.200
Gender				
(male)	51.3	48.9	52.5	.426
Marital status				
(Married/co-				
habiting)	64.4	66.1	63.5	
(Single at parents home)	12.5	11.1	13.2	
(Single, living independently)	16.2	17.2	15.7	.830
(Separated/divorced)	6.3	5.0	7.0	
(Widowed)	0.6	0.6	0.6	
Existence of children				
(yes)	52.1	54.4	50.8	.431
Existence of children at home				
(yes)	43.8	47.8	41.9	.234
Level of education				
(Primary school)	3.9	3.9	3.9	
(Secondary school)	19.4	22.8	17.7	
(Higher education-not university)	29.5	27.2	30.6	.682
(University- first degree, BSc)	33.8	32.2	34.6	
(University Post graduate, PhD)	13.4	13.9	13.2	
Number of children-below 18				
(0 children)	12.6	11.7	13.1	
(1 - 2 children)	34.0	37.2	32.4	.705
(3 or more children)	5.5	5.5	5.4	
Number of children-above 18				
(0 children)	34.1	34.8	33.8	
(1 - 2 children)	16.0	17.4	15.4	.890
(3 or more children)	1.9	2.3	1.7	
Income				
(more than average)	14.7	15.6	14.3	
(average)	64.4	62.2	65.4	
(less than average)	20.9	22.2	20.2	.762

^aMembership percentage in each segment based on the cross-tabulation *Results from the chi-square test ** All values in italic significant at p < .05

Table 26. Socio-demographic profile of the Fish fillet in olive oil sample across segments per country, %

	France			Germany			Italy			Spain			UK	
Involved innovators (N=23)	Involved traditionals (N=83)	Sig.*	Involved innovators (N=40)	Involved traditionals (N=66)	Sig.*	Involved innovators (N=38)	Involved traditionals (N=77)	Sig.*	Involved innovators (N=36)	Involved traditionals (N=68)	Sig.*	Involved innovators (N=43)	Involved traditionals (N=62)	Sig.*
					<u></u>									
39.57	42.2	.277	42.4	41.0	.542	42.7	38.1	.024**	38.9ª	40.1	.571	42.1ª	38.4	.120
39.1	51.8	.282	57.5	47.0	.293	60.5	45.5	.128	47.2	51.5	.680	58.1	43.5	.141
47.8	51.8	.735	45.0	54.5	.341	57.9	53.2	.638	47.2	51.5	.680	46.5	51.6	.607
82.6	59.0		60.0	62.1		65.8	51.9		77.8	80.9		53.5	66.1	
13.0	9.6		2.5	4.5		18.4	29.9		8.3	8.8		14.0	11.3	
4.3	20.5	.135	22.5	27.3	.453	13.2	13.0	.189	11.1	5.9	.844	27.9	11.3	.112
-	9.6		15.0	6.1		-	5.2		2.8	2.9		4.7	11.3	
-	1.2		-	-		2.6	-		-	1.5		-	-	
	······································									-				
60.9	42.2	.111	60.0	45.5	.146	50.0	41.6	.391	66.7	75.0	.367	39.5	53.2	.167
52.2	31.3	.386	47.5	25.8	.081	39.5	39.0	.113	66.7	70.6	.225	37.2	45.1	.339
17.4	15.7		25.0	18.2		7.9	10.4		2.8	10.3		11.7	13.1	
30.4	24.1	.256	32.5	22.7	.717	36.8	24.7	.585	58.4	57.9	.381	37.2	32.4	.969
13.0	2.4		2.5	4.6		5.25	6.5		-	8.9		5.5	5.4	
43.5	22.9		32.5	25.8		34.2	29.9		50.0	60.3		34.8	33.8	
17.4	14.4	.333	22.5	16.7	.967	15.9	11.7	.794	13.8	14.8	.333	17.4	15.4	.327
-	4.8		5.0	3.0		-	-		2.8	-		2.3	1.7	
_	_		15.0	12.1		_	_		2.8	4.4		_	4.8	
21.7	26.5					5.3	9.1					18.6		
21.7	24.1	.805			.322	55.3	39.0	.342			.617	20.9		
43.5	32.5		15.0	21.2		34.2	40.3		38.9	36.8		34.9	41.9	.574
13.0	16.9		5.0	9.1			11.7		19.4	16.2			11.3	
17.4	19.3		25.0	13.6		2.6	7.8		13.9	7.4		18.6	24.2	
		.595			.267			.417			.560			.614
		.0,0			0,			,						
	100 100	Involved Involved	Involved Involved innovators traditionals (N=23) (N=83)	Involved innovators traditionals (N=23) Sig.* Involved innovators (N=40) 39.57 42.2 .277 42.4 60.9 a 48.2 39.1 48.2 51.8 .282 57.5 47.8 51.8 .735 45.0 82.6 59.0 6 59.0 59.6 60.0 60.0 60.0 60.0 60.0 60.0 60.0 60.0	Involved Involved	Involved Involved	$ \begin{array}{ c c c c c c c c } \hline \textbf{Involved} & \textbf{Involved} \\ \hline \textbf{innovators} & \textbf{traditionals} \\ \hline \textbf{(N=23)} & \textbf{(N=83)} \\ \hline \textbf{(N=83)} & \textbf{Sig.*} \\ \hline \textbf{(N=40)} & \textbf{(N=66)} \\ \hline \textbf{(N=66)} & \textbf{Sig.*} \\ \hline \textbf{(N=66)} \\ \hline \textbf{(N=66)} & \textbf{Sig.*} \\ \hline \textbf{(N=38)} \\ \hline \textbf{(N=38)} \\ \hline \textbf{39.57} & 42.2 & .277 & 42.4 & 41.0 & .542 & 42.7 \\ \hline \textbf{60.9}^a & 48.2 & & 42.5^a & 53.0 & .39.5^a \\ \hline \textbf{39.1} & 51.8 & .282 & 57.5 & 47.0 & .293 & 60.5 \\ \hline \textbf{47.8} & 51.8 & .735 & 45.0 & 54.5 & .341 & 57.9 \\ \hline \textbf{82.6} & 59.0 & & 60.0 & 62.1 & 65.8 \\ \hline \textbf{13.0} & 9.6 & & 2.5 & 4.5 & .341 & 57.9 \\ \hline \textbf{4.3} & 20.5 & .135 & 22.5 & 27.3 & .453 & 13.2 \\ \hline \textbf{-} & 9.6 & & 15.0 & 6.1 & & - \\ \hline \textbf{-} & 1.2 & & - & - & & 2.6 \\ \hline \textbf{60.9} & 42.2 & .111 & 60.0 & 45.5 & .146 & 50.0 \\ \hline \textbf{52.2} & 31.3 & .386 & 47.5 & 25.8 & .081 & 39.5 \\ \hline \textbf{17.4} & 15.7 & & 25.0 & 18.2 & .79 \\ \hline \textbf{30.4} & 24.1 & .256 & 32.5 & 22.7 & .717 & 36.8 \\ \hline \textbf{13.0} & 2.4 & & & 2.5 & 4.6 & & 5.25 \\ \hline \textbf{43.5} & 22.9 & & 32.5 & 25.8 & .081 & 39.5 \\ \hline \textbf{47.4} & 14.4 & .333 & .22.5 & 16.7 & .967 & 15.9 \\ \hline \textbf{-} & 4.8 & & 5.0 & 3.0 & & - \\ \hline \textbf{-} & 4.8 & & 5.0 & 3.0 & & - \\ \hline \textbf{-} & 21.7 & 24.1 & .805 & 15.0 & 25.8 & .322 & 55.3 \\ \hline \textbf{43.5} & 32.5 & 32.5 & 15.0 & 25.8 & .322 & 55.3 \\ \hline \textbf{43.5} & 32.5 & 32.5 & 15.0 & 25.8 & .322 & 55.3 \\ \hline \textbf{43.5} & 32.5 & 32.5 & 15.0 & 25.8 & .322 & 55.3 \\ \hline \textbf{43.5} & 32.5 & 15.0 & 21.2 & .34.2 \\ \hline \textbf{13.0} & 16.9 & .595 & 50.0 & 63.6 & .267 & 63.2 \\ \hline \end{tabular}$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$

^aMembership percentage in each segment based on the cross-tabulation *Results from the chi-square test ** All values in italic significant at p < .05

Table 27. Purchase and consumer behaviour of the *Fish fillet in olive oil* sample across countries, %

		Total (N=536)	France (N=106)	Germany (N=106)	Italy (N=115)	Spain (N=104)	UK (N=105)	Sig.*
Main decision maker:								
	(Yes, I am the main)	76.3	73.6 a	75.5	74.8	77.9	80.0	
(Yes, I am	a joint alongside my family)	23.7	26.4	24.5	25.2	22.1	20.0	.816
Purchase behaviour							,	
Farmed fish							,	
	(Once a week or more)	23.1	7.5	7.5	32.2	45.2	22.9	
	(2-3 times a month)	25.9	22.6	28.3	27.8	25.0	25.7	.000**
	(Once a month)	19.6	24.5	24.5	18.3	10.6	20.0	.000***
	(Less than once a month)	24.8	32.1	32.1	18.3	16.3	25.7	
	(Never)	6.5	13.2	7.5	3.5	2.9	5.7	
Wild fish								
	(Once a week or more)	16.8	11.3	8.5	15.7	32.7	16.2	
	(2-3 times a month)	25.4	34.0	17.0	20.0	31.7	24.8	.000
	(Once a month)	19.6	18.9	27.4	13.0	12.5	26.7	.000
	(Less than once a month)	26.9	33.0	40.6	30.4	18.3	26.7	
	(Never)	8.4	2.8	6.6	10.9	4.8	5.7	
Seafood								
	(Once a week or more)	16.8	8.5	10.4	20.0	14.4	30.5	.000
Frozen fish	(0)	24.6	10.0	15.1	261	40.0	27.6	
W7 1 6 1	(Once a week or more)	24.6	12.3	15.1	26.1	42.3	27.6	.000
Whole fish	(0)	150	0.4	0.5	10.1	22.7	10.0	
D 151	(Once a week or more)	17.9	9.4	8.5	19.1	33.7	19.0	.000
Processed fish	(0 1)	20.0	10.4	140	25.2	20.0	20.0	002
2	(Once a week or more)	20.0	10.4	14.2	25.2	29.8	20.0	.003
Consumption behaviour								
Farmed fish							·	
	(Once a week or more)	23.3	5.7	8.5	28.7	48.1	25.7	
	(2-3 times a month)	31.0	34.9	29.2	32.2	27.9	30.5	.000
	(Once a month)	16.4	24.5	16.0	16.5	9.6	15.2	.000
	(Less than once a month)	23.3	25.5	36.8	18.3	12.5	23.8	
	(Never)	6.0	9.4	9.4	4.3	1.9	4.8	
Wild fish								
	(Once a week or more)	18.3	16.0	7.5	14.8	34.6	19.0	
	(2-3 times a month)	28.5	28.3	22.6	27.0	33.7	31.4	.000
	(Once a month)	20.7	26.4	25.5	20.9	11.5	19.0	.000
	(Less than once a month)	26.3	27.4	38.7	26.1	16.3	22.9	
	(Never)	6.2	1.9	5.7	11.3	3.8	7.6	
Seafood								
	(Once a week or more)	18.5	9.4	11.3	22.6	20.2	28.6	.000
Frozen fish								
	(Once a week or more)	28.0	15.1	11.3	27.8	54.8	31.4	.000
Whole fish								
	(Once a week or more)	19.6	10.4	5.7	23.5	36.5	21.9	.000
Processed fish								
	(Once a week or more)	24.1	11.3	17.0	31.3	35.6	24.8	.000

^aMembership percentage in each segment based on the cross-tabulation. *Results from the chi-square test ** All values in italic significant at p < .05

Table 28. Purchase and consumer behaviour of the Fish fillet in olive oil sample across segments, %

		Total (N=536)	Involved innovators (N=180)	Involved traditionals	Sig.*
Main decision maker:			. ,	(N=356)	
viain decision maker.	(Yes, I am the main)	76.3	81.7 a	76.3	
	(Yes, I am a joint alongside my family)	23.7	18.3	23.7	.038**
Purchase behavior	(1cs, 1 am a joint alongside my family)	23.1	16.5	23.1	.030
Farmed fish					
r armed rish	(Once a week or more)	23.1	21.7	23.9	
	(2-3 times a month)	25.9	32.2	22.8	
	(Once a month)	19.6	21.1	18.8	.083
	(Less than once a month)	24.8	19.4	27.5	
	(Never)	6.5	5.6	7.0	
Wild fish	(110101)	0.0		7.0	
,, 11d 11511	(Once a week or more)	16.8	15.6	17.4	
	(2-3 times a month)	25.4	25.6	25.3	
	(Once a month)	19.6	25.6	16.6	.120
	(Less than once a month)	26.9	25.0	32.3	
	(Never)	8.4	8.3	8.4	
Seafood					
	(Once a week or more)	16.8	20.0	15.2	.014
Frozen fish	,				
	(Once a week or more)	24.6	31.1	21.3	.062
Whole fish	,				
	(Once a week or more)	17.9	18.9	17.4	.522
Processed fish					
	(O nce a week or more)	20.0	24.4	17.7	.062
Consumption behavior			·		
Farmed fish					
	(Once a week or more)	23.3	25.6	22.2	
	(2-3 times a month)	31.0	36.7	28.1	.114
	(Once a month)	16.4	13.9	17.4	.114
	(Less than once a month)	23.3	18.3	25.8	
	(Never)	6.0	5.6	6.2	
Wild fish					
	(Once a week or more)	18.3	20.0	17.4	
	(2-3 times a month)	28.5	28.3	28.7	.324
	(Once a month)	20.7	23.9	19.1	.324
	(Less than once a month)	26.3	21.1	28.9	
	(Never)	6.2	6.7	5.9	
Seafood					
	(Once a week or more)	18.5	23.3	16.0	.002
Frozen fish					
	(Once a week or more)	28.0	35.0	24.4	.006
Whole fish					
	(Once a week or more)	19.6	18.9	19.9	.024
Processed fish					
	(Once a week or more)	24.1	31.1	20.5	.036

^aMembership percentage in each segment based on the cross-tabulation. *Results from the chi-square test ** All values in italic significant at p < .05

Table 29. Purchase and consumer behaviour of the Fish fillet in olive oil sample across segments per country, %

		France		(Germany			Italy			Spain			UK	
	Involved innovators (N=23)	Involved traditionals (N=83)	Sig.*	Involved innovators (N=40)	Involved traditionals (N=66)	Sig.*	Involved innovators (N=38)	Involved traditionals (N=77)	Sig.*	Involved innovators (N=36)	Involved traditionals (N=68)	Sig.*	Involved innovators (N=43)	Involved traditionals (N=62)	Sig.*
Main decision maker:															
(Yes, I am the main)	82.6 a	71.1		80.0	72.7		76.3	74.0		80.6a	76.5		88.4	74.2	
(Yes, I am a joint alongside my family)	17.4	28.9	.267	20.0	27.3	.399	23.7	26.0	.790	19.4	23.5	.633	11.6	25.8	.074
Purchase behaviour															
Farmed fish															
(Once a week or more)	8.7	7.2		2.5	10.6		34.2	31.2		47.2	44.1		14.0	29.0	
(2-3 times a month)	39.1	25.3	.614	22.5	22.7	.634	44.7	19.5	.024	25.0	25.0	.989	32.6	21.0	.014**
(Once a month)	26.1	24.1	.014	27.5	22.7	.034	10.5	22.1	.024	8.3	11.8	.989	32.6	11.3	.014**
(Less than once a month)	21.7	34.9		32.5	31.8		7.9	23.4		16.7	16.2		18.6	30.6	
(Never)	4.3	8.4		15.0	12.1		2.6	3.9		2.8	2.9		2.3	8.1	
Wild fish															
(Once a week or more)	8.7	12.0		7.5	9.1		15.8	15.6		33.3	32.4		11.6	19.4	
(2-3 times a month)	47.8	30.1	.169	10.0	21.2	.453	23.7	18.2	.879	33.3	30.9	.760	23.3	25.8	.045
(Once a month)	26.1	16.9	.109	32.5	24.2	.433	10.5	14.3	16.7	10.3	./60	39.5	17.7	.043	
(Less than once a month)	13.0	38.6		40.0	40.9	40.9	26.3	32.5		13.9	20.6		25.6	27.4	
(Never)	4.3	2.4		10.0	4.5		23.7	19.5		2.8	5.9			9.7	
Consumption behaviour															
How often do you consume Farmed fish															
(Once a week or more)	4.3	6.0		10.0	7. 6		28.9	28.6		52.8	45.6		25.6	25.8	
(2-3 times a month)	52.2	30.1	344	25.0	31.8	.868	47.4	24.7	.109	25.0	29.4	.799	39.5	24.2	.172
(Once a month)	21.7	25.3	.544	15.0	16.7	.000	10.5	19.5	.10)	5.6	11.8	.177	18.6	12.9	.1/2
(Less than once a month)	13.0	28.9		37.5	36.4		10.5	22.1		13.9	11.8		14.0	30.6	
(Never)	8.7	9.6		12.5	7.6		2.6	5.2		2.8	1.5		2.3	6.5	
How often do you consume Wild fish															
(Once a week or more)	17.4	15.7		7.5	7.6		21.1	11.7		38.9	32.4		16.3	21.0	
(2-3 times a month)	30.4	27.7	.648	20.0	20.0 24.2	950	23.7	28.6	.159	33.3	33.8	.955	34.9	29.0	.145
(Once a month)	34.8	24.1	.070	27.5 24.2	.750	21.1	20.8	.137	11.1	11.8	.755	27.9	12.9	.175	
(Less than once a month)	17.4	30.1		37.5	39.4		15.8	31.2		13.9	17.6		18.6	25.8	
(Never)	-	2.4		7.5	4.5		18.4	7.8		2.8	4.4		2.3	11.3	

^{*}Membership percentage in each segment based on the cross-tabulation. *Results from the chi-square test ** All values in italic significant at p < .05

Table 30. Involvement, innovativeness and subjective knowledge of the *Fish fillet in olive oil* sample across countries, mean scores

	Total (N=536)	France (N=106)	Germany (N=106)	Italy (N=115)	Spain (N=104)	UK (N=105)	Sig.*
Involvement							
I am very concerned about what fish products I purchase ^f	5.16	5.29 ^{bc}	4.97^{ab}	4.53 ^a	5.70°	5.36 ^{bc}	.000
I care a lot about what fish products I consume	5.55	5.34 ^a	5.41 ^{ab}	5.43 ^{ab}	5.82°	5.75 ^b	.001
Generally, choosing the right fish products is important to me	5.67	5.55 ^{ab}	5.45 ^a	5.66 ^{ab}	5.82 ^{ab}	5.88 ^b	.011
Innovativeness							
In general, I am among the last in my circle of friends to purchase new fish products	4.18	4.46 ^b	3.92^a	4.01 ^a	4.12 ^{ab}	4.38 ^{ab}	.049
Compared to my friends, I do little shopping for new fish products	4.05	4.43	3.84	3.95	4.10	3.96	.078
In general, I am the last in my circle of friends to know the names of the latest new fish product trends	4.04	4.34	3.94	3.92	4.03	3.97	.320
Subjective knowledge							
I consider that I know more about fish than the average person	4.61	4.34 ^a	4.44 ^a	4.58 ^{ab}	4.73 ^{ab}	4.97 ^b	.005
I have a lot of knowledge about how to prepare fish	4.80	4.35 ^a	4.90^{b}	4.70^{ab}	5.02 ^b	5.07 ^b	.001
I have a lot of knowledge about how to evaluate the quality of fish	4.82	4.67	4.88	4.63	4.95	4.99	.133

f 1 = Strongly disagree, 7 = Strongly agree

Table 31. Involvement, innovativeness and subjective knowledge of the *Fish fillet in olive oil* sample across segments, mean scores

	Total (N=536)	Involved innovators (N=180)	Involved traditional (N=356)	Sig.*
Involvement				
I am very concerned about what fish products I purchase ^b	5.16	5.06	5.21	.210
I care a lot about what fish products I consume	5.55	5.83	5.40	.000
Generally, choosing the right fish products is important to me	5.67	6.06	5.47	.000
Innovativeness				
In general, I am among the last in my circle of friends to purchase new fish products	4.18	2.78	4.88	.000
Compared to my friends, I do little shopping for new fish products	4.05	2.47	4.86	.000
In general, I am the last in my circle of friends to know the names of the latest new fish product trends	4.04	2.39	4.87	.000
Subjective knowledge				
I consider that I know more about fish than the average person	4.61	4.98	4.42	.000
I have a lot of knowledge about how to prepare fish	4.80	5.38	4.51	.000
I have a lot of knowledge about how to evaluate the quality of fish	4.82	5.23	4.61	.000

^b 1 = Strongly disagree, 7 = Strongly agree

a,b,c Tukey HSD post hoc test, countries without common superscripts differ significantly

^{*}Results from the ANOVA

^{**} All values in italic significant at p < .05

^{*}Results from the t- test

^{**} All values in italic significant at p < .05

Table 32. Involvement, innovativeness and subjective knowledge of the Fish fillet in olive oil sample across countries, mean scores

		France		1	Germany			Italy			Spain			UK	
	Involved innovators (N=23)	Involved traditionals (N=83)	Sig.*	Involved innovators (N=40)	Involved traditionals (N=66)	Sig.*	Involved innovators (N=38)	Involved traditionals (N=77)	Sig.*	Involved innovators (N=36)	Involved traditionals (N=68)	Sig.*	Involved innovators (N=43)	Involved traditionals (N=62)	Sig.*
Involvement							<u> </u>								
I am very concerned about what fish products I purchase ^b	5.09	5.35	0.334	5.15	4.86	0.254	3.92	4.83	0.003	5.81	5.65	0.401	5.33	5.39	0.813
I care a lot about what fish products I consume	5.30	5.35	0.854	5.85	5.14	0.000	5.84	5.23	0.003	5.94	5.75	0.289	5.98	5.60	0.053
Generally, choosing the right fish products is important to me	5.87	5.46	0.067	6.00	5.12	0.000	6.03	5.48	0.004	6.11	5.66	0.024	6.21	5.65	0.002
Innovativeness															
In general, I am among the last in my circle of friends to purchase new fish products	2.78	4.93	0.000	2.43	4.83	0.000	2.34	4.83	0.000	2.92	4.75	0.000	3.37	5.08	0.000
Compared to my friends, I do little shopping for new fish products	2.87	4.87	0.000	2.30	4.77	0.000	2.37	4.73	0.000	2.67	4.85	0.000	2.33	5.10	0.000
In general, I am the last in my circle of friends to know the names of the latest new fish product trends	2.30	4.90	0.000	2.20	5.00	0.000	2.39	4.68	0.000	2.69	4.74	0.000	2.37	5.08	0.000
Subjective knowledge															
I consider that I know more about fish than the average	4.87	4.19	0.020	4.85	4.20	0.004	4.97	4.39	0.015	4.89	4.65	0.328	5.26	4.77	0.069
person I have a lot of knowledge about how to prepare fish	5.00	4.17	0.002	5.53	4.52	0.000	5.26	4.43	0.001	5.36	4.84	0.034	5.58	4.71	0.001
I have a lot of knowledge about how to evaluate the quality of fish	5.26	4.51	0.004	5.40	4.56	0.000	4.89	4.49	0.123	5.22	4.81	0.091	5.37	4.73	0.019

 $^{^{}b}$ 1 = Strongly disagree, 7 = Strongly agree *Results from the t- test ** All values in italic significant at p < .05

Table 33. Socio-demographic profile of the *Thin smoked fillet* sample across countries, %

Characteristics	Total (N=528)	France (N=105)	Germany (N=104)	Italy (N=112)	Spain (N=102)	UK (N=105)	Sig.*
Age			` '	` '	. ,	/	
(mean in years)	41.1	41.5	41.3	40.2	40.4	42.1	.648
Age group						•	
(20-40)	49.4	49.5 ^a	49.0	49.1	50.0	49.5	
(41-60)	50.6	50.5	51.0	50.9	50.0	50.5	1.000
Gender							
(male)	50.2	50.5	49.0	50.9	51.0	49.5	.998
Marital status							
(Married/co-habiting)	66.1	69.5	51.0	62.5	72.5	75.2	
(Single at parents home)	10.8	8.6	5.8	20.5	11.8	6.7	
(Single, living independently)	16.1	19.0	29.8	11.6	10.8	9.5	.000
(Separated/divorced)	6.1	1.9	11.5	3.6	4.9	8.6	
(Widowed)	0.9	1.0	1.9	1.8	-	<u>-</u>	
Existence of children							
(yes)	54.9	49.5	50.0	50.0	63.7	61.9	.072
Existence of children at home							
(yes)	45.8	28.9	25.3	48.2	59.9	44.8	.000
Number of children-below 18	13.0	20.5					
(0 children)	15.2	15.2	16.4	16.1	0.0	10.2	
(1 - 2 children)	36.9	15.2			8.8	19.3	002
(3 or more children)	2.9	26.7 7.7	33.6	33.9	51.0 4.0	39.6 3.0	.002
Number of children-above 18	2.9	1.1		-	4.0		
(0 children)	32.4	29.5	30.8	26.8	44.1	31.4	~ - -
(1 - 2 children)	19.1	18.1	16.3	22.3	17.7	20.7	.025
(3 or more children)	3.5	2.0	2.9	0.9	2.0	9.9	
Level of education	<i>-</i> -	1.0	26.0		1.0		
(Primary school)	5.7	1.0	26.9	-	1.0	-	
(Secondary school)	20.6	25.7	39.4	8.0	9.8	21.0	000
(Higher education-not university)	30.9	26.7	8.7	54.5	29.4	33.3	.000
(University- first degree, BSc)	29.0	33.3	17.3	25.9	38.2	30.5	
(University Post graduate, PhD)	13.8	13.3	7.7	11.6	21.6	15.2	
Income	12.4	11 4	0.7	0.0	10.6	21.0	
(more than average)	13.4	11.4	8.7	8.0	18.6	21.0	0.70
(average)	67.0	69.5	65.4	77.7	63.7	58.1	.018
(less than average) Membership percentage in each clust	19.5	19.0	26.0	14.3	17.6	21.0	

^aMembership percentage in each cluster based on the cross-tabulation

^{*}Results from the chi-square test ** All values in italic significant at p < .05

Table 34. Socio-demographic profile of the *Thin smoked fillet* sample across segments, %

Characteristics	Total (N=528)	Involved innovators (N=155)	Involved traditional (N=373)	Sig.*
Age				
(mean in years)	41.1	41.5	40.9	.574
Age group				
(20-40)	49.4	49.7 a	49.3	
(41-60)	50.6	50.3	50.7	.942
Gender				
(male)	50.2	48.4	50.9	.593
Marital status				
(Married/co-				
habiting)	66.1	69.0	64.9	
(Single at parents home)	10.8	10.3	11.0	
(Single, living independently)	16.1	14.2	16.9	.565
(Separated/divorced)	6.1	6.5	5.9	
(Widowed)	0.9	0.0	1.3	
Existence of children				
(yes)	54.9	55.5	54.7	.868
Existence of children at home				
(yes)	45.8	44.5	46.4	.339
Level of education				
(Primary school)	5.7	5.8	5.6	
(Secondary school)	20.6	18.1	21.7	
(Higher education-not university)	30.9	29.7	31.4	.639
(University- first degree, BSc)	29.0	33.5	27.1	
(University Post graduate, PhD)	13.8	12.9	14.2	
Number of children-below 18				
(0 children)	15.2	15.7	15.0	
(1 - 2 children)	36.9	35.9	37.3	.644
(3 or more children)	2.9	4.0	2.4	
Number of children-above 18				
(0 children)	32.4	32.3	32.5	
(1 - 2 children)	19.1	16.8	20.0	.041
(3 or more children)	3.5	6.4	2.2	
Income				
(more than average)	13.4	16.1	12.3	
(average)	67.0	61.9	69.2	.260
(less than average)	19.5	21.9	18.5	

^aMembership percentage in each cluster based on the cross-tabulation *Results from the chi-square test ** All values in italic significant at p < .05

Table 35. Socio-demographic profile of the *Thin smoked fillet* across segments per country, %

·		France			Germany			Italy			Spain			UK	
Characteristics	Involved innovators (N=23)	Involved traditionals (N=82)	Sig.*	Involved innovators (N=42)	Involved traditionals (N=62)	Sig.*	Involved innovators (N=25)	Involved traditionals (N=87)	Sig.*	Involved innovators (N=35)	Involved traditionals (N=67)	Sig.*	Involved innovators (N=30)	Involved traditionals (N=75)	Sig.*
Age															
(mean in years)	41.35	41.49	.962	38.9	42.9	.055	40.3	40.1	.926	39.9 ^a	40.7	.685	48.1ª	38.8	.001**
Age group	40.73	40.2		50.53	41.0		50.03	40.0		5.4.2	47.0		22.2	60.0	
(20-40)	49.7°	49.3	4.40	59.5 a	41.9	0.70	52.0a	48.3	7.40	54.3	47.8	500	23.3	60.0	
(41-60)	50.3	50.7	.448	40.5	58.1	.078	48.0	51.7	.743	45.7	52.2	.532	76.7	40.0	.001
Gender												0.40			
(male)	52.2	50.0	1.000	45.2	51.6	.523	52.0	50.6	.900	51.4	50.7	.948	43.3	52.0	.422
Marital status															
(Married/co-habiting)	78.3	67.1		57.1	46.8		56.0	64.4		77.1	70.1		80.0	73.3	
(Single at parents home)	8.7	8.5	.787	4.8	6.5	.682	24.0	19.5	.600	17.1	9.0	.148	-	9.3	
(Single, living independently)	13.0	20.7	.707	28.6	30.6	.002	12.0	11.5		5.7	13.4	.1 10	6.7	10.7	.222
(Separated/divorced)	-	2.4		9.5	12.9		8.0	2.3		-	7.5		13.3	6.7	
(Widowed)		1.2			3.2			2.3		-			-	-	
Existence of children															
(yes)	65.2	45.1	.088	47.6	51.6	.689	36.0	54.0	.112	62.9	64.2	.895	66.7	60.0	.525
Existence of children at home															
(yes)	39.1	37.8	.065	38.1	33.8	.266	36.0	52.9	.659	62.9	58.4	.304	43.3	45.3	.380
Number of children-below 18															
(0 children)	26.1	12.2		11.9	19.4		12.0	11.8		-	13.4		15.7	15.0	
1 - 2 child	30.5	25.6	.656	35.8	32.3	.350	34.0	36.8	.933	54.4	49.2	.020**	35.9	37.3	.046
3 or more children	8.8	7.3			-			-		8.4	17.9		4.0	2.4	
Number of children-above 18															
(0 children)	39.1	26.8		35.7	27.4		12.0	31.0		48.6	39.9		32.3	32.5	
(1 child)	21.7	17.0	.780	7.2	22.6	.079	20.0	23.0	.042**	8.6	21.4	.037	16.8	20.0	.072
(2 children)	4.4	1.2		4.8	1.6		4.0	-		2.8	-		6.4	2.2	
Level of education															
(Primary school)	-	1.2		21.4	30.6		-	-		-	1.5		-	-	
(Secondary school)	17.4	28.0		40.5	38.7		4.0	9.2		2.9	13.4		16.7	22.7	
(Higher education-not university)	21.7	28.0	.624	4.8	11.3	.260	60.0	52.9	.615	37.1	25.4	.369	36.7	32.0	.082
(University- first degree, BSc)	43.5	30.5		26.2	11.3		20.0	27.6		37.1	38.8		43.3	25.3	
(University Post graduate, PhD)	17.4	12.2		7.1	8.1		16.0	10.3		22.9	20.9		3.3	20.0	
Income				***************************************											
(more than average)	13.0	11.0		14.3	4.8		12.0	6.9		20.00	17.9		20.0	21.3	
(average)	56.5	73.2	.248	61.9	67.7	.242	72.0	79.3	.661	68.6	61.2	.492	50.0	61.3	.344
(less than average)	30.4	15.9		23.8	27.4		16.0	13.8		11.4	20.9	=	30.0	17.3	

^aMembership percentage in each segment based on the cross-tabulation

^{*}Results from the chi-square test

^{**} All values in italic significant at p < .05

Table 36. Purchase and consumption behaviour of the Thin smoked fillet sample across countries, %

	Total (N=528)	France (N=105)	Germany (N=104)	Spain (N=102)	Italy (N=112)	UK (N=105)	Sig.*
fain decision maker:							
(Yes, I am the main	n) 77.5	73.3	81.7	84.3	71.4	77.1 ^a	
(Yes, I am a joint alongside my famil-	/	26.7	18.3	15.7	28.6	22.9	.126
urchase behaviour							
Farmed fish							
(Once a week or mor	e) 20.3	14.3	10.6	35.3	21.4	20.0	
(2-3 times a mont	h) 27.5	25.7	24.0	27.5	33.9	25.7	
(Once a mont		16.2	22.1	16.7	16.1	21.9	.000*
(Less than once a mont	,	37.1	28.8	13.7	25.9	25.7	
(Neve	,	6.7	14.4	6.9	2.7	6.7	
Wild fish							
(Once a week or mor	e) 15.3	11.4	7.7	26.5	15.2	16.2	
(2-3 times a mont	,	19.0	24.0	27.5	21.4	20.0	
(Once a mont	,	24.8	21.2	18.6	21.4	20.0	.015
(Less than once a mont		35.2	42.3	21.6	29.5	30.5	
(Neve	,	9.5	4.8	5.9	12.5	13.3	
Seafood							
(Once a week or mor	e) 13.4	4.8	9.6	15.7	17.0	20.0	.000
Frozen fish							
(Once a week or mor	e) 22.7	13.3	16.3	32.4	25.0	26.7	.001
Whole fish							
(Once a week or mor	e) 15.5	5.7	7.7	38.2	14.3	12.4	.000
Processed fish							
(Once a week or mor	e) 20.6	13.3	17.3	30.4	23.2	19.0	.000
onsumption behaviour							
Farmed fish							
(Once a week or mor	e) 21.8	17.1	11.5	41.2	20.5	19.0	
(2-3 times a mont	h) 26.7	23.8	24.0	23.5	36.6	24.8	.000
(Once a mont	h) 18.2	15.2	19.2	13.7	17.0	25.7	.000
(Less than once a mont	h) 27.8	38.1	36.5	18.6	23.2	22.9	
(Neve	er) 5.5	5.7	8.7	2.9	2.7	7.6	
Wild fish							
(Once a week or mor	/	10.5	8.7	23.5	14.3	15.2	
(2-3 times a mont	/	21.9	23.1	35.3	28.6	22.9	
(Once a mont	/	30.5	23.1	17.6	20.5	28.6	.007
(Less than once a mont		30.5	38.5	17.6	24.1	23.8	
(Neve	er) 8.3	6.7	6.7	5.9	12.5	9.5	
Seafood							
(Once a week or mor	e) 15.5	5.7	13.5	21.6	16.1	18.1	.000
Frozen fish							
(Once a week or mor	e) 26.3	12.4	20.2	50.0	25.9	23.8	.000
Whole fish							
(Once a week or mor	e) 18.0	6.7	8.7	41.2	17.0	17.1	.000
Processed fish		1.1.2	20.2	20.2	24.1	21.0	000
Once a week or mor Membership percentage in each segment based on the		14.3	20.2	39.2	24.1	21.0	.000

^aMembership percentage in each segment based on the cross-tabulation. *Results from the chi-square test ** All values in italic significant at p < .05

Table 37. Purchase and consumption behaviour of the *Thin smoked fillet* sample across segments, %

		Total (N=528)	Involved innovators (N=155)	Involved traditionals (N=373)	Sig.*
Main decision maker:				,	
	(Yes, I am the main)	77.5	76.1	78.0	
(Yes, I	am a joint alongside my family)	22.5	23.9	22.0	.637
Purchase behavior					
Farmed fish					
	(Once a week or more)	20.3	19.4	20.6	
	(2-3 times a month)	27.5	32.3	25.5	
	(Once a month)	18.6	20.0	18.0	.401
	(Less than once a month)	26.3	21.9	28.2	
	(Never)	7.4	6.5	7.8	
Wild fish	(110101)	7.1		7.0	
W IIG 11311	(Once a week or more)	15.3	16.1	15.0	
	(2-3 times a month)	22.3	25.2	21.2	
	(Once a month)	21.2	27.1	18.8	.034**
	(Less than once a month)	31.8	26.5	34.0	
	(Never)	9.3	5.2	11.0	
Seafood	(Nevel)	9.3		11.0	
Searood	(Once a week or more)	13.4	13.5	13.4	.321
Engage Cal	(Office a week of filore)	13.4	15.5	13.4	.321
Frozen fish	(0,	22.7	20.7	10.0	070
W71 1 - 6: -1-	(Once a week or more)	22.7	29.7	19.8	.079
Whole fish	(0 1)	15.5	16.0	15.0	7.10
D 161	(Once a week or more)	15.5	16.8	15.0	.740
Processed fish	(0 1)	20.6	25.0	10.5	0.67
	(O nce a week or more)	20.6	25.8	18.5	.067
Consumption behavior					
Farmed fish					
	(Once a week or more)	21.8	24.5	20.6	
	(2-3 times a month)	26.7	29.0	25.7	.510
	(Once a month)	18.2	18.7	18.0	.510
	(Less than once a month)	27.8	23.2	29.8	
	(Never)	5.5	4.5	5.9	
Wild fish					
	(Once a week or more)	14.4	18.1	12.9	
	(2-3 times a month)	26.3	23.2	27.6	016
	(Once a month)	24.1	30.3	21.4	.016
	(Less than once a month)	26.9	24.5	27.9	
	(Never)	8.3	3.9	10.2	
Seafood					
	(Once a week or more)	15.5	16.1	14.5	.052
Frozen fish					
	(Once a week or more)	26.3	35.5	22.5	.007
Whole fish	(••	,
	(On a a a susals an mana)	18.0	21.3	16.6	.740
	(Once a week or more)				
Processed fish	(Once a week or more)	16.0	21.3	10.0	., 10

^aMembership percentage in each segment based on the cross-tabulation. *Results from the chi-square test ** All values in italic significant at p < .05

Table 38. Purchase and consumer behavior across segments per country, %

		France		(Germany			Italy			Spain			UK			
	Involved innovators (N=23)	Involved traditionals (N=82)	Sig.*	Involved innovators (N=42)	Involved traditionals (N=62)	Sig.*	Involved innovators (N=25)	Involved traditionals (N=87)	Sig.*	Involved innovators (N=35)	Involved traditionals (N=67)	Sig.*	Involved innovators (N=30)	Involved traditionals (N=75)	Sig.*		
Main decision maker:																	
(Yes, I am the main)	69.6 a	74.4		76.2 a	85.5		80.0	69.0		85.7	83.6		66.7a	81.3			
(Yes, I am a joint alongside my family)	30.4	25.6	.644	23.8	14.5	.229	20.0	31.0	.282	14.3	16.4	.779	33.3	18.7	.106		
Purchase behaviour																	
Farmed fish								18.4									
(Once a week or more)	13.0	14.6		2.4	16.1		32.0	33.3		40.0	32.8		13.3	22.7			
(2-3 times a month)	30.4	24.4	.356	35.7	16.1	.003**	36.0	16.1	.363	34.3	23.9	.456	23.3	26.7	.126		
(Once a month)	26.1	13.4	.550	33.3	14.5	.005**	16.0	29.9	.303	8.6	20.9	.430	13.3	25.3	.120		
(Less than once a month)	30.4	39.0		21.4	33.9		12.0	2.3		11.4	14.9		36.7	21.3			
(Never)	-	8.5		7.1	19.4		4.0			5.7	7.5		13.3	4.0			
Wild fish																	
(Once a week or more)	0.7	10.0		4.0	0.7		0.0	15.0		20.6	25.4		20.0	1.4.5			
(2-3 times a month)	8.7 8.7	12.0	1.00	4.8	9.7	004	8.0	17.2	265	28.6	25.4	255	20.0	14.7	100		
(Once a month)	8.7 34.8	13.4 22.0	.169	31.0 31.0	19.4 14.5	.006	24.0 36.0	20.7 17.2	.265	37.1	22.4 17.9	.255	16.7	21.3 21.3	.180		
(Less than once a month)	34.8 34.8	51.2		23.8	54.8		24.0	31.0		20.0 11.4	26.9		16.7 43.3	25.3			
(Never)	34.6	7.3		9.5		54.8 1.6			8.0	13.8		2.9	26.9 7.5		3.3	17.3	
Consumption behaviour	.	1.3			1.0		0.0	13.6						17.5			
How often do you consume Farmed fish																	
(Once a week or more)	21.7 a	15.9		9.5	12.9		28.0	18.4		51.4a	35.8		13.3 ^a	21.3			
(2-3 times a month)	21.7	24.4		35.7	16.1		36.0	36.8		25.7	22.4		23.3	25.3			
(Once a month)	21.7	13.4	.558	23.8	16.1	.051	16.0	17.2	.768	5.7	17.9	.343	26.7	25.3	.632		
(Less than once a month)	34.8	39.0		28.6	41.9		16.0	25.3		14.3	20.9		23.3	22.7			
(Never)	-	7.3		2.4	12.9		4.0	2.3		2.9	3.0		13.3	5.3			
How often do you consume Wild fish										***************************************					-		
(Once a week or more)	17.4	8.5		9.5	8.1		8.0	16.1		34.3	17.9		20.0	13.3			
(2-3 times a month)	13.0	24.4	.317	28.6	19.4	10.4	28.0	28.7		28.6	38.8	.190	13.3	26.7	.278		
(Once a month)	34.8	29.3	.31/	28.6	19.4		32.0	17.2	.280	22.9	14.9	.190	36.7	25.3	.278		
(Less than once a month)	34.8	29.3		26.2	46.8	46.8	28.0	23.0		11.4	20.9		26.7	22.7			
(Never)	-	8.5		7.1	6.5		4.0	14.9		2.9	7.5		3.3	12.0			

^aMembership percentage in each segment based on the cross-tabulation. *Results from the chi-square test ** All values in italic significant at p < .05

Table 39. Involvement, innovativeness and subjective knowledge of the *Thin smoked fillet* sample across countries, mean scores

	Total (N=528)	France (N=105)	Germany (N=104)	Italy (N=112)	Spain (N=102)	UK (N=105)	Sig.*
Involvement							
I am very concerned about what fish products I purchase ^f	5.18	5.39 ^{bc}	5.02 ^b	4.53 ^a	5.78°	5.23 ^b	.000
I care a lot about what fish products I consume	5.56	5.45 ^a	5.61 ^{ab}	5.30^{a}	5.96 ^b	5.53 ^a	.000
Generally, choosing the right fish products is important to me	5.62	5.65 ^{ab}	5.63 ^{ab}	5.36 ^a	5.94 ^b	5.53 ^a	.000
Innovativeness							
In general, I am among the last in my circle of friends to purchase new fish products	4.20	4.59 ^b	3.86^{a}	4.13 ^{ab}	4.10^{ab}	4.33 ^{ab}	.009
Compared to my friends, I do little shopping for new fish products	4.12	4.48 ^b	3.79 ^a	4.25 ^{ab}	4.13 ^{ab}	3.96^{ab}	.015
In general, I am the last in my circle of friends to know the names of the latest new fish product trends	4.10	4.41	3.93	4.13	3.97	4.07	.166
Subjective knowledge							
I consider that I know more about fish than the average person	4.59	4.53	4.43	4.52	4.74	4.73	.308
I have a lot of knowledge about how to prepare fish	4.77	4.51 ^a	4.99ab	4.57 ^a	5.06	4.73 ^{ab}	.004
I have a lot of knowledge about how to evaluate the quality of fish	4.79	4.79	4.84	4.58	5.01	4.73	.170

Table 40. Involvement, innovativeness and subjective knowledge of the Thin smoked fillet across segments, mean scores

	Total (N=528)	Involved innovators (N=155)	Involved traditional (N=373)	Sig.*
Involvement				
I am very concerned about what fish products I purchase b	5.18	5.22	5.16	.646
I care a lot about what fish products I consume	5.56	5.94	5.41	.000
Generally, choosing the right fish products is important to me	5.62	5.97	5.47	.000
Innovativeness				
In general, I am among the last in my circle of friends to purchase new fish products	4.20	2.60	4.87	.000
Compared to my friends, I do little shopping for new fish products	4.12	2.46	4.82	.000
In general, I am the last in my circle of friends to know the names of the latest new fish product trends	4.10	2.49	4.77	.000
Innovativeness				
I consider that I know more about fish than the average person	4.59	4.88	4.47	.000
I have a lot of knowledge about how to prepare fish	4.77	5.24	4.57	.000
I have a lot of knowledge about how to evaluate the quality of fish	4.79	5.20	4.61	.000

^b 1 = Strongly disagree, 7 = Strongly agree

f 1 = Strongly disagree, 7 = Strongly agree

a,b,c Tukey HSD post hoc test, countries without common superscripts differ significantly

^{*}Results from the ANOVA

^{**} All values in italic significant at p < .05

^{*}Results from the t- test

^{**} All values in italic significant at p < .05

Table 41. Involvement, innovativeness and subjective knowledge of the *Thin smoked fillet* across segments per country, mean scores

		France		•	Germany			Italy			Spain		UK		
	Involved innovators (N=23)	Involved traditionals (N=82)	Sig.*	Involved innovators (N=42)	Involved traditionals (N=62)	Sig.*	Involved innovators (N=25)	Involved traditionals (N=87)	Sig.*	Involved innovators (N=35)	Involved traditionals (N=67)	Sig.*	Involved innovators (N=30)	Involved traditionals (N=75)	Sig.*
Involvement	'					<u>.</u>			<u></u>						
I am very concerned about what fish products I purchase ^a	5.39	5.39	.997	4.79	5.18	.151	4.36	4.57	.527	6.00	5.67	.148	5.50	5.12	.063
I care a lot about what fish products I consume	5.61	5.40	.385	5.90	5.40	.007	5.84	5.15	.001	6.34	5.76	.001	5.87	5.40	.018
Generally, choosing the right fish products is important to me	5.74	5.62	.653	5.88	5.47	.020	5.96	5.18	.000	6.17	5.82	.060	6.03	5.33	.000
Innovativeness															
In general, I am among the last in my circle of friends to purchase new fish products	3.22	4.98	.000	2.33	4.89	.000	2.40	4.62	.000	2.60	4.88	.000	2.67	5.00	.000
Compared to my friends, I do little shopping for new fish products	2.87	4.93	.000	2.19	4.87	.000	2.64	4.71	.000	2.71	4.87	.000	2.07	4.72	.000
In general, I am the last in my circle of friends to know the names of the latest new fish product trends	2.70	4.89	.000	2.36	5.00	.000	2.48	4.60	.000	2.51	4.73	.000	2.50	4.69	.000
Innovativeness															
I consider that I know more about fish than the average person	4.70	4.49	.419	4.98	4.06	.001	4.96	4.39	.054	4.86	4.67	.475	4.87	4.68	.454
I have a lot of knowledge about how to prepare fish	4.83	4.43	.122	5.40	4.71	.003	5.32	4.36	.002	5.37	4.90	.051	5.10	4.59	.059
I have a lot of knowledge about how to evaluate the quality of fish	4.91	4.76	.540	5.19	4.60	.014	5.32	4.37	.000	5.29	4.87	.068	5.23	4.53	.005

^a 1 = Strongly disagree, 7 = Strongly agree

^{*}Results from the t- test

^{**} All values in italic significant at p < .05

Appendix 4. Beliefs about the farmed fish and wild fish across countries and market segments

Table 42. Beliefs of the Fresh fish steak sample towards farmed fish and wild fish across countries, mean scores

Belief	Total (N=532)	France (N=103)	Germany (N=108)	Italy (N=108)	Spain (N=107)	UK (N=106)	Sig.*
Farmed fish is less affected by marine pollution than wild fish	4.50	4.09 ^a	4.39 ^{ab}	4.53 ^{abc}	4.95°	4.54 ^{bc}	.000
Farmed fish is healthier than wild fish	4.09	3.98^{a}	3.73 ^a	4.48 ^b	4.14 ^{ab}	4.11 ^{ab}	.001
Farmed fish is more fresh than wild fish	4.04	3.94 ^{ab}	3.75 ^a	4.21 ^{ab}	4.04 ^{ab}	4.27 ^b	.024
Farmed fish is cheaper than wild fish	5.00	4.64 ^a	4.94^{ab}	4.96^{ab}	5.11 ^b	5.33 ^b	.002
Farmed fish provides more guarantees than wild fish	4.43	3.95 ^a	4.35 ^{ab}	4.65 ^b	4.63 ^b	4.55 ^b	.000
Farmed fish is easier to find than wild fish	5.28	4.92 ^a	5.22ab	5.42 ^b	5.51 ^b	5.31 ^{ab}	.003
Wild fish is safer to consumer than farmed fish	4.42	4.60	4.56	4.21	4.23	4.49	.054
Wild fish lives a better life than farmed fish	5.15	5.06	5.30	4.98	5.19	5.23	.269
Wild fish is better quality than farmed fish	4.97	5.04	4.95	4.86	5.07	4.95	.717
Wild fish is more nutritious than farmed fish	4.69	4.58	4.75	4.63	4.71	4.76	.750
Wild fish is more firm than farmed fish	4.51	3.87^{a}	4.79°	4.29 ^{ab}	4.90°	4.69bc	.000
Wild fish tastes better than farmed fish	5.11	4.91 ^a	5.08 ^{ab}	5.14 ^{ab}	5.50 ^b	4.93ª	.002

^e 1 = Strongly disagree, 7 = Strongly agree

Table 43. Beliefs of the Fresh fish steak towards farmed fish and wild fish across segments, mean scores

Belief	Total (N=532)	Involved innovators (N=167)	Involved traditional (N=365)	Sig.*
Farmed fish is less affected by marine pollution than wild fish	4.50	4.54	4.48	.631
Farmed fish is healthier than wild fish	4.09	3.84	4.21	.002**
Farmed fish is more fresh than wild fish	4.04	3.71	4.20	.000
Farmed fish is cheaper than wild fish	5.00	5.37	4.83	.000
Farmed fish provides more guarantees than wild fish	4.43	4.49	4.40	.492
Farmed fish is easier to find than wild fish	5.28	5.62	5.12	.000
Wild fish is safer to consumer than farmed fish	4.42	4.25	4.49	.037
Wild fish lives a better life than farmed fish	5.15	5.33	5.07	.016
Wild fish is better quality than farmed fish	4.97	5.07	4.93	.184
Wild fish is more nutritious than farmed fish	4.69	4.66	4.70	.694
Wild fish is more firm than farmed fish	4.51	4.53	4.50	.776
Wild fish tastes better than farmed fish	5.11	5.23	5.06	.142

^{1 =} Strongly disagree, 7 = Strongly agree *Results from the t- test

a,b,c Tukey HSD post hoc test, countries without common superscripts differ significantly

^{*}Results from the ANOVA

^{**} All values in italic significant at p < .05

^{**} All values in italic significant at p < .05

Table 44. Beliefs of the Fresh fish steak towards farmed fish and wild fish across segments per country, mean scores

		France			Germany			Italy			Spain			UK	
Beliefs	Involved innovators (N=13)	Involved traditional (N=90)	Sig.*	Involved innovators (N=46)	Involved traditional (N=62)	Sig.*	Involved innovators (N=36)	Involved traditional (N=72)	Sig.*	Involved innovators (N=37)	Involved traditional (N=70)	Sig.*	Involved innovators (N=35)	Involved traditional (N=71)	Sig.*
Farmed fish is less affected by marine pollution than wild fish ^a	4.15	4.08	.076	4.41	4.37	.853	4.50	4.54	.845	5.08	4.89	.457	4.31	4.65	.163
Farmed fish is healthier than wild fish	3.77	4.01	.537	3.46	3.94	.050	4.28	4.58	.181	4.14	4.14	.975	3.60	4.37	.007**
Farmed fish is cheaper than wild fish	4.92	4.60	.390	5.24	4.73	.044	5.14	4.88	.298	5-62	4.84	.004	5.66	5.17	.021
Farmed fish is more fresh than wild fish	4.08	3.92	.335	3.43	3.98	.030**	3.86	4.39	.026**	3.76	4.19	.134	3.71	4.55	.003
Farmed fish provides more guarantees than wild fish	3.85	3.97	.755	4.37	4.34	.887	4.67	4.64	.898	4.95	4.46	.085	4.20	4.72	.028
Farmed fish is easier to find than wild fish	4.69	4.96	.483	5.46	5.05	.075	5.89	5.18	.001	5.86	5.33	.034	5.66	5.14	.013
Wild fish is safer to consumer than farmed fish	4.85	4.57	.279	4.33	4.73	.104	4.11	4.26	.546	4.03	4.34	.244	4.31	4.58	.228
Wild fish lives a better life than farmed fish	5.15	5.04	.764	5.46	5.18	.178	5.19	4.88	.182	5.27	5.14	.621	5.43	5.13	.181
Wild fish is better quality than farmed fish	4.77	5.08	.434	5.07	4.87	.354	5.14	4.72	.065	5.27	4.96	.169	4.91	4.97	.808
Wild fish is more nutritious than farmed fish	4.46	4.60	.696	4.72	4.77	.804	4.78	4.56	.309	4.73	4.70	.899	4.46	4.92	.075
Wild fish is more firm than farmed fish	3.69	3.90	.568	4.87	4.73	.521	3.89	4.49	.005	5.08	4.80	.217	4.49	4.79	.190
Wild fish tastes better than farmed fish	4.92	4.91	.975	5.24	4.97	.221	5.39	5.01	.122	5.57	5.46	.627	4.80	5.00	.430

^a 1 = Strongly disagree, 7 = Strongly agree *Results from the t- test

^{**} All values in italic significant at p < .05

Table 45. Beliefs of the Fish fillet in olive oil sample towards farmed fish and wild fish across countries, mean scores

Belief	Total (N=536)	France (N=106)	Germany (N=106)	Italy (N=115)	Spain (N=104)	UK (N=105)	Sig.*
Farmed fish is less affected by marine pollution than wild fish ^e	4.43	3.96 ^a	4.26 ^a	4.44ª	5.04 ^b	4.45 ^a	.000
Farmed fish is healthier than wild fish	4.08	3.76^{a}	3.86^{ab}	4.40°	4.34 ^{bc}	4.02 ^{abc}	.001
Farmed fish is more fresh than wild fish	4.08	3.74^{a}	4.06^{ab}	4.25 ^b	4.13^{ab}	4.21^{ab}	.044
Farmed fish is cheaper than wild fish	5.16	4.97^{ab}	5.03 ^{abc}	4.95 ^a	5.41 ^{bc}	5.45°	.002
Farmed fish provides more guarantees than wild fish	4.40	3.85^{a}	4.28 ^{ab}	4.57 ^{bc}	4.78°	4.52bc	.000
Farmed fish is easier to find than wild fish	5.20	5.11 ^{ab}	5.10^{ab}	5.05 ^a	5.52 ^b	5.24 ^{ab}	.043
Wild fish is safer to consumer than farmed fish	4.44	4.64	4.38	4.26	4.46	4.50	.301
Wild fish lives a better life than farmed fish	5.20	5.16 ^{ab}	5.18 ^{ab}	4.84^{a}	5.25 ^{ab}	5.60 ^b	.000
Wild fish is better quality than farmed fish	5.09	5.08 ^{ab}	4.87^{a}	4.83 ^a	5.26 ^{ab}	5.45 ^b	.001
Wild fish is more nutritious than farmed fish	4.80	4.63 ^a	4.68^{ab}	4.63 ^a	4.93^{ab}	5.12 ^b	.010
Wild fish is more firm than farmed fish	4.68	3.90^{a}	4.75 ^{bc}	4.34^{b}	5.30^{d}	5.15 ^{cd}	.000
Wild fish tastes better than farmed fish	5.23	5.22	5.04	5.06	5.42	5.45	.021

Table 46. Beliefs of Fish fillet in olive oil sample towards farmed fish and wild fish across segments, mean scores

Belief	Total (N=536)	Involved innovators (N=180)	Involved traditional (N=356)	Sig.*
Farmed fish is less affected by marine pollution than wild fish ^a	4.43	4.33	4.48	.253
Farmed fish is healthier than wild fish	4.08	3.78	4.23	.000
Farmed fish is more fresh than wild fish	4.08	3.79	4.23	.000
Farmed fish is cheaper than wild fish	5.16	5.33	5.07	.026
Farmed fish provides more guarantees than wild fish	4.40	4.25	4.48	.058
Farmed fish is easier to find than wild fish	5.20	5.37	5.12	.029
Wild fish is safer to consumer than farmed fish	4.44	4.20	4.57	.003
Wild fish lives a better life than farmed fish	5.20	5.43	5.08	.002
Wild fish is better quality than farmed fish	5.09	5.29	4.99	.007
Wild fish is more nutritious than farmed fish	4.80	4.86	4.77	.437
Wild fish is more firm than farmed fish	4.68	4.75	4.64	.359
Wild fish tastes better than farmed fish	5.23	5.41	5.15	.021

^a1 = Strongly disagree, 7 = Strongly agree

^{° 1 =} Strongly disagree, 7 = Strongly agree

a,b,c,Tukey HSD post hoc test, countries without common superscripts differ significantly

^{*}Results from the ANOVA

^{**} All values in italic significant at p < .05

^{*}Results from the t-test

^{**} All values in italic significant at p < .05

Table 47. Beliefs of the Fish fillet in olive oil sample towards farmed fish and wild fish across segments per country, mean scores

		France		(Germany			Italy			Spain		UK		
Belief	Involved innovators (N=23)	Involved traditional (N=83)	Sig.*	Involved innovators (N=40)	Involved traditional (N=66)	Sig.*	Involved innovators (N=38)	Involved traditional (N=77)	Sig.*	Involved innovators (N=36)	Involved traditional (N=68)	Sig.*	Involved innovators (N=43)	Involved traditional (N=62)	Sig.*
Farmed fish is less affected by marine pollution than wild fish ^a	4.04	3.94	.770	4.55	4.09	.126	4.26	4.53	.226	4.81	5.16	.147	3.95	4.79	.001**
Farmed fish is healthier than wild fish	3.39	3.87	.159	3.98	3.79	.484	4.13	4.53	.089	3.97	4.53	.040**	3.35	4.48	.000
Farmed fish is cheaper than wild fish	5.30	4.88	.149	4.98	5.06	.725	5.03	4.91	.634	5.56	5.34	.390	5.77	5.23	.036
Farmed fish is more fresh than wild fish	3.48	3.81	.292	4.15	4.00	.558	3.89	4.43	.026**	3.72	4.35	.028	3.58	4.65	.000
Farmed fish provides more guarantees than wild fish	3.39	3.98	.065	4.40	4.21	.458	4.32	4.69	.131	4.56	4.90	.188	4.26	4.71	.081
Farmed fish is easier to find than wild fish	5.35	5.05	.281	5.18	5.06	.637	5.11	5.03	.768	5.83	5.35	.029	5.42	5.11	.247
Wild fish is safer to consumer than wild fish	4.65	4.64	.967	4.23	4.47	.346	4.03	4.38	.219	4.14	4.63	.087	4.14	4.74	.008
Wild fish lives a better life than farmed fish	5.43	5.08	.212	5.48	5.00	.051	4.84	4.84	.993	5.47	5.13	.178	5.86	5.42	.060
Wild fish is better quality than farmed fish	5.30	5.02	.350	4.80	4.91	.632	4.89	4.81	.724	5.61	5.07	.030	5.84	5.18	.003
Wild fish is more nutritious than farmed fish	5.04	4.52	.114	4.73	4.65	.755	4.45	4.73	.242	4.94	4.93	.938	5.16	5.10	.796
Wild fish is more firm than farmed fish	3.70	3.95	.411	4.73	4.77	.823	4.00	4.51	.035	5.53	5.18	.105	5.35	5.02	.152
Wild fish tastes better than farmed fish	5.26	5.20	.834	5.00	5.06	.818	5.13	5.03	.647	5.83	5.21	.005	5.74	5.24	.027

a 1 = Strongly disagree, 7 = Strongly agree *Results from the t- test ** All values in italic significant at p < .05

Table 48. Beliefs of the Thin smoked fillet sample towards farmed fish and wild fish across countries, mean scores

Belief	Total (N=528)	France (N=105)	Germany (N=104)	Italy (N=112)	Spain (N=102)	UK (N=105)	Sig.*
Farmed fish is less affected by marine pollution than wild fish ^e	4.48	4.21 ^a	4.48ª	4.31a	4.95 ^b	4.46 ^a	.000
Farmed fish is healthier than wild fish	4.10	3.83^a	3.88^a	4.28 ^a	4.25 ^a	4.25 ^a	.011
Farmed fish is more fresh than wild fish	4.14	3.79^{a}	4.12 ^{ab}	4.25 ^{ab}	4.32 ^b	4.23 ^{ab}	.029
Farmed fish is cheaper than wild fish	4.98	4.83	5.03	4.91	5.09	5.06	.563
Farmed fish provides more guarantees than wild fish	4.45	3.95 ^a	4.63 ^b	4.36 ^{ab}	4.61 ^b	4.73 ^b	.000
Farmed fish is easier to find than wild fish	5.23	5.06	5.30	5.06	5.48	5.25	.062
Wild fish is safer to consumer than farmed fish	4.42	4.54	4.51	4.28	4.48	4.30	.411
wild fish lives a better life than farmed fish	5.16	4.99ª	5.52 ^b	4.99 ^a	5.19 ^{ab}	5.14 ^{ab}	.008
Wild fish is better quality than farmed fish	5.03	5.10	5.08	4.82	5.16	5.02	.272
Wild fish is more nutritious than farmed fish	4.80	4.67	4.78	4.71	5.00	4.85	.283
Wild fish is more firm than farmed fish	4.55	4.05^a	4.84 ^b	4.16 ^a	5.05 ^b	4.72 ^b	.000
Wild fish tastes better than farmed fish	5.05	5.10 ^{ab}	4.98 ^{ab}	4.77 ^a	5.36 ^b	5.09 ^{ab}	.006

Table 49. Beliefs of the Thin smoked fillet sample towards farmed fish and wild fish across segments, mean scores

Belief	Total (N=528)	Involved innovators (N=155)	Involved traditional (N=373)	Sig.*
Farmed fish is less affected by marine pollution than wild fish ^e	4.48	4.54	4.45	.507
Farmed fish is healthier than wild fish	4.10	3.88	4.19	.010
Farmed fish is more fresh than wild fish	4.14	3.86	4.26	.001
Farmed fish is cheaper than wild fish	4.98	5.10	4.93	.163
Farmed fish provides more guarantees than wild fish	4.45	4.40	4.47	.537
Farmed fish is easier to find than Wild fish	5.23	5.50	5.11	.001
Wild fish is safer to consumer than farmed fish	4.42	4.28	4.48	.097
Wild fish lives a better life than farmed fish	5.16	5.31	5.10	.069
Wild fish is better quality than farmed fish	5.03	5.24	4.95	.010
Wild fish is more nutritious than farmed fish	4.80	4.78	4.80	.836
Wild fish is more firm than farmed fish	4.55	4.68	4.50	.123
Wild fish tastes better than farmed fish	5.05	5.18	5.00	.112

^e 1 = Strongly disagree, 7 = Strongly agree

 $^{^{\}rm e}$ 1 = Strongly disagree, 7 = Strongly agree $^{\rm a,b,c}$ Tukey HSD post hoc test, countries without common superscripts differ significantly *Results from the ANOVA

^{**} All values in italic significant at p < .05

^{*}Results from the t-test

^{**} All values in italic significant at p < .05

Table 50. Beliefs of the *Thin smoked fillet* sample towards farmed fish and wild fish across segments per country, mean scores

		France		•	Germany			Italy			Spain			UK	
Belief	Involved innovators (N=23)	Involved traditional (N=82)	Sig.*	Involved innovators (N=42)	Involved traditional (N=62)	Sig.*	Involved innovators (N=25)	Involved traditional (N=87)	Sig.*	Involved innovators (N=35)	Involved traditional (N=67)	Sig.*	Involved innovators (N=30)	Involved traditional (N=75)	Sig.*
Farmed fish is less affected by marine pollution than wild fish ^a	3.96	4.28	.336	4.62	4.39	.403	4.56	4.24	.235	5.11	4.87	.332	4.17	4.57	.108
Farmed fish is healthier than wild fish	3.65	3.88	.496	3.76	3.95	.445	4.36	4.25	.681	4.09	4.33	.350	3.57	4.52	.000**
Farmed fish is cheaper than wild fish	4.96	4.79	.595	4.81	5.18	.233	5.32	4.79	.070	5.43	4.91	.051	5.07	5.05	.960
Farmed fish is more fresh than wild fish	3.26	3.94	.034**	4.14	4.10	.848	3.92	4.34	.146	4.20	4.39	.471	3.47	4.53	.000
Farmed fish provides more guarantees than wild fish	3.39	4.11	.029	4.64	4.61	.910	4.32	4.37	.862	4.63	4.60	.910	4.63	4.77	.556
Farmed fish is easier to find than Wild fish	4.87	5.11	4.23	5.31	5.29	.943	5.80	4.85	.000	5.77	5.33	.068	5.70	5.07	.007
Wild fish is safer to consumer than farmed fish	4.78	4.48	.343	4.24	4.69	.088	4.44	4.23	.432	4.23	4.61	.169	3.87	4.48	.003
Wild fish lives a better life than farmed fish	4.83	5.04	.504	5.52	5.52	.974	5.36	4.89	.048**	5.31	5.12	.457	5.33	5.07	.266
Wild fish is better quality than farmed fish	5.35	5.04	.283	4.93	5.18	.303	5.36	4.67	.007	5.49	4.99	.054	5.20	4.95	.304
Wild fish is more nutritious than farmed fish	4.35	4.76	.138	4.62	4.89	.313	5.12	4.59	.035	4.83	5.09	.310	5.00	4.79	.390
Wild fish is more firm than farmed fish	4.30	3.98	.301	4.79	4.87	.717	4.12	4.17	.856	5.23	4.96	.204	4.67	4.75	.727
Wild fish tastes better than farmed fish	5.13	5.10	.911	4.81	5.10	.209	5.08	4.68	.146	5.49	5.30	.466	5.47	4.93	.025

^a The scale for the statements was 1 = Strongly disagree, 7 = Strongly agree

^{*}Results from the t- test

^{**} All values in italic significant at p < .05

Appendix 5. Overall liking and perceived expected quality of the product mock-ups after visual inspection of the physical product

Table 51. Overall liking and expected quality of *Fresh fish steak* across countries based on the visual appearance of the physical product, mean scores

	Total (N=532)	France (N=103)	Germany (N=108)	Italy (N=108)	Spain (N=107)	UK (N=106)	Sig.*
Overall liking based on the visual appearance of the physical product ^e	7.02	6.68 ^a	7.01 ^{ab}	7.11 ^{ab}	7.29 ^b	7.00 ^{ab}	.015**
This product is nutritious ^f	5.44	5.11 ^a	5.44 ^{abc}	5.26 ^{ab}	5.82 ^{cd}	5.58 ^{bcd}	.000
This product is healthy	5.57	4.94^a	5.60 ^{bc}	5.53 ^b	5.92°	5.82 ^{bc}	.000
This product can make you feel good	5.37	4.89^{a}	5.38 ^b	5.28 ^{ab}	5.93°	5.34 ^b	.000
This product is easy to cook	5.59	5.21 ^a	5.48 ^{ab}	5.53 ^{ab}	6.07°	5.67 ^b	.000
This product tastes good	5.39	4.96^{a}	5.53 ^{bc}	5.17 ^{ab}	5.64°	5.62°	.000
This product is natural	5.49	5.00^{a}	5.53 ^{bc}	5.35 ^{ab}	5.80°	5.77°	.000
This product is easy to digest	5.55	5.14 ^a	5.60 ^{ab}	5.42 ^{ab}	5.88°	5.71 ^{bc}	.000
This product is familiar to you	4.95	4.70^{a}	5.28 ^b	4.99 ^{ab}	4.66ª	5.10 ^{ab}	.007
This product is of high quality	5.23	5.06	5.26	5.05	5.36	5.40	.070
This product is safe to consume	5.42	4.99ª	5.53 ^{bc}	5.24 ^{ab}	5.78°	5.56 ^{bc}	.000

^{°1 =} I think I would dislike it extremely, 9 =I think I would dislike it extremely

Table 52. Overall liking and expected quality of *Fresh fish steak* across segments based on the visual appearance of the physical product, mean scores

	Total (N=532)	Involved innovators (N=167)	Involved traditional (N=365)	Sig.*
Overall liking based on the visual appearance of the physical product ^a	7.02	7.32	6.88	.000
This product is nutritious ^b	5.44	5.69	5.33	.000**
This product is healthy	5.57	5.97	5.38	.000
This product can make you feel good	5.37	5.72	5.21	.000
This product is easy to cook	5.59	5.88	5.46	.000
This product tastes good	5.39	5.68	5.25	.000
This product is natural	5.49	5.78	5.36	.000
This product is easy to digest	5.55	5.81	5.43	.000
This product is familiar to you	4.95	5.33	4.78	.000
This product is of high quality	5.23	5.48	5.11	.000
This product is safe to consume	5.42	5.77	5.26	.000

^a1 = I think I would dislike it extremely, 9 = I think I would dislike it extremely

^fThe scale for the Expected quality statements was 1 = Strongly disagree, 7 = Strongly agree

a,b,c Tukey HSD post hoc test, countries without common superscripts differ significantly

^b 1 = Strongly disagree, 7 = Strongly agree

^{*}Results from the t- test

^{**} All values in italic significant at p < .05

Table 53. Overall liking and expected quality of Fresh fish steak across segments based on the visual appearance of the physical product, mean scores

		France			Germany			Italy			Spain		UK			
	Involved innovators (N=13)	Involved traditionals (N=90)	Sig.*	Involved innovators (N=46)	Involved traditionals (N=62)	Sig.*	Involved innovators (N=36)	Involved traditionals (N=72)	s Sig.*	Involved innovators (N=37)	Involved traditionals (N=70)	Sig.*	Involved innovators (N=35)	Involved traditionals (N=71)	Sig.*	
Overall liking based on the visual appearance of the physical product ^a	7.08	6.62	.246	7.24	6.84	.100	7.50	6.92	.017**	7.57	7.14	.063	7.09	6.96	.686	
This product is nutritious ^b	5.23	5.09	.685	5.63	5.29	.080	5.69	5.04	.001	5.84	5.81	.914	5.77	5.49	.189	
This product is healthy	5.08	4.92	.663	5.85	5.42	.021**	6.03	5.28	.000	6.16	5.79	.051	6.20	5.63	.004**	
This product can make you feel good	5.15	4.86	.416	5.70	5.15	.004	5.75	5.04	.000	6.16	5.80	.060	5.46	5.28	.409	
This product is easy to cook	5.62	5.16	.183	5.57	5.42	.460	5.86	5.36	.008	6.30	5.94	.070	5.97	5.52	.037	
This product tastes good	5.23	4.92	.374	5.70	5.40	.151	5.56	4.97	.009	5.92	5.50	.061	5.69	5.59	.662	
This product is natural	5.08	4.99	.801	5.72	5.39	.105	5.69	5.18	.017	6.05	5.67	.093	5.91	5.70	.315	
This product is easy to digest	5.08	5.14	.854	5.89	5.39	.011	5.86	5.19	.001	5.84	5.90	.805	5.91	5.61	.099	
This product is familiar to you	5.23	4.62	.144	5.46	5.15	.200	5.50	4.74	.006	5.27	4.34	.009	5.09	5.11	.932	
This product is of high quality	5.38	5.01	.304	5.43	5.13	.143	5.31	4.92	.080	5.70	5.19	.037	5.51	5.34	.465	
This product is safe to consume	5.08	4.98	.785	5.78	5.34	.031	5.56	5.08	.029	6.19	5.56	.003**	5.80	5.44	.086	

^a1 = I think I would dislike it extremely, 9= I think I would like it extremely

^b 1 = Strongly disagree, 7 = Strongly agree

^{*}Results from the t- test

^{**} All values in italic significant at p < .05

Table 54. Overall liking and expected quality of Fish fillet in olive oil across countries based on the visual appearance of the physical product, mean scores

	Total (N=536)	France (N=106)	Germany (N=106)	Italy (N=115)	Spain (N=104)	UK (N=105)	Sig.*
Overall liking based on the visual appearance of the physical product ^e	5.73	5.51 ^{ab}	5.17 ^a	5.97 ^b	6.13 ^b	5.84 ^{ab}	.002**
This product is nutritious ^f	4.84	4.74 ^{ab}	4.54 ^a	4.77 ^{ab}	5.17 ^b	4.99 ^{ab}	.003
This product is healthy	4.89	4.57 ^a	4.67 ^a	4.84^{ab}	5.16 ^b	5.20 ^b	.000
This product can make you feel good	4.77	4.38^{a}	4.55^{ab}	4.73 ^{ab}	5.23°	5.00 ^{bc}	.000
This product is easy to cook	5.08	4.87ª	4.89 ^a	4.98 ^a	5.50 ^b	5.17 ^{ab}	.001
This product tastes good	4.80	4.51 ^a	4.58^{ab}	4.80^{abc}	5.10°	5.04 ^{bc}	.002
This product is natural	4.87	4.46 ^a	4.69^{ab}	4.74 ^{ab}	5.32°	5.16 ^{bc}	.000
This product is easy to digest	4.95	4.72a	4.78^{ab}	4.83 ^{ab}	5.22 ^b	5.19 ^{ab}	.005
This product is familiar to you	4.29	4.21 ^{abc}	4.10^{ab}	4.50 ^{bc}	4.02ª	4.62°	.031
This product is of high quality	4.66	4.49 ^{ab}	4.37 ^a	4.57 ^{abc}	5.01°	4.90 ^{bc}	.002
This product is safe to consume	4.88	4.62a	4.82^{ab}	4.63 ^a	5.29 ^b	5.09 ^{ab}	.000

Table 55. Overall liking and expected quality of Fish fillet in olive oil across segments based on the visual appearance of the physical product, mean scores

	Total (N=536)	Involved innovators (N=180)	Involved traditionals (N=356)	Sig.*
Overall liking based on the visual appearance of the physical product ^a	5.73	5.82	5.68	.436
This product is nutritious ^b	4.84	4.93	4.79	.273
This product is healthy	4.89	5.03	4.81	.061
This product can make you feel good	4.77	4.93	4.69	.044**
This product is easy to cook	5.08	5.29	4.97	.008
This product tastes good	4.80	4.94	4.73	.078
This product is natural	4.87	5.05	4.78	.027
This product is easy to digest	4.95	5.05	4.89	.180
This product is familiar to you	4.29	4.39	4.29	.319
This product is of high quality	4.66	4.77	4.61	.211
This product is safe to consume	4.88	4.97	4.84	.270

^a1 = I think I would dislike it extremely, 9 = I think I would dislike it extremely

 $^{^{\}rm e}1$ = I think I would dislike it extremely, 9 =I think I would dislike it extremely $^{\rm f}1$ = Strongly disagree, 7 = Strongly agree $^{\rm a,b,c}$ Tukey HSD post hoc test, countries without common superscripts differ significantly

^{*}Results from the ANOVA

^{**} All values in italic significant at p < .05

^b 1 = Strongly disagree, 7 = Strongly agree

^{*}Results from the t- test

^{**} All values in italic significant at p < .05

Table 56. Overall liking and expected quality of Fish fillet in olive oil across segments based on the visual appearance of the physical product per country, mean scores

		France			Germany			Italy			Spain		UK		
	Involved innovators (N=23)	Involved traditionals (N=83)	Sig.*	Involved innovators (N=40)	Involved traditional (N=66)	s Sig.*	Involved innovators (N=38)	Involved traditionals (N=77)	s Sig.*	Involved innovators (N=36)	Involved traditional (N=68)		Involved innovators (N=43)	Involved traditionals (N=62)	Sig.*
Overall liking based on the visual appearance of the physical product ^a	6.09	5.35	.028**	5.20	5.15	.904	5.84	6.04	.626	5.94	6.22	.374	6.12	5.65	.293
This product is nutritious ^b	4.87	4.70	.483	4.88	4.33	.044**	4.76	4.77	.992	5.14	5.19	.831	4.98	5.00	.930
This product is healthy	4.74	4.52	.391	5.05	4.44	.034	4.87	4.83	.897	5.17	5.16	.984	5.21	5.19	.951
This product can make you feel good	4.61	4.31	.274	4.93	4.32	.024	4.79	4.70	.734	5.11	5.29	.456	5.09	4.94	.557
This product is easy to cook	5.26	4.76	.093	5.43	4.56	.000	5.11	4.92	.486	5.36	5.57	.389	5.30	5.08	.402
This product tastes good	4.83	4.42	.109	4.95	4.36	.054	4.89	4.75	.617	4.97	5.16	.497	5.02	5.05	.925
This product is natural	4.70	4.40	.269	5.03	4.48	.055	4.87	4.68	.482	5.25	5.35	.696	5.26	5.10	.547
This product is easy to digest	5.00	4.64	.175	5.08	4.61	.090	4.89	4.81	.724	4.89	5.40	.035**	5.33	5.10	.394
This product is familiar to you	4.52	4.12	.271	4.43	3.91	.137	4.42	4.55	.682	3.81	4.13	.360	4.77	4.52	.445
This product is of high quality	4.74	4.42	.210	4.55	4.26	.353	4.71	4.49	.440	4.81	5.12	.236	5.02	4.81	.436
This product is safe to consume	4.78	4.58	.444	5.13	4.64	.089	4.71	4.58	.648	5.11	5.38	.292	5.05	5.11	.822

^a1 = I think I would dislike it extremely, 9= I think I would like it extremely

b 1 = Strongly disagree, 7 = Strongly agree *Results from the t- test

^{**} All values in italic significant at p < .05

Table 57. Overall liking and expected quality of *Thin smoked fillet* across countries based on the visual appearance of the physical product, mean scores

	Total (N=528)	France (N=105)	Germany (N=104)	Italy (N=112)	Spain (N=102)	UK (N=105)	Sig.*
Overall liking based on the visual appearance of the physical product ^e	6.06	5.74ª	6.13 ^{ab}	5.92ª	5.87 ^a	6.64 ^b	.002**
This product is nutritious ^f	4.96	4.76ª	5.18 ^b	4.77 ^a	4.97 ^{ab}	5.13 ^b	.026
This product is healthy	4.97	4.60^{a}	5.23 ^b	4.86^{ab}	4.92ab	5.27 ^b	.001
This product can make you feel good	4.83	4.53 ^a	4.89^{ab}	4.78^{ab}	4.89^{ab}	5.07 ^b	.043
This product is easy to cook	5.20	5.12	4.98	5.13	5.32	5.43	.053
This product tastes good	4.95	4.66ª	5.13 ^{ab}	4.88^{ab}	4.86^{ab}	5.22 ^b	.016
This product is natural	4.89	4.65 ^a	5.08^{ab}	4.68^{a}	4.76 ^a	5.31 ^b	.000
This product is easy to digest	4.95	4.73 ^a	5.03 ^{ab}	4.87^{ab}	4.91^{ab}	5.23 ^b	.040
This product is familiar to you	4.55	4.32^{ab}	4.84 ^b	4.52ab	4.21 ^a	4.84 ^b	.005
This product is of high quality	4.70	4.65 ^{ab}	4.82^{ab}	4.41 ^a	4.53 ^a	5.09 ^b	.003
This product is safe to consume	4.95	4.74 ^a	5.25 ^{bc}	4.57ª	4.85 ^{ab}	5.36°	.000

e1 = I think I would dislike it extremely, 9 =I think I would dislike it extremely

Table 58. Overall liking and expected quality of *Thin smoked fillet* across segments based on the visual appearance of the physical product, mean scores

	Total (N=528)	Involved innovators (N=155)	Involved traditional (N=373)	Sig.*
Overall liking based on the visual appearance of the physical product ^a	6.06	6.08	6.05	.887
This product is nutritious ^b	4.96	5.10	4.90	.085
This product is healthy	4.97	5.08	4.93	.234
This product can make you feel good	4.83	4.83	4.83	.948
This product is easy to cook	5.20	5.26	5.17	.389
This product tastes good	4.95	5.08	4.90	.153
This product is natural	4.89	5.03	4.84	.112
This product is easy to digest	4.95	5.02	4.92	.415
This product is familiar to you	4.55	4.62	4.51	.479
This product is of high quality	4.70	4.62	4.73	.408
This product is safe to consume	4.95	5.01	4.93	.540

^a1 = I think I would dislike it extremely, 9 =I think I would dislike it extremely

f 1 = Strongly disagree, 7 = Strongly agree
a,b,cTukey HSD post hoc test, countries without common superscripts differ significantly

^{*}Results from the ANOVA

^{**} All values in italic significant at p < .05

^b 1 = Strongly disagree, 7 = Strongly agree

^{*}Results from the t- test

^{**} All values in italic significant at p < .05

Table 59. Overall liking and expected quality of *Thin smoked fillet* across segments based on the visual appearance of the physical product per country, mean scores

	France		Germany				Italy			Spain		UK			
	Involved innovators (N=23)	Involved traditionals (N=82)	Sig.*	Involved innovators (N=42)	Involved traditionals (N=62)	Sig.*	Involved innovators (N=25)	Involved traditionals (N=87)	Sig.*	Involved innovators (N=35)	Involved traditionals (N=67)	Sig.*	Involved innovators (N=30)	Involved traditionals (N=75)	Sig.*
Overall liking based on the visual appearance of the physical product ^a	5.87	5.71	.714	5.88	6.31	.197	6.16	5.85	.448	5.74	5.94	.622	6.12	5.65	.410
This product is nutritious ^b	4.52	4.83	.278	5.33	5.08	.306	5.24	4.63	.016**	4.80	5.06	.368	4.98	5.00	.066
This product is healthy	4.22	4.71	.114	5.48	5.06	.099	5.16	4.77	.129	4.71	5.03	.305	5.21	5.19	.152
This product can make you feel good	4.39	4.57	.554	5.00	4.82	.479	4.96	4.72	.373	4.66	5.01	.294	5.09	4.94	.716
This product is easy to cook	4.74	5.23	.081	5.02	4.95	.779	5.56	5.00	.029	5.20	5.39	.477	5.30	5.08	.012**
This product tastes good	4.43	4.72	.361	5.36	4.98	.156	5.24	4.77	.102	4.66	4.97	.289	5.02	5.05	.120
This product is natural	4.48	4.70	.456	5.24	4.97	.288	5.08	4.56	.067	4.57	4.87	.374	5.26	5.10	.046
This product is easy to digest	4.61	4.77	.566	5.07	5.00	.776	4.96	4.84	.648	4.86	4.94	.768	5.33	5.10	.131
This product is familiar to you	3.96	4.43	.225	5.12	4.65	.094	4.68	4.47	.502	4.03	4.30	.469	4.77	4.52	.304
This product is of high quality	4.35	4.73	.220	4.86	4.79	.804	4.64	4.34	.308	4.09	4.76	.027**	5.02	4.81	.943
This product is safe to consume	4.43	4.83	.179	5.36	5.18	.531	4.84	4.49	.238	4.57	5.00	.234	5.05	5.11	.192

 $^{^{\}rm a}$ l = I think I would dislike it extremely, 9= I think I would like it extremely $^{\rm b}$ l = Strongly disagree, 7 = Strongly agree

^{*}Results from the t- test

^{**} All values in italic significant at p < .05

Appendix 6. Overall liking and perceived expected quality of the product mock-ups after visual inspection of the packaging and labelling

Table 60. Overall liking and expected quality of *Fresh fish steak* across countries based on the label, mean scores

	Total (N=532)	France (N=103)	Germany (N=108)	Italy (N=108)	Spain (N=107)	UK (N=106)	Sig.*
Overall liking based on the visual appearance of the label ^e	6.75	6.35 ^a	6.69 ^{ab}	6.86 ^b	6.97^{b}	6.84^{ab}	.010**
This product is readily available ^f	4.90	4.70 ^a	4.97 ^{ab}	4.67ª	5.17 ^b	5.01 ^{ab}	.010
This product is credible	5.19	4.83 ^a	5.18 ^{abc}	5.06 ^{ab}	5.51°	5.34 ^{bc}	.000
This product is trustworthy	5.20	4.86^{a}	5.11 ^{ab}	5.01^{ab}	5.67°	5.36 ^{bc}	.000
This product is good value for money	4.86	4.53 ^a	4.91^{ab}	4.87^{ab}	5.11 ^b	4.89^{ab}	.013
This product is inexpensive	4.34	4.09	4.37	4.30	4.52	4.40	.240
This product is known	4.27	4.15	4.29	4.13	4.33	4.44	.521
This product is produced in an environmental friendly way	4.76	4.60^{a}	4.72 ^{ab}	4.63 ^a	4.73 ^{ab}	5.11 ^b	.016
This product is authentic	4.92	4.61 ^a	4.87^{ab}	4.84^{ab}	5.06 ^b	5.20 ^b	.003
This product is a high quality product	5.00	4.78^{a}	5.09 ^a	4.84^{a}	5.13 ^a	5.17 ^a	.029
This product helps local producers /economy	4.77	4.51 ^{ab}	4.79^{b2}	4.65 ^{ab}	4.86^{ab}	5.01 ^a	.036

e1 = I think I would dislike it extremely, 9 =I think I would dislike it extremely

Table 61. Overall liking and expected quality of Fresh fish steak across segments based on the label, mean scores

	Total (N=532)	Involved innovators (N=167)	Involved traditional (N=365)	Sig.*
Overall liking based on the visual appearance of the label ^a	6.75	6.98	6.64	.008
This product is readily available ^b	4.90	5.02	4.85	.125
This product is credible	5.19	5.50	5.05	.000
This product is trustworthy	5.20	5.46	5.09	.000
This product is good value for money	4.86	5.10	4.76	.002
This product is inexpensive	4.34	4.33	4.34	.937
This product is known	4.27	4.17	4.31	.303
This product is produced in an environmental friendly way	4.76	4.90	4.70	.074
This product is authentic	4.92	5.16	4.81	.001
This product is a high quality product	5.00	5.21	4.91	.004
This product helps local producers /economy	4.77	4.91	4.70	.064

^a1 = I think I would dislike it extremely, 9 =I think I would dislike it extremely

f 1 = Strongly disagree, 7 = Strongly agree

a,b,c Tukey HSD post hoc test, countries without common superscripts differ significantly

^{*}Results from the ANOVA

^{**} All values in italic significant at p < .05

^b 1 = Strongly disagree, 7 = Strongly agree

^{*}Results from the t- test

^{**} All values in italic significant at p < .05

Table 62. Overall liking and expected quality of Fresh fish steak across segments per country based on the label, mean scores

		France			Germany			Italy			Spain		UK			
	Involved innovators (N=13)	Involved traditionals (N=90)	Sig.*	Involved innovators (N=46)	Involved traditionals (N=62)	Sig.*	Involved innovators (N=36)	Involved traditionals (N=72)	s Sig.*	Involved innovators (N=37)	Involved traditionals (N=70)	Sig.*	Involved innovators (N=35)	Involved traditionals (N=71)	Sig.*	
Overall liking based on the label ^a	6.85	6.28	.161	6.78	6.63	.575	6.94	6.82	.630	7.22	6.84	.149	7.06	6.73	.275	
This product is readily available ^b	4.69	4.70	.984	4.96	4.98	.893	4.97	4.51	.036**	5.24	5.13	.671	5.06	4.99	.787	
This product is credible	4.92	4.82	.763	5.43	4.98	.042**	5.39	4.90	.014	5.65	5.44	.324	5.74	5.14	.005**	
This product is trustworthy	4.92	4.86	.845	5.26	5.00	.223	5.25	4.89	.071	5.92	5.54	.051	5.63	5.23	.073	
This product is good value for money	4.69	4.51	.632	5.07	4.79	.233	5.00	4.81	.401	5.41	4.96	.088	5.09	4.79	.181	
This product is inexpensive	4.15	4.08	.861	4.28	4.44	.567	4.31	4.29	.953	4.65	4.46	.555	4.14	4.52	.194	
This product is known	4.38	4.11	.501	3.85	4.61	.008	4.03	4.18	.592	4.65	4.16	.131	4.14	4.59	.186	
This product is produced in an environmental friendly way	5.00	4.54	.189	4.76	4.69	.792	4.78	4.56	.300	4.89	4.64	.404	5.17	5.08	.718	
This product is authentic	5.08	4.54	.006**	4.93	4.82	.598	5.00	4.76	.269	5.41	4.87	.037**	5.37	5.11	.267	
This product is a high quality product	5.08	4.73	.170	5.17	5.03	.507	4.97	4.78	.391	5.43	4.97	.063	5.31	5.10	.337	
This product helps local producers /economy	4.92	4.46	.157	4.78	4.79	.974	4.58	4.68	.694	5.22	4.67	.049	5.09	4.97	.643	

^{**} Think I would dislike it extremely, 9=I think I would like it extremely b = I = I think I would like it extremely b = I = I think I would like it extremely b = I = I think I would like it extremely b = I think I would like it extrem

Table 63. Overall liking and expected quality of Fish fillet in olive oil across countries based on the label, mean scores

	Total (N=536)	France (N=106)	Germany (N=106)	Italy (N=115)	Spain (N=104)	UK (N=105)	Sig.*
Overall liking based on the label ^e	6.37	5.98 ^{ab}	5.94ª	6.44 ^{abc}	6.90°	6.56 ^{bc}	.000**
This product is readily available ^f	4.55	4.63 ^{ab}	4.20ª	4.30 ^{abc}	4.92°	4.72 ^{bc}	.000
This product is credible	4.99	4.81^{ab}	4.87^{ab}	4.72ª	5.38°	5.19 ^{bc}	.000
This product is trustworthy	4.94	4.67 ^a	4.76^{ab}	4.75 ^{ab}	5.42°	5.14 ^{bc}	.000
This product is good value for money	4.53	4.19^{a}	4.25 ^a	4.56 ^a	5.15 ^b	4.52 ^a	.000
This product is inexpensive	4.04	3.81 ^a	3.86^{a}	4.11^{ab}	4.43 ^b	4.01^{ab}	.022
This product is known	4.01	3.76^{ab}	3.69 ^a	3.80^{ab}	4.45°	4.35 ^{bc}	.000
This product is produced in an environmental friendly way	4.70	4.39^{a}	4.58^{ab}	4.47^{a}	5.03 ^{bc}	5.09°	.000
This product is authentic	4.76	4.37 ^a	4.55 ^a	4.61 ^a	5.20 ^b	5.08 ^b	.000
This product is a high quality product	4.84	4.60^{ab}	4.55 ^a	4.65 ^{ab}	5.34°	5.07 ^{bc}	.000
This product helps local producers /economy	4.68	4.34 ^a	4.51 ^{ab}	4.40^{a}	5.18°	5.01 ^{bc}	.000

e1 = I think I would dislike it extremely, 9 = I think I would dislike it extremely

Table 64. Overall liking and expected quality of Fish fillet in olive oil across segments based on the label, mean scores

	Total (N=536)	Involved innovators (N=180)	Involved traditional (N=356)	Sig.*
Overall liking based on the label ^a	6.37	6.70	6.20	.001
This product is readily available ^b	4.55	4.52	4.56	.743
This product is credible	4.99	5.19	4.89	.004
This product is trustworthy	4.94	5.19	4.82	.000
This product is good value for money	4.53	4.57	4.51	.640
This product is inexpensive	4.04	3.87	4.13	.051
This product is known	4.01	3.86	4.08	.125
This product is produced in an environmental friendly way	4.70	4.82	4.64	.125
This product is authentic	4.76	4.93	4.67	.022
This product is a high quality product	4.84	4.99	4.76	.041
This product helps local producers /economy	4.68	4.77	4.64	.314

^a1 = I think I would dislike it extremely, 9 =I think I would dislike it extremely

f 1 = Strongly disagree, 7 = Strongly agree

a,b,cTukey HSD post hoc test, countries without common superscripts differ significantly *Results from the ANOVA

^{**} All values in italic significant at p < .05

^b 1 = Strongly disagree, 7 = Strongly agree

^{*}Results from the t- test

^{**} All values in italic significant at p < .05

Table 65. Overall liking and expected quality of *Fish fillet in olive oil* across countries based on the label, mean scores

		France			Germany			Italy			Spain			UK	
	Involved innovators (N=23)	Involved traditionals (N=83)	Sig.*	Involved innovators (N=40)	Involved traditionals (N=66)	Sig.*	Involved innovators (N=38)	Involved traditionals (N=77)	Sig.*	Involved innovators (N=36)	Involved traditionals (N=68)	Sig.*	Involved innovators (N=43)	Involved traditionals (N=62)	Sig.*
Overall liking based on the label ^a	6.61	5.81	.001**	6.30	5.73	.084	6.47	6.43	.893	7.08	6.81	.298	7.00	6.26	.037**
This product is readily available ^b	4.74	4.60	.608	4.20	4.20	.991	4.26	4.32	.828	4.86	4.96	.708	4.65	4.77	.696
This product is credible	5.04	4.75	.195	5.25	4.64	.003**	4.68	4.74	.831	5.53	5.31	.312	5.37	5.06	.183
This product is trustworthy	5.04	4.57	.019	5.15	4.53	.006	4.79	4.73	.809	5.58	5.34	.255	5.35	5.00	.156
This product is good value for money	4.52	4.10	.124	4.53	4.09	.123	4.37	4.65	.277	5.08	5.19	.638	4.40	4.61	.488
This product is inexpensive	3.87	3.80	.802	4.05	3.74	.334	3.82	4.26	.124	4.19	4.56	.210	3.47	4.39	.007
This product is known	3.78	3.76	.948	3.60	3.74	.658	3.53	3.94	.167	4.31	4.53	.514	4.05	4.56	.113
This product is produced in an environmental friendly way	4.61	4.33	.302	4.75	4.47	.287	4.50	4.45	.866	4.92	5.09	.473	5.21	5.00	.398
This product is authentic	4.61	4.30	.251	4.88	4.35	.020	4.66	4.58	.776	5.14	5.24	.673	5.21	4.98	.382
This product is a high quality product	4.83	4.54	.231	4.88	4.35	.049	4.82	4.57	.352	5.22	5.40	.462	5.16	5.00	.557
This product helps local producers /economy	4.35	4.34	.972	4.83	4.32	.081	4.47	4.36	.720	5.06	5.25	.436	4.95	5.05	.722

^aI = I think I would dislike it extremely, 9= I think I would like it extremely ^bI = Strongly disagree, 7 = Strongly agree

^{*}Results from the t- test

^{**} All values in italic significant at p < .05

Table 66. Overall liking and expected quality of *Thin smoked fillet* across countries based on the label, mean scores

	Total (N=528)	France (N=105)	Germany (N=104)	Italy (N=112)	Spain (N=102)	UK (N=105)	Sig.*
Overall liking based the label ^e	6.47	6.20	6.22	6.59	6.66	6.67	.055
This product is readily available ^f	4.79	4.76	4.88	4.63	4.78	4.89	.542
This product is credible	5.04	4.88	5.08	4.90	5.15	5.19	.133
This product is trustworthy	5.04	4.88^{ab}	5.17 ^{bc}	4.82a	5.23°	5.12 ^{abc}	.032**
This product is good value for money	4.71	4.58	4.67	4.65	4.77	4.87	.526
This product is inexpensive	4.34	4.32	4.15	4.32	4.51	4.37	.496
This product is known	4.31	4.20^{ab}	4.06^{a}	4.19^{ab}	4.53bc	4.60^{a}	.028
This product is produced in an environmental friendly way	4.66	4.71^{ab}	4.55 ^a	4.53 ^a	4.56 ^a	4.97^{b}	.042
This product is authentic	4.87	4.72	4.96	4.72	4.90	5.03	.230
This product is a high quality product	4.88	4.87	4.91	4.66	4.94	5.02	.267
This product helps local producers /economy	4.73	4.53 ^a	4.55 ^a	4.70^{ab}	4.94 ^b	4.95 ^b	.024

e: 1 = I think I would dislike it extremely, 9 =I think I would like it extremely

Table 67. Overall liking and expected quality of the Thin smoked fillet across segments based on the label, mean scores

Liking/beliefs	Total (N=528)	Involved innovators (N=155)	Involved traditional (N=373)	Sig.*
Overall liking based the label ^a	6.47	6.63	6.40	.141
This product is readily available ^b	4.79	4.91	4.73	.150
This product is credible	5.04	5.17	4.98	.078
This product is trustworthy	5.04	5.22	4.97	.022
This product is good value for money	4.71	4.75	4.69	.666
This product is inexpensive	4.34	4.12	4.43	.021
This product is known	4.31	4.25	4.34	.498
This product is produced in an environmental friendly way	4.66	4.66	4.66	.954
This product is authentic	4.87	5.03	4.80	.050
This product is a high quality product	4.88	4.98	4.83	.213
This product helps local producers /economy	4.73	4.79	4.71	.472

^a1 = I think I would dislike it extremely, 9 = I think I would dislike it extremely

f 1 = Strongly disagree, 7 = Strongly agree
a.b.e Tukey HSD post hoc test, countries without common superscripts differ significantly

^{*}Results from the ANOVA

^{**} All values in italic significant at p < .05

^b 1 = Strongly disagree, 7 = Strongly agree

^{*}Results from the t- test ** All values in italic significant at p < .05

Table 68. Overall liking and expected quality of *Thin smoked fillet* across segments based on the label per country, mean scores

		France			Germany			Italy			Spain			UK	
Liking/Beliefs	Involved innovators (N=23)	Involved traditionals (N=82)	Sig.*	Involved innovators (N=42)	Involved traditionals (N=62)	Sig.*	Involved innovators (N=25)	Involved traditionals (N=87)	Sig.*	Involved innovators (N=35)	Involved traditionals (N=67)	Sig.*	Involved innovators (N=30)	Involved traditionals (N=75)	Sig.*
Overall liking based the label ^a	6.43	6.13	.399	6.21	6.23	.972	6.96	6.48	.191	6.80	6.58	.470	6.87	6.59	.456
This product is readily available ^b	4.74	4.77	.895	5.14	4.71	.079	4.76	4.59	.526	4.80	4.78	.937	4.97	4.85	.689
This product is credible	4.87	4.88	.967	5.21	4.98	.294	5.28	4.79	.035**	5.03	5.21	.473	5.40	5.11	.237
This product is trustworthy	5.00	4.84	.553	5.31	5.08	.330	5.32	4.68	.007	5.14	5.27	.625	5.27	5.07	.446
This product is good value for money	4.61	4.57	.901	4.76	4.61	.588	4.92	4.57	.191	4.66	4.84	.541	4.80	4.89	.739
This product is inexpensive	4.17	4.37	.524	4.24	4.10	.644	4.00	4.41	.147	4.14	4.70	.081	3.97	4.53	.070
This product is known	4.09	4.23	.677	4.05	4.06	.959	4.16	4.20	.905	4.34	4.63	.373	4.60	4.60	1.000
This product is produced in an environmental friendly way	4.65	4.73	.776	4.57	4.53	.884	4.60	4.51	.721	4.29	4.70	.087	5.27	4.85	.129
This product is authentic	4.83	4.70	.683	5.17	4.82	.140	5.12	4.61	.050	4.69	5.01	.186	5.30	4.92	.142
This product is a high quality product	4.96	4.84	.670	5.02	4.84	.460	4.96	4.57	.160	4.69	5.07	.141	5.30	4.91	.165
This product helps local producers /economy	4.30	4.60	.328	4.60	4.52	.762	4.88	4.64	.388	4.97	4.93	.872	5.17	4.87	.238

^a1 = I think I would dislike it extremely, 9= I think I would like it extremely ^b1 = Strongly disagree, 7 = Strongly agree *Results from the t- test

^{**} All values in italic significant at p < .05

Appendix 7. Familiarity with the fish species across countries and market segments

Table 69. Liking, Familiarity, Knowledge, Experience of the *Fresh fish steak* sample with Greater Amberjack across countries, mean scores

	Total (N=532)	France (N=103)	Germany (N=108)	Italy (N=108)	Spain (N=107)	UK (N=106)	Sig.*
I think I would like this product ^e	6.44	5.89 ^a	6.36 ^{ab}	6.51 ^b	6.69 ^b	6.72 ^b	.000**
I am familiar with the species ^f	3.34	2.74 ^a	3.43 ^{ab}	3.54 ^b	3.51 ^b	3.45 ^b	.010
I am experienced about the species ^f	3.25	2.83	3.37	3.31	3.37	3.35	.119
I am knowledgeable about the species ^f	3.28	2.83	3.39	3.25	3.45	3.48	.062

Table 70. Liking, Familiarity, Knowledge, Experience of the *Fresh fish steak* sample with Greater Amberjack across segments, mean scores

	Total (N=532)	Involved innovators (N=167)	Involved traditional (N=365)	Sig.*
I think I would like this product ^a	6.44	6.81	6.27	.000
I am familiar with the species ^b	3.34	3.55	3.24	.079**
I am experienced about the species ^b	3.25	3.47	3.15	.048
I am knowledgeable about the species ^b	3.28	3.46	3.21	.139

^aThe scale for the Liking questions was: 1 = I think I would dislike it extremely, 9= I think I would like it extremely

^{°1=} I think I would dislike it extremely, 9 =I think I would dislike it extremely f I = Strongly disagree, 7 = Strongly agree , a,b,c Tukey HSD post hoc test, countries without common superscripts differ significantly *Results from the ANOVA ** All values in italic significant at p < .05

^b The scale for the statements was: 1 = Strongly disagree, 7 = Strongly agree

^{*}Results from the t- test ** All values in italic significant at p < .05

Table 71. Liking, Familiarity, Knowledge, Experience of the *Fresh fish steak* sample with Greater Amberjack across segments per country, mean scores

		France			Germany Italy					Spain		UK				
	Involved innovators	innovators traditional Sig.*			Involved Involved innovators traditional Sig.*			Involved Involved innovators traditional Sig.*			Involved Involved innovators traditional Sig.*			Involved Involved innovators traditional Sig.*		
	(N=13)	(N=90)		(N=46)	(N=62)		(N=36)	(N=72)		(N=37)	(N=70)		(N=35)	(N=71)		
I think I would like this product ^a	6.54	5.80	.062	6.65	6.15	.053	7.14	6.19	.001**	6.84	6.61	.397	6.77	6.69	.793	
I am familiar with the species ^b	3.62	2.61	.041**	3.52	3.35	.634	3.75	3.43	.434	4.00	3.26	.051	2.89	3.73	.041**	
I am experienced about the species ^b	3.46	2.73	.131	3.43	3.32	.743	3.67	3.13	.135	3.84	3.13	.051	2.94	3.55	.125	
I am knowledgeable about the	3.46	2.74	.135	3.37	3.40	.919	3.53	3.11	.305	3.97	3.17	.028**	2.94	3.75	.051	

^a 1 = I think I would dislike it extremely, 9= I think I would like it extremely

Table 72 Liking, Familiarity, Knowledge, Experience of the Fish fillet in olive oil sample with Grey mullet across countries, mean scores

	Total (N=536)	France (N=106)	Germany (N=106)	Italy (N=115)	Spain (N=104)	UK (N=105)	Sig.*
I think I would like this product e	6.35	5.96ª	6.14^{ab}	6.36 ^{abc}	6.58 ^{bc}	6.73°	.001**
I am familiar with the species ^f	3.91	3.44 ^{ab}	3.00 ^a	4.85 ^d	3.85 ^{bc}	4.32 ^{cd}	.000
I am experienced about the species ^f	3.74	3.53 ^{ab}	2.93a	4.53°	3.60^{b}	4.04 ^{bc}	.000
I am knowledgeable about the species ^f	3.71	3.36^{ab}	2.94ª	4.39^{d}	3.66 ^{bc}	4.12 ^{cd}	.000

^b 1 = Strongly disagree, 7 = Strongly agree

^{*}Results from the t- test

^{**} All values in italic significant at p < .05

 $^{^{\}rm e}$ 1 = I think I would dislike it extremely, 9 =I think I would dislike it extremely $^{\rm f}$ 1 = Strongly disagree, 7 = Strongly agree $^{\rm a,b,c}$ Tukey HSD post hoc test, countries without common superscripts differ significantly *Results from the ANOVA ** All values in italic significant at p < .05

Table 73. Liking, Familiarity, Knowledge, Experience of the Fish fillet in olive oil sample with Grey Mullet across segments, mean scores

	Total (N=536)	Involved innovators (N=180)	Involved traditional (N=356)	Sig.*
I think I would like this product ^a	6.35	6.63	6.21	.001
I am familiar with the species ^b	3.91	4.36	3.68	.000**
I am experienced about the species ^b	3.74	4.16	3.53	.000
I am knowledgeable about the species ^b	3.71	4.10	3.51	.000

^a1 = I think I would dislike it extremely, 9 I think I would dislike it extremely

Table 74. Liking, Familiarity, Knowledge, Experience of the *Fish fillet in olive oil* sample with Grey mullet across segments per country, mean scores

		France		Germany				Italy			Spain			UK	
	Involved innovators (N=23)	Involved traditional (N=83)	s Sig.*	Involved innovators (N=40)	Involved traditional (N=66)	s Sig.*	Involved innovators (N=38)	Involved traditional (N=77)		Involved innovators (N=36)	Involved traditionals (N=68)	Sig.*	Involved innovators (N=43)	Involved traditional (N=62)	
I think I would like this product ^a	6.22	5.89	.233	6.43	5.97	.104	6.50	6.29	.538	6.64	6.54	.722	7.16	6.44	.009**
I am familiar with the species ^b	3.70	3.37	.433	3.28	2.83	.228	5.50	4.53	.001**	4.08	3.72	.308	4.93	3.90	.005
I am experienced about the species ^b	4.00	3.40	.105	3.13	2.82	.389	5.29	4.16	.000	3.75	3.51	.508	4.53	3.69	.019
I am knowledgeable about the species ^b	3.78	3.24	.144	3.03	2.89	.706	5.18	4.00	.000	3.72	3.63	.792	4.63	3.77	.019

^a1 = I think I would dislike it extremely, 9= I think I would like it extremely

^b 1 = Strongly disagree, 7 = Strongly agree *Results from the t- test ** All values in italic significant at p < .05

 $^{^{\}rm b}$ 1 = Strongly disagree, 7 = Strongly agree *Results from the t- test ** All values in italic significant at p < .05

Table 75. Liking, Familiarity, Knowledge, Experience of the *Thin smoked fillet* sample with Grey Mullet across segments per country, mean scores

	Total (N=528)	France (N=105)	Germany (N=104)	Italy (N=112)	Spain (N=102)	UK (N=105)	Sig.*
I think I would like this product ^e	6.25	5.93	6.27	6.21	6.38	6.46	.109
I am familiar with the species ^f	3.84	3.34 ^a	3.37 ^a	4.68 ^b	3.75 ^a	3.99 ^a	.000**
I am experienced about the species ^f	3.71	3.34 ^{ab}	3.22 ^a	4.35°	3.61 ^{ab}	3.96 ^{bc}	.000
I am knowledgeable about the species ^f	3.71	3.44 ^{ab}	3.16^{a}	4.14 ^c	3.81 ^{abc}	3.97 ^{bc}	.000

Table 76. Liking, Familiarity, Knowledge, Experience of the *Thin smoked fillet* sample with Grey Mullet across segments, mean scores

	Total (N=528)	Involved innovators (N=155)	Involved traditional (N=373)	Sig.*
I think I would like this product ^a	6.25	6.55	6.13	.003**
I am familiar with the species ^b	3.84	4.05	3.75	.098
I am experienced about the species ^b	3.71	3.95	3.61	.047
I am knowledgeable about the species ^b	3.71	3.87	3.65	.188

^a1 = I think I would dislike it extremely, 9= I think I would like it extremely ^b 1 = Strongly disagree, 7 = Strongly agree

^c1 = I think I would dislike it extremely, 9 =I think I would dislike it extremely
^f 1 = Strongly disagree, 7 = Strongly agree ^{a,b,c}Tukey HSD post hoc test, countries without common superscripts differ significantly *Results from the ANOVA ** All values in italic significant at p < .05

^{*}Results from the t- test ** All values in italic significant at p < .05

Table 77. Liking, Familiarity, Knowledge, Experience of the *Thin smoked fillet* sample with Grey Mullet across segmetns per country, mean scores

	France			Germany			Italy			Spain			UK		
	Involved innovators (N=23)	Involved traditionals (N=82)	Sig.*	Involved innovators (N=42)	Involved traditional (N=62)		Involved innovators (N=25)	Involved traditional (N=87)		Involved innovators (N=35)	Involved traditionals (N=67)	Sig.*	Involved innovators (N=30)	Involved traditionals (N=75)	Sig.*
I think I would like this product ^a	6.09	5.89	.568	6.74	5.95	.009**	6.64	6.09	.154	6.29	6.43	.600	6.87	6.29	.083
I am familiar with the species ^b	3.17	3.39	.620	3.71	3.13	.128	5.44	4.46	.014**	3.83	3.70	.701	4.27	3.88	.346
I am experienced about the species ^b	3.26	3.37	.805	3.60	2.97	.094	5.08	4.14	.018	3.69	3.57	.705	4.33	3.81	.198
I am knowledgeable about the species ^b	3.35	3.46	.791	3.43	2.98	.216	4.60	4.01	.144	4.03	3.70	.294	4.10	3.92	.659

^a1 = I think I would dislike it extremely, 9= I think I would like it extremely
^b 1 = Strongly disagree, 7 = Strongly agree
*Results from the t- test

^{**} All values in italic significant at p < .05

Appendix 8. Likelihood (share) of choices for newly developed mock-ups

Table 78. Likelihood of choice for different fresh fish steaks product mock-ups

			Attributes		Likelihood of choice (%)							
Prod.	COO	Nutrition claim	Health claim	Logo	Price (%)	Overall	France	Germany	Italy	Spain	UK	
						(N=532)	(N=103)	(N=108)	(N=108)	(N=107)	(N=106)	
1	EU prod. own	high protein	heart function brain	ASC logo	30	25.4	20.4	21.3	19.4	31.8	34.0	
2	country	Omega 3	function	none	0	68.2	72.8	66.7	75.9	64.5	61.3	
3	None	None	None heart	ASC logo	15	6.4	6.8	12.0	4.6	3.7	4.7	
4	None own	high protein	function brain	none	0	27.1	27.2	25.9	19.4	27.1	35.8	
5	country	None	function	ASC logo	15	60.5	61.2	63.0	67.6	60.7	50.0	
6	EU prod. own	Omega 3	None brain	none	30	12.4	11.7	11.1	13.0	12.1	14.2	
7	country	Omega 3	function	ASC logo	30	53.0	58.3	54.6	58.3	43.9	50.0	
8	None	None	None heart	ASC logo	0	28.8	24.3	30.6	25.9	31.8	31.1	
9	EU prod.	high protein	function brain	none	15	18.2	17.5	14.8	15.7	24.3	18.9	
10	None	high protein	function heart	ASC logo	15	10.3	13.6	7.4	11.1	5.6	14.2	
11	EU prod. own	Omega 3	function	ASC logo	0	60.7	47.6	66.7	54.6	72.9	61.3	
12	country own	None	None heart	none	30	28.9	38.8	25.9	34.3	21.5	24.5	
13	country	Omega 3	function	ASC logo	15	68.2	70.9	71.3	75.0	64.5	59.4	
14	EU prod.	high protein	None brain	none	0	28.0	24.3	26.9	23.1	29.9	35.8	
15	None	None	function brain	none	30	3.8	4.9	1.9	1.9	5.6	4.7	
16	None country	Omega 3	function	none	0	31.8	31.1	26.9	25.0	30.8	45.3	
17	prod.	high in protein	None heart	ASC logo	30	44.4	50.5	48.1	52.8	32.7	37.7	
18	EU prod.	None	function	ASC logo	15	23.9	18.4	25.0	22.2	36.4	17.0	
19	None	Omega 3	None brain	none	15	9.4	14.6	12.0	8.3	3.7	8.5	
20	EU prod. own	None	function heart	ASC logo	30	12.4	8.7	12.0	11.1	16.8	13.2	
21	country own	high protein	function	ASC logo	0	78.2	76.7	75.9	80.6	79.4	78.3	
22	country	Omega 3	None brain	ASC logo	0	81.8	84.5	88.9	84.3	75.7	75.5	
23	EU prod.	high protein	function heart	none	30	14.1	11.7	5.6	12.0	21.5	19.8	
24	None own	None	function brain	none	15	4.1	3.9	5.6	3.7	2.8	4.7	
25	country	high protein	function	none	15	51.9	61.2	43.5	58.3	47.7	49.1	
26	EU prod.	None	None heart	none	0	28.2	24.3	22.2	25.0	39.3	30.2	
27	None own	Omega 3	function	ASC logo	30	19.9	14.6	34.3	16.7	13.1	20.8	
28	country	high protein	None brain	none	15	38.2	44.7	28.7	45.4	31.8	40.6	
29	EU prod.	None	function heart	ASC logo	0	50.0	42.7	59.3	44.4	57.0	46.2	
30	None own	Omega 3	function heart	none	30	11.8	12.6	12.0	10.2	11.2	13.2	
31	country	None	function	none	30	33.1	41.7	28.7	38.0	24.3	33.0	
32	EU prod.	Omega 3	None brain	ASC logo	15	35.9	38.8	42.6	38.0	35.5	24.5	
33	None	high protein	function brain	ASC logo	0	31.0	19.4	28.7	24.1	40.2	42.5	
34	EU prod.	Omega 3	function	none	15	18.0	16.5	13.0	17.6	20.6	22.6	
35	own country	None	heart function	none	0	68.2	73.8	59.3	74.1	71.0	63.2	
36	None	high protein	None	ASC logo	30	13.7	9.7	27.8	8.3	8.4	14.2	

Table 79. Likelihood of choice for different fish fillets in oil product mock-ups

	Attributes					Likelihood of choice (%)							
Prod.	COO	Nutrition claim	Health claim	Logo	Price (%)	Overall	France	Germany	Italy	Spain	UK		
						(N=536)	(N=106)	(N=106)	(N=115)	(N=104)	(N=105)		
1	EU prod.	high protein	heart function	ASC logo	30	14.2	13.2	8.5	12.2	15.4	21.9		
2	own	0	brain		0	74.6	79.2	70.8	76.5	76.9	69.5		
2 3	country None	Omega 3 None	function None	none ASC logo	15	11.2	7.5	20.8	11.3	7.7	8.6		
3	None	None	heart	ASC logo	13	28.4	29.2	33.0	25.2	19.2	35.2		
4	None own	high protein	function brain	none	0	60.1	60.4	59.4	60.0	68.3	52.4		
5	country	None	function	ASC logo	15								
6	EU prod.	Omega 3	None	none	30	11.6	10.4	7.5	14.8	12.5	12.4		
_	own		brain		20	53.4	53.8	49.1	57.4	57.7	48.6		
7 8	country None	Omega 3	function	ASC logo	30	26.1	24.5	27.7	17.4	20.2	31.4		
ð	None	None	None heart	ASC logo	0	26.1 20.5	24.5 21.7	37.7 13.2	17.4 25.2	20.2 22.1	20.0		
9	EU prod.	high protein	function brain	none	15	9.3	5.7	8.5	7.8	12.5	12.4		
10	None	high protein	function	ASC logo	15	7.5	5.7	0.5	7.0	12.3	12.4		
	- 10-10	8 F	heart	1100 1000		58.2	54.7	62.3	55.7	50.0	68.6		
11	EU prod.	Omega 3	function	ASC logo	0								
	own				• •	32.5	39.6	29.2	36.5	37.5	19.0		
12	country	None	None	none	30	(0.2	(0.0	(7.0	72.0	(0.2	(1.0		
13	own country	Omega 3	heart function	ASC logo	15	68.3	69.8	67.9	73.0	68.3	61.9		
14	EU prod.	high protein	None	none	0	26.9	28.3	26.4	20.9	27.9	31.4		
17	Le prou.	mgn protem	brain	none	· ·	4.9	1.9	5.7	6.1	3.8	6.7		
15	None	None	function	none	30								
			brain			34.0	34.9	31.1	27.8	32.7	43.8		
16	None	Omega 3	function	none	0								
	country	high in	3.7		20	45.0	48.1	48.1	47.8	41.3	39.0		
17	prod.	protein	None	ASC logo	30	21.1	17.0	20.0	24.2	26.0	17.1		
18	EU prod.	None	heart function	ASC logo	15	21.1	17.0	20.8	24.3	26.0	17.1		
19	None	Omega 3	None	none	15	7.1	6.6	2.8	8.7	6.7	10.5		
	- 10-22	5 B c	brain			8.2	4.7	6.6	7.8	10.6	11.4		
20	EU prod. own	None	function heart	ASC logo	30	84.7	88.7	90.6	83.5	82.7	78.1		
21	country own	high protein	function	ASC logo	0	85.4	92.5	90.6	82.6	83.7	78.1		
22	country	Omega 3	None	ASC logo	0								
	_	C	brain	C		10.3	6.6	3.8	13.9	13.5	13.3		
23	EU prod.	high protein	function	none	30								
	3.7	27	heart		1.5	4.3	0.9	5.7	3.5	2.9	8.6		
24	None	None	function	none	15	56.7	60.4	51.9	67.8	59.6	42.9		
25	own country	high protein	brain function	none	15	30.7	00.4	31.9	07.8	39.6	42.9		
26	EU prod.	None	None	none	0	27.6	29.2	31.1	16.5	29.8	32.4		
	- F		heart			15.7	10.4	17.0	15.7	10.6	24.8		
27	None own	Omega 3	function	ASC logo	30	46.1	54.7	37.7	54.8	46.2	36.2		
28	country	high protein	None	none	15								
29	EU prod.	None	brain function	ASC logo	0	44.0	37.7	57.5	33.9	41.3	50.5		
	•		heart	C		9.9	7.5	4.7	11.3	12.5	13.3		
30	None	Omega 3	function	none	30								
	own	27	heart			37.5	36.8	33.0	48.7	38.5	29.5		
31	country	None	function	none	30	20 5	27.4	30.2	27.0	27.9	29.5		
32	EU prod.	Omega 3	None brain	ASC logo	15	28.5 34.0	35.8	30.2 36.8	27.8 23.5	33.7	29.5 41.0		
33	None	high protein	function	ASC logo	0								
24	EII '	0	brain		1.7	16.6	13.2	14.2	17.4	20.2	18.1		
34	EU prod. own	Omega 3	function	none	15	70.7	77.4	74.5	74.8	66.3	60.0		
35	country	None	heart function	none	0	/0./	//.4	74.5	/4.8	00.3	00.0		
	-				30	12.7	9.4	11.3	7.8	13.5	21.9		
36	None	high protein	None	ASC logo	30	12.7	9.4	11.3	7.8	13.5	2		

Table 80. Likelihood of choice for different thin smoked fillet product mock-ups

			Attributes		Likelihood of choice (%)							
Prod.	COO	Nutrition claim	Health claim	Logo	Price (%)	Overall	France	Germany	Italy	Spain	UK	
			1 .			(N=528)	(N=105)	(N=104)	(N=112)	(N=102)	(N=105)	
1	EU prod. own	high protein	heart function brain	ASC logo	30	23.3	23.8	28.8	16.1	25.5	22.9	
2	country	Omega 3	function	none	0	68.6	66.7	60.6	77.7	67.6	69.5	
3	None	None	None heart	ASC logo	15	8.1	9.5	10.6	6.3	6.9	7.6	
4	None own	high protein	function brain	none	0	26.5	26.7	26.9	23.2	22.5	33.3	
5 6	country EU prod.	None	function	ASC logo	15 30	56.1 17.4	60.0 13.3	57.7 15.4	54.5 22.3	55.9 21.6	52.4 14.3	
	own	Omega 3	None brain function	none ASC logo	30	59.7	58.1	50.0	70.5	56.9	61.9	
7 8	country None	None	None	ASC logo	0	23.9	32.4	33.7	14.3	17.6	21.9	
9	EU prod.	high protein	heart function	none	15	16.5	9.5	16.3	15.2	25.5	16.2	
10	None	high protein	brain function	ASC logo	15	10.4	7.6	5.8	10.7	9.8	18.1	
		<i>U</i> 1	heart	Č								
11	EU prod. own	Omega 3	function	ASC logo	0	57.8	47.6	76.0	58.9	54.9	51.4	
12	country own	None	None heart	none	30	31.8	44.8	18.3	30.4	35.3	30.5	
13	country	Omega 3	function	ASC logo	15	68.0	64.8	67.3	67.0	70.6	70.5	
14	EU prod.	high protein	None brain	none	0	27.5	30.5 4.8	32.7	28.6	23.5	21.9	
15	None	None	function brain	none	30	4.5		0.0	4.5	5.9	7.6	
16	None	Omega 3 high in	function	none	0	32.0	26.7	30.8	33.9	32.4	36.2	
17	prod.	protein	None heart	ASC logo	30	49.1	59.0	47.1	50.0	43.1	45.7	
18 19	EU prod. None	None Omega 3	function None	ASC logo none	15 15	18.9 10.0	14.3 10.5	22.1 11.5	16.1 8.9	24.5 9.8	18.1 9.5	
20	EU prod.	None	brain function	ASC logo	30	15.0	17.1	14.4	17.9	16.7	8.6	
21	own country	high protein	heart function	ASC logo	0	75.0	72.4	74.0	73.2	73.5	81.9	
	own		None	ASC logo	0	79.2	84.8	86.5	75.9	70.6	78.1	
22	country	Omega 3	brain								19.0	
23	EU prod.	high protein	function heart	none	30	16.9	9.5	11.5	19.6	24.5		
24	None own	None	function brain	none	15	4.0	5.7	1.9	4.5	4.9	2.9	
25 26	country EU prod.	high protein None	function None	none none	15 0	54.4 25.6	63.8 29.5	36.5 30.8	63.4 23.2	51.0 21.6	56.2 22.9	
27	None	Omega 3	heart function	ASC logo	30	20.1	6.7	32.7	13.4	27.5	21.0	
	own	high protein	None	none	15	39.8	54.3	26.9	44.6	38.2	34.3	
28 29	,	None	brain function	ASC logo	0	46.8	35.2	64.4	42.0	42.2	50.5	
	EU prod.		heart									
30	None own	Omega 3	function heart	none	30	13.4	10.5	8.7	13.4	19.6	15.2	
31 32	country EU prod.	None	function	none	30 15	36.0 35.4	45.7 27.6	24.0 44.2	42.9 35.7	34.3 36.3	32.4 33.3	
	•	Omega 3	None brain	ASC logo								
33	None	high protein	function brain	ASC logo	0	28.6	26.7	31.7	21.4	29.4	34.3	
34	EU prod.	Omega 3	function heart	none	15	22.3	18.1	16.3	21.4	31.4	24.8	
35	Country	None	function	none	0	64.8	74.3	60.6	70.5	55.9 12.7	61.9	
36	None	high protein	None	ASC logo	30	12.9	7.6	23.1	8.0	12.7	13.3	

