DIVERSIFY

New species for EU aquaculture

Deliverable Report

Deliverable No:	D30.5	Delivery Month:		53
Deliverable Title	Project plan for market test and development of marketing strategy			
WP No:	30	WP Lead beneficiary:		
WP Title:	Socioeconomics – Business model and marketing strategy development			
Task No:	30.2.2	Task Lead beneficiary:		
Task Title:	New product marketing strategy development			
Other beneficiaries:				
Status:	Delivered		Expected month:	52
………..				

Lead Scientist preparing the Deliverable: Nijssen, E.J. (TU/e)
Other Scientists participating: Vos, M., Borgh, W. van der (P10. TU/e), Reijnders, M, Haaster-de Winter, M. (P6. DLO).

Objective: New product marketing strategies per species and product: Identification of a set of alternative marketing strategies and selection of the best options for market testing in the selected countries accounting for competitive conditions (drawing on results of the consumer studies and business modelling efforts). These will be used for the test reported in deliverable D30.6.

Deviations: The test was changed from real life to a virtual market test in amendment. It was based on the lack of availability of physical new products of the new species.

Contents

1   Introduction

The general objective of this report was to develop new product marketing strategies per species and product. Specifically, to identify a set of alternative marketing strategies and select the best option for entering the market of the identified target countries. The choice was based on results of the consumer studies and business modelling efforts, particularly deliverables D30.1, D29.6 and D29.8. However, also empirical data from testing parameters of possible market strategies were collected. This will help determine the effectiveness of different marketing instruments and thus help to identify the best options available. Exploration of option was done using systems dynamic modeling (see Section 4). The results of the effort will be reported in the next deliverable, ***D30.6 Report on results of test markets per species***.

Due to the still absence of large scale production of some of the farmed species included in DIVERSIFY and lack of actual products to test in the market place and roll out sequentially, the choice was made to use experiments instead, *e.g.* a virtual, online market test. The decision was motivated by the trend towards online food shopping in the EU, and recent research suggesting that online tests may be a better estimate of real adoption than actual life test market because of customers' more conscious involvement (e.g, Wu and Rangaswamy 2003).

The objective of the virtual, online market test is to study parameters of the market strategies for the new species and their products in a natural competitive setting. Two elements are of particular concern and the focal point of our research:

- First, because consumers are unfamiliar with the new species they may have difficulty categorizing and thus understanding the species and their product(s). By providing marketing cues such as offering customers a referent product (*e.g.* greater amberjack is similar to tuna), this problem can be overcome.
- Second, we like to know whether it is sufficient to promote the products using only the claim of newness or whether it is better to also draw attention to the objective of policy makers to promote farmed fish in order to help prevent overfishing and thus prevent overexploitation of our oceans. Furthermore, we like to explore to what extend consumers are worried about their safety and thus prefer to have a traceability label present. The label also addresses the issue that many retailers are more and more requiring farmers to sell certified fish.

Below we outline the research design of the planned studies. First, we design a preliminary test, *i.e.* experiment to study the effectiveness of offering referent product information to consumers. We introduce the issue of categorization of radical or unfamiliar new products to increase the chance of consumer acceptance, in particular trial. Next, the methodology of the experiment is detailed. Second, we discuss the virtual online market experiment. We begin by explaining decisions regarding the virtual online setting, which relate to the market test's external validity. Next, we present the underlying model used and the experimental design decisions made. The measures and cues, for instance, are discussed. Finally, we explain in more detail the way marketing strategies per country will be developed drawing on the results of our experiments (and prior other deliverables) using a simulation model. Alternative model settings may be explored and provide extra insights.

2 Preliminary categorization experiment

2.1 Overcoming unfamiliarity by adequate framing

Adoption of radically new and thus unfamiliar new products is generally difficult and slow. It is caused by the fact that consumers lack cognitions regarding the new product, but also because they lack a frame of reference (Rosa and Spanjol 2005). Consumers cannot draw on their existing knowledge to make sense of the new product and lack information regarding the categorization of the new product. It can, and generally will, prevent them from buying and even trying the new product. Research shows that the problem is particularly prevalent in case the radical new product is very dissimilar to existing products. Consequently, peripheral changes to a product are more easily evaluated and accepted by consumers than core changes to a design (Zhenfeng, Tripat, and Ying 2015).

New fish species may not be radical in appearance but the fact that the species is unfamiliar to consumers make them difficult to evaluate and thus adopt. For example, consumers will generally lack information in which prototypical category to place a fish. This may hinder adoption and even their decision to try a new species and related product. Offering consumers information about the fish its closest neighbor *i.e.* referent may help overcome this problem. Offering consumers this information will offer the necessary cognitive update and allow for a processing of other marketing information regarding the new product offer. Due to this update and new information, an information anchor is provided and feelings of familiarity can grow more quickly too (compare Rosa and Spanjol 2005).

In this study we explore the need for a referent product to stimulate trial of the new species. We use fish mongers as opinion leaders and informants of consumers. Fish monger are experts and they are a credible source of information.

The hypothesis is that prototypical information facilitates customer cognition and thus understanding what stimulates an initial positive attitude and thus willingness to engage in a trial.

2.2 Method

Design
To study this issue an experiment with a 2 x 2 between subjects design was used: yes/no new label; yes/no referent product. In accordance with D29.7/8 we decided to focus on the most characteristic species for the project *i.e.* greater amberjack and fillets. We assume that the effect of offering extra information regarding the referent species would be important for a less familiar species such as greater amberjack. So, a positive impact on its information on consumers' willingness to buy/try will be anticipated.

In accordance with suggestions made in prior deliverables (e.g., D30.3 and D29.6) and based on the similarity with tuna a similar high positioning will be used in the experiment.[1]

Data collection
We used an online panel (Profile) and select consumers who:
- o are able to prepare a meal

---

[1] In the experiment no prices are displayed/used but we simply inform respondents that the provided options fit their budget.

○ eat fish (products) sometimes or regularly.

As experimental setting we choose the fish monger. As was mentioned, mongers are experts and known to offer good advice to their customers. The setting of the specialty store makes advice by the frontline employee likely and credible.

We will use a total sample size of 400, which leaves us with 100 respondents per experimental group (1 species/product x 4 manipulations x 100= 400 respondents). The test will be done using European consumers and limiting ourselves to a single country in order to control for national culture.

As dependent variable we will use the likelihood of adoption of the new species by consumers in this important channel of distribution. The information regarding percentage of people likely to try the new fish can be used later for marketing strategy simulation regarding diffusion of the product in this important channel. Table 1 offers a brief overview of the experiment and related survey.

Table 1. Description experiment study 1

Task
You are asked to cook a nice meal for your family. The recipe you selected involves fish with a mix of tomato, red peppers, capers, and onion. You now are shopping for a nice fillet at your local fish monger. You just explained him the dish you plan to make and your budget. Based on this information, he suggests 3 options: cod, tuna, or greater amberjack. *(Please include pictures of these 3 products from monger's counter to aid the respondent).*   *[continue]*   Manipulations: Option 1: [no further explanation.] He particularly recommends greater amberjack to you for your dish.   Option 2: He explains that greater amberjack concerns a new species. He very much recommends it to you for your dish.   Option 3: He explains that greater amberjack is a fish similar to tuna in structure and taste. He very much recommends it to you for your dish.   Option 4: He explains that greater amberjack is a new species. It is a fish similar to tuna. He very much recommends it to you for your dish.   Questions: (DVs) (trust of advice; quality rating new species; likeliness of trial).   How much do you appreciate the monger's advice? *1: Very little/ 7: very much*   How believable do you think his information? *Very little/ 7: very much*   How trustworthy is his advice? *1: Very little/ 7: very much*   How helpful do you think this advice: *Very little/ 7: very much*   How attractive do you think this new amberjack species? *1: Very little/ 7: very much*   How appealing do you consider this new amberjack fish? *1: Very low/ 7: very high*   How likely are you to follow the advice and try this new species? *1: Very unlikely/ 7: very likely*

How likely are you to give the new species a chance and purchase it to prepare your recipe?
1: Very unlikely/ 7: very likely

Control questions:
- Before this experiment, had you heard of, or were familiar with greater amberjack†?
  1: very unfamiliar/ 7: very familiar to me
- Is there a species fish you really do not like? _____
- Where do you normally, i.e. mainly shop for fish?
  o At super market
  o At monger (specialty store)
  o At the (open) market
  o other___
- Please respond to the following questions? (innovativeness)
  o In general, I am among the first in my circle of friends to buy a new fish species when it appears *1: Very much disagree/ 7: very much agree.*
  o If I heard that a new product was available in the store, I would be interested enough to buy it. *1: Very much disagree/ 7: very much agree.*
  o I will not buy a new fish product if I haven't tasted/tried it yet. *1: Very much disagree/ 7: very much agree.*

Gender:
  o Male
  o Female

Age: _____(actual age)

Marital status:
  o Married/co-habiting
  o Single, living at parents' home
  o Single, living independently
  o Separated/divorced
  o Widowed

Do you have children?
  o No
  o Yes. If yes, numbers of children below and above 18 years old respectively. Below: ___, above:___

Highest education level:
  o Primary school
  o Secondary school
  o Higher education (not university)
  o University (first degree, BSc)
  o University (higher degree, postgraduate as MSc, PhD)

Household income
  o More than average
  o Average
  o Less than average

2.3 Note on analysis and conceptual framework

In this setting the monger acts as opinion leader and source of information. Opinion leaders negotiate meaning and categorization of radically new products with providers (Rindova and Petkova 2007, Rosa and Spanjol 2005). Because we include multiple dependent variables (DV), *i.e.* people's attitude towards the information of the monger and also towards the new species, we will be able to account for potential mediating mechanisms. Apart from a simple analysis of variance (impact of manipulations between groups) a path model will be explored and estimated.

3 Virtual online experiment

3.1 Market strategy

Firms may use a general or a more targeted approach to launch their new products. The former, general approach involves using a claim of newness to target the masses, and is generally accompanied by a price promotion to temporarily increase consumers' perceived relative advantage. The price promotion is used to reduce cost, but also financial risk. It thus promotes trial. The latter, targeted approach, involves carefully identifying unique selling points (USPs) of the new product (or its underlying [production] technology) and targeting a niche, *i.e.* a specific subset of customers that is particularly likely to appreciate the new products specific properties. Such a niche approach is particularly useful for radical and less familiar new products because it implies focusing on those customers with the highest perceived relative advantage of the new product (Schuhmacher, Kuester, and Hultink 2017, Nijssen 2017). For the DIVERSIFY project's fish species the fact that they are farmed may be considered a potential USP; this production method helps prevent overfishing and thus overexploitation of the seas. It can be leveraged by approaching people that are environmental conscious and who worry about species disappearing and humanity disrupting the oceans. By particularly targeting this segment or niche inroads can be made and the launch made more successfully.

The mass, mainstream market entry, based using a regular claim of newness and price discount, will be compared with the niche approach focused on the above identified USP of consumers' helping save the environment, and accounting for two different mediating mechanisms. People attracted by the claim of newness will be innovative consumers who like to try the new fish species. They appreciate new things and variety, and will be curious to try the new alternative, particularly when promoted using a price discount. In contrast, those influenced by the niche approach like to protect the environment (avoid overexploitation of the seas and tuna becoming extinct). The communication cues involved will affect their feelings of guilt. These two mediating mechanisms will be studied and compared in order to identify the best way of market entry/launch. As an extra independent variable, we will account for consumers concerns of food safety by including a traceability label. EU is promoting traceability to enhance consumer feelings of safety and control. This will be done for all 5 target countries.

Figure 1 shows the conceptual framework related to the design. Note that the country dimension is not shown in the figure. Also note that drawing on results of study 1 (see above) we will include a reference product in the online description of greater amberjack.

We expect multiple routes that consumers can adopt a new product. Innovative consumers are most likely to adopt. However, the cues that we vary in our experiment appeal to certain, unique mechanisms for adoption. We summarize our main <u>hypotheses</u>:

- A price discount will activate a consumer's price proneness, which will fuel the willingness to try the new species.
- A traceability label will activate a consumer's safety concern, which will fuel the willingness to try the new species.
- An environmental cue/claim will activate a consumer's anticipated guilt, which will fuel the willingness to try the new species.
- The above paths will be positively moderated by norms of environmental concern and product/promotion norms of the consumer.
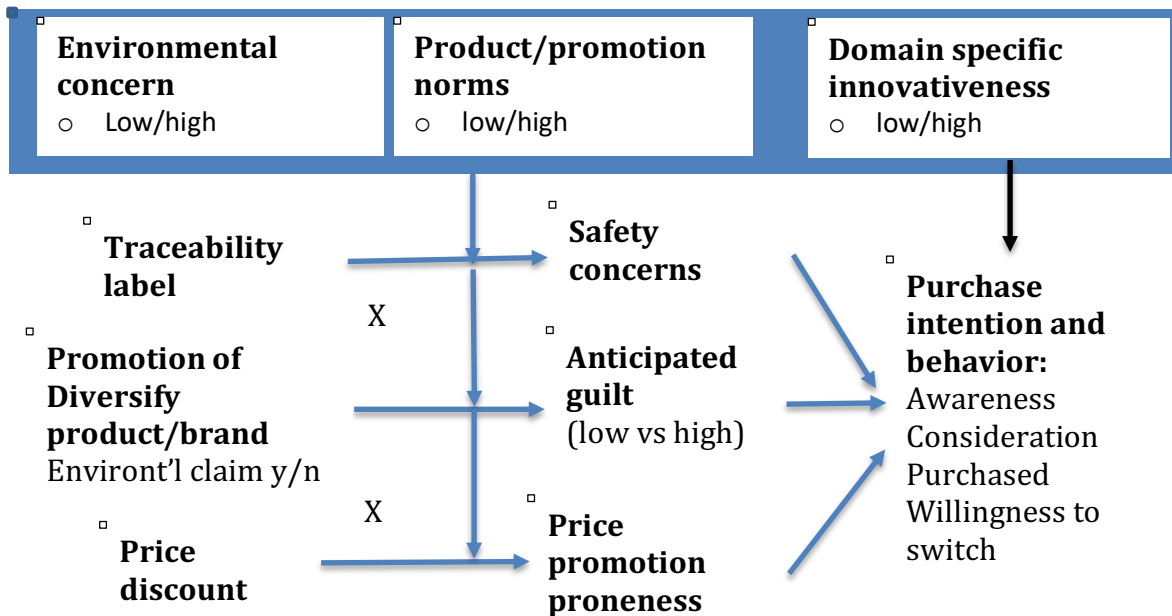
Figure 1. Conceptual framework
Note: X refers to interactions between independent variables/manipulations

The experiment will help uncover which innovation path and cues are best used and appealed to. In the analyses we will also account for interactions between the main effects (see Xs in **Figure 1**). Again, we select a high product positioning for our new species (*e.g.* in accord with D30.3, D29.6) by informing the respondents in advance that prices are similar for the species shown.

3.2   Method

<u>Design</u>
For the research we will use a 2 x 2 x 2 between subjects experimental design. It includes: promotional claim (yes/no environmental claim), price discount (no/yes 15%), and traceability label (yes/no).

In accordance with D29.7 and 8 we will again focus on the most characteristic species for the project *i.e.* greater amberjack. We will use fillets as product for the market test. This product had the best customer evaluations (see D29.7).

DVs: Several dependent variables will be used referring to different stages of consumer engagement: (i) awareness of the Diversify product/species; (ii) consideration of the Diversify product/species, (iii) actual buying of Diversity products/species. And, finally, (iv) the willingness to reconsider/switch after additional information about Diversity project is provided.

Sample
The study will involve respondents of all 5 target markets as mentioned in the DOW: UK, F(rance), S(pain), I(taly), and G(ermany). This accounts for the fact that prior research found "Significant differences across Member States … with respect to preparation skills and the use of quality cues" (Eumofa 2017, p. 4).

Respondents of each country need to meet some criteria to make the experiment meaningful. The prequalification can mimic that of previous experiments for the Diversify project, but will be detailed below for matters of completeness (see Table 2).

In total 1,500 respondents will be included in the study, i.e. 300 respondents per country divided in 8 groups/manipulations, i.e. 300/8 = 37-38 per group.

The aim is to balance the sample and thus to ensure that people with different demographic profiles are evenly distributed across manipulation groups/conditions. A random allocation of respondents to treatment groups can be used, but the effect on accomplishing this goal should be implemented.

Data will be collected by a professional agency (P38. HRH).

Table 2. Prequalification criteria for respondents Study 2

1. How often do you eat fish? (prequalify)   o never/seldom, → exclude: never/seldom   o sometimes,   o regularly,   o often   2. How often do you consume fish products? (prequalify)   o never/seldom, → exclude: never   o sometimes,   o regularly,   o often   3. Do grocery shopping for their household? (prequalify)   o never, → exclude: never   o sometimes,   o regularly/often   4. Do you have experience buying things online in past 12 months (please refer to purchases of e.g. books, hotel, groceries, electronics) (prequalify)   o none, → exclude: no/none

- o some,
- o much

3.3 Specification virtual online store setting

Store setting
The research/online setting will focus on a national supermarket channel. Supermarkets are the dominant sales channel for consumers in the considered target markets, holding some 2/3 market share in, for example, Spain, France, and Germany (Eumofa 2017). Moreover, its share has steadily increased overtime. This setting is meant to offer respondents a trusted shopping environment. Trust is a key in people's shopping experience and an important mediator between web presence and purchase intention (Hassanein and Head 2007). The focus will be on the supermarket's (fresh) fish category to present and thus launch the new product in competitive setting.

We will focus the experiment on the most characteristic species of the project, *i.e.* greater amberjack. For matters of simplification and preventing overrepresentation in the online setting, we select a single species and product, *i.e.* fillets (**Figure 2**).

Figure 2. Greater amberjack fillets

Localization
We will use a single online national store-theme. It will be localized using some elements to create a believable national setting. This will include:
- Use of local language,
- Selection across the 5 countries of products and species that fit all 5 countries (based on a review of these countries' national retailers' online stores). By matching products and species carefully across the 5 target countries comparison in setting will be secured.

To prevent mistakes a reality-check will be performed for each target country; several pretests will be performed to ensure correct /clear wording and a good flow of the experiment/questionnaire. To coordinate between countries and ensure proper implementation we will begin with the GB master version that then will be developed in to national versions for the other (target) counties involved.

Category visuals and store layout/navigation requirements
- The context will consist of two central pages. Page 1: Show fish category of retailer with approximately 10-12 products. It should include a variety of species and processed products. The aim is to present respondents with a realistic online store context (fish category) and to get respondents in choice mode/mood. This page will have limited navigation options;
    i. Vertical should be displayed but fixed (not operational) accept for option "fillets" (see below). The options shown c/should include: fillets, processed products, and then types of fish (salmon, sea bass, cod, tuna, other species).
    ii. Horizontal should be operational. The options should include: i) on sale, ii) new, iii) traceability labels (related to our manipulations). Here whole fish and processed products can be displayed, i.e. products that do not compete with our focal product. If experimental conditions meet one of the criteria greater amberjack fillets will also be shown (e.g. if manipulation= discount, then show greater amberjack fillets on click when choosing option "on sale")
- Our product, i.e. greater amberjack fillets will be displayed on first page as one of the 10-12 products with label NEW.
- Pictures and descriptions for fish products will be placed in folder/Dropbox and will be collected from national retailers' sites per country. Pictures will have adequate quality (minimal 500 x 500 pixels).
- On page 2 the greater amberjack fillets will appear with the competing species i.e. fillets. The presentation of these products will be randomized, shown in random order. This will reduce location /presentation bias.

Table 3 offers a brief description and detailing of the online, virtual retail store experiment.

Table 3. Description experiment study 2

Description of the Experiment
Setting (Instructions for creating **page 1):** **For the layout and feel of page 1 see example below. The cues in horizontal navigation options should be varied in accord with manipulations of the experimental group.** For instructions/details of manipulation per group see Table 4 below. To prevent influence of price, no prices will be shown and similar amounts of fish per portion will be communicated: 300 gr. Pictures will display the fillets in similar packaging materials.

Functionality of the website. **Only offer extra click option on 3 horizontal navigation options: on sale today, new, and traceability.** While the first two are dependent on manipulation the latter is fixed (for content 'traceability' button please see Appendix A). After clicking horizontal options a deeper/extra page should appear providing more details

Content for "on sale today" and "new" please show several products that do not interfere with tasks 2 (so no fillets except if greater amberjack under option 'new' next to some other processed products with label new, and under 'on sale'—but only show greater amberjack here (with some other processed products) if in deed promotion -15% is yes.).

From the vertical navigation only option "fillets" will work.
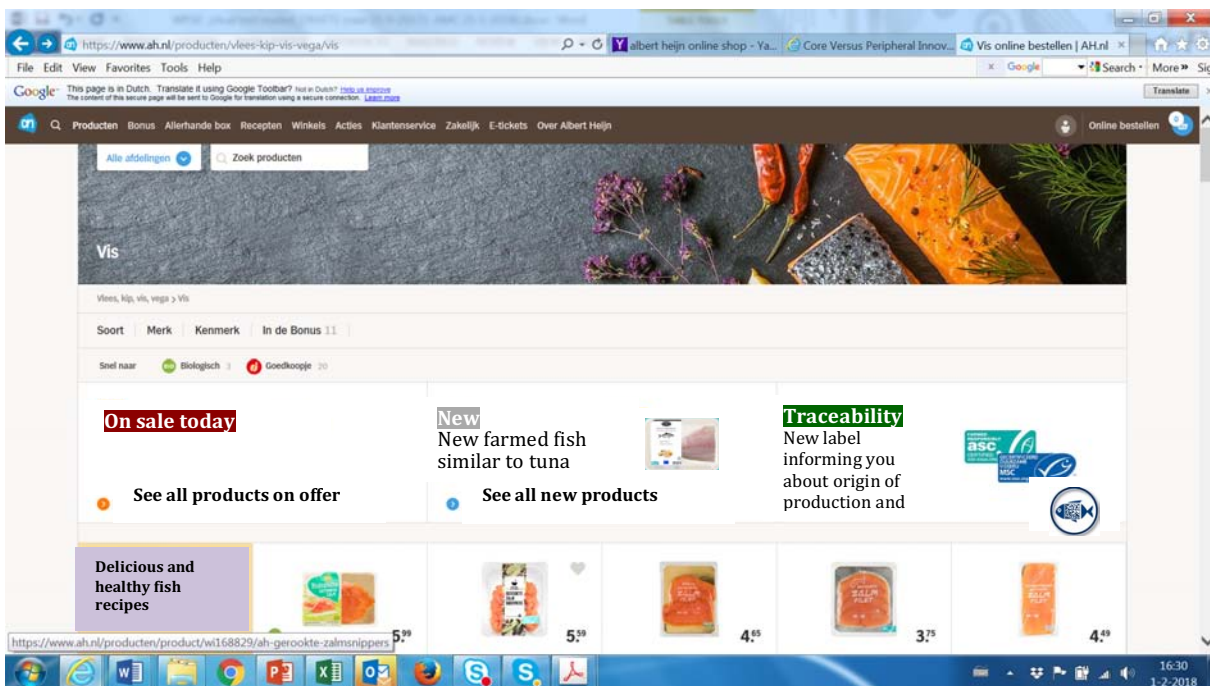
Please include on this first page 10-12 products including a full range of products, i.e. some fillets of fish (listed below) and several processed products, e.g. smoked, fish fingers, shrimp etc. Scrolling down respondents should see all 10-12 (or more) products covering the fish category of the (imaginary) retailer. Pictures will be provided.

Task 1

You are planning to cook a delicious meal for your family, and you like to surprise them. You are thinking about a recipe with fresh fish. You found this website of a large national retailer; and landed on its fish category.

Please look at the website for a minute and then tell us what you think. Please note that some but not all navigation options are functional yet. After 2 minutes we will ask you to answer some brief questions about this website and retailer.

Question after task 1 (check on realistic setting)

How do you feel about the website? (Hassanein and Head 2007) *1=completely disagree; 7=completely agree*

…I would have positive feelings towards buying a product from this site
…The thought of buying a product from this website is appealing to me
…It would be a good idea to buy a product from this website

Task 2
We now return to your goal of planning to cook a delicious meal for your family. The recipe you are thinking of involves fresh fish and vegetables. You now are shopping for a nice fillet of fish. ***Please select the option "fillets" on the left hand side of the page (i.e. from the vertical navigation list) and make your choice from the set of 5 products presented there.*** Please assume that all products are similar in price and fit your budget.

Please select the fish for your dinner from the website. After that we will again you some brief questions.

<u>Page 2</u> Show all options, including picture and brief info per species/product. Show horizontally, next to each other on single page/screen. Please <u>randomize the location</u> of these products across respondents.

Cod (Bacajauw);
Tuna;
Sea bass;
Salmon; <u>and</u>

Greater amberjack (manipulations: yes/no 'farmed fish that helps to prevent overexploitation of the seas, yes/no price discount 15%; yes /no traceability label)

Table 4 provides an overview of all experimental conditions of our experiment.

Table 4. Detailing of manipulation cues per experimental group study 2

Environ't claim	*price* 15% discount	*Traceable*	*Instruction*
y	n	n	- Page New NEW! : show greater amberjack. - Page On sales: don't show greater amberjack on this page - Detailed product info: new farmed fish similar to tuna; Buying farmed greater amberjack offers you the opportunity to help prevent overfishing and help save our seas
y	y	n	- Page New: NEW! show greater amberjack. add discount logo

			- Page On sales: yes, show greater amberjack on this page with discount label
			- Detailed product info: new farmed fish similar to tuna, Buying farmed greater amberjack offers you the opportunity to help prevent overfishing and help save our seas and discount label
y	n	y	- Page New: show greater amberjack; add traceability logo - Page On sales: don't show greater amberjack on this page
			- Detailed product info: new farmed fish similar to tuna, Buying farmed greater amberjack offers you the opportunity to help prevent overfishing and help save our seas, and traceability label
y	y	y	- Page New: show greater amberjack; add discount and traceability logo - Page On sales: yes, show greater amberjack on this page. Add discount label and traceability logo -
			- Detailed product info: new farmed fish similar to tuna; Buying farmed fish helps prevent overfishing our seas; price discount and traceability labels. Add discount label and traceability logo
n	y	n	- Page New: show greater amberjack; add discount logo - Page On sales: yes, show greater amberjack on this page
			- Detailed product info: new farmed fish similar to tuna, discount label
n	y	y	- Page New: show greater amberjack; add discount logo - Page On sales: yes, show greater amberjack on this page, add traceability label
			- Detailed product info: new farmed fish similar to tuna; price discount and traceability labels
n	n	y	- Page New: show greater amberjack; add traceability logo - Page On sales: don't show greater amberjack on this page
			- Detailed product info: new farmed fish similar to tuna; and traceability label
n	n	n	- Page New: show greater amberjack - On sales: don't show greater amberjack on this page

			- Detailed product info: new farmed fish similar to tuna

3.4 Measures

The survey is complemented with a brief survey through which data is collected for the remaining constructs of our model and controls. Most measures for these constructs were borrowed from the extent literature. For matters of conciseness sometimes a selection of items per scale was made.

The dependent measures for awareness, consideration and willingness to buy used 4, 3, and 2 items respectively and were based on the extent branding and adoption literature (e.g., Hassanein and Head 2007, Vitell, Rallapalli, and Sinhapakdi 1993).

The independent constructs of environmental concern, and innovativeness were measured using scales adopted from Kilbourne, Beckmann, and Thelen (2002) and Goldsmidt and Hofacker (1991) and consist of 5 and 5 (selected items) respectively. The scale for Product/promotion norms was borrowed from Vitell, Rallapalli, and Sinhapakdi (1993) and used 4 items. Anticipated Guilt was measured using 3 items and draws on Dahl, Honea, and Manchanda (2005). The measures for Safety concern and Price promotion proneness were developed for this study and consisted of 3 and 4 items respectively

Appendix B shows an overview of the measures and set up for the questionnaire.

4   Summary and comments regarding simulations of marketing strategies

This report discusses the plan for developing and detailing marketing strategies for the new species and their products of the DIVERSIFY project. In the absence of actual products of the farmed species the real-life market test was substituted by a virtual one. Focusing on the most prototypical species, i.e. Greater amberjack, and the product of fillets, two experiments were designed.

In the first experiment the importance of offering consumers extra information about a new fish species is studied. While some consumers may be triggered by the label new, others may require more information in order to be convincing to try a new alternative on the market. Drawing on prior research on adoption of radical new products and extension of product categories we explored the need for customers for a referent product (*i.e.* which is the closest neighbor of the new product). We chose the setting of the fish monger store and the fish monger offering advice and information about the species.

The second experiment involves an online store of a virtual national retailer. In this second experiment the effects of price discount, traceability label and communication of referent product will be studied simultaneously. The experiment will be performed in all five target countries, *i.e.* UK, France, Italy, Spain and Germany. By focusing on online context, we begin to explore the potential of using the innovative new channel. It complements the setting of the first experiment that focuses on fish mongers.

While the two experiments will offer interesting results in their own right that practitioners can use in their marketing decisions for their new species and products, it also offers information for detailing

the marketing strategy for our focal species and the fillets that are derived from it. Specifically, the experiments will offer information on the following variables:

- Impact of discounting
- Trial rate in supermarket and monger channels
- Impact of traceability logo
- Need for promotion/communication, in particular actively offering referent information

This information will complement prior insights from previous deliverables on advertising message effectiveness and price levels/price sensitivity. This information will be used as parameter settings to specify the marketing strategies for the species and simulate diffusion of the species in the market over time, i.e. per country via the monger and supermarket channels.

For this simulation we selected a model that will be used for this purpose. The model is shown in **Figure 3**. It will be made context specific and adapted for our purposes. Particularly interesting is that the model accounts for the link between production and market launch; that is, a full-fledged launch can only take place if production can keep up. Otherwise, a more targeted, *i.e.* selective approach will be required.

As was mentioned, for each target country we will estimate a model using the country's unique parameter settings that come from the previously described experiments. Where necessary the settings will be complemented with information of prior deliverables (e.g. on price levels /sensitivity, *i.e.* D29.6). The outcomes of the simulations will show the effectiveness of the market strategy emphasizing the selected quality positioning of the product/species. Specifically, it will help understand the effect of the <u>interplay of variables and mechanisms</u> studied in the experiments for each country, i.e. market.

Using sensitivity analyses the impact of changes in assumptions can and will be explored. It can help producers/farmers and their partners gain insight into the market potential and best option for launching their species. A <u>key assumption</u> in these simulations will be the <u>level and reliability of production</u>. If farming remains problematic this means that production levels are low or unreliable. Both will prevent targeting the mass market. Without enough produce or the chance of not being able to deliver on promise the retail channel will be unlikely to collaborate and roll out the product to its customers. Then mongers and restaurants could be targeted instead. However, if production output is not a problem then a full, mass market approach may be considered and used. Our simulations aim to account for these different assumptions and scenarios and their effect on outcomes.

Finally, based on the simulation results we will be able to offer advice to farmers as to which market to target first (and how, *i.e.* with what kind of marketing mix), and which to approach next.
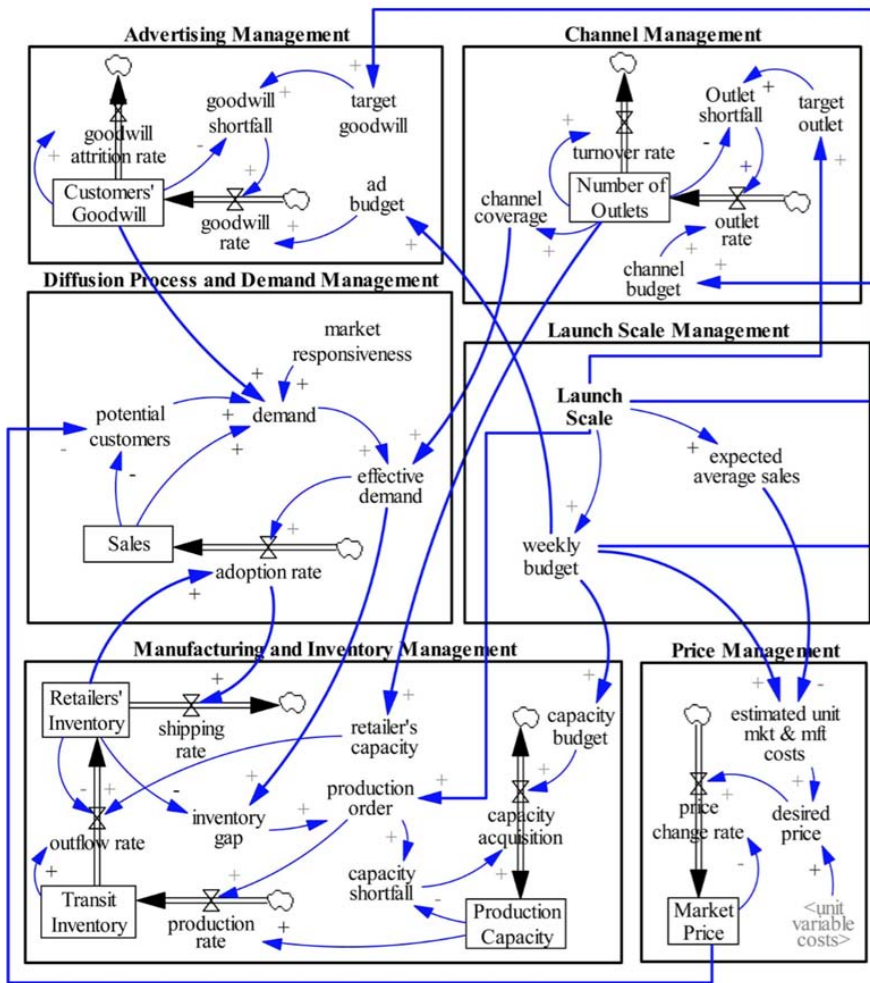
Figure 3. System dynamics model for exploring marketing strategy and its effects (Cui, Zhao, and Ravichandran, 2011).

5   References

Albert Heijn. www.ah.nl/vlees-kip-vis-vega/vis. Accessed 14-2-2018.

Cui, A. S., Zhao, M., & Ravichandran, T. (2011). Market uncertainty and dynamic new product launch strategies: a system dynamics model. *IEEE Transactions on Engineering Management*, 58(3), 530-550.

Dahl, D. W., Honea, H. and Manchanda, R. V. (2005), Three Rs of Interpersonal Consumer Guilt: Relationship, Reciprocity, Reparation. *Journal of Consumer Psychology*, 15, 307–315.

EUMOFA (2017). *EU Consumer habits regarding fishery and aquaculture products* - FINAL REPORT, January 2017. WWW.EUMOFA.EU.

Goldsmidt R.A. and Hofacker C.F. (1991) Measuring consumer innovativeness, *Journal of the Academy of Marketing Science*, 19(3), 209–221.

Hassanein, K. and M. Head (2007) Manipulating perceived social presence through the web interface and its impact on attitude towards online shopping, *International Journal of Human-Computer Studies*, 65(8), 689-708.

Kilbourne, W.E., Beckmann S.C., Thelen, E. (2002) The role of the dominant social paradigm in environmental attitudes: a multinational examination, Journal of Business Research, 55(3), 193-204.

Nijssen, E.J. (2017) *Effectual marketing, an effectual approach*, Routledge, 2nd edition.

Rindova, V.P. and Petkova, A.P., (2007) When Is a New Thing a Good Thing? Technological Change, Product Form Design, and Perceptions of Value for Product Innovations, *Organization Science*, 18(2), March–April 2007, 217–232

Rosa, J. A., and Spanjol, J. (2005). Micro-level product-market dynamics: shared knowledge and its relationship to market development. *Journal of the Academy of Marketing Science*, 33(2), 197-216.

Schuhmacher, M. C. Kuester, S. and Hultink E.J. (2017) Appetizer or Main Course: Early Market vs. Majority Market Go-to-Market Strategies for Radical Innovations, Journal of Product Innovation Management, 35(1):106–124.

Vitell, S.J. Rallapalli, K.C., and Sinhapakdi,A. (1993) Marketing Norms: The Influence of Personal Moral Philosophies and Organizational Ethical Culture, *Journal of the Academy of Marketing Science*, 21(4), 331-37.

Wu J. and Rangaswamy, A. (2003). A Fuzzy Set Model of Search and Consideration with an Application to an Online Market, *Marketing Science*, 22(3), 411-434

Zhenfeng M, Tripat G, and Ying J. (2015) Core Versus Peripheral Innovations: The Effect of Innovation Locus on Consumer Adoption of New Products. *Journal of Marketing Research*, 52(3), 309-324.

APPENDIX A
Example of screen shot for first page (sample based on website of national retailer Albert Heijn, Netherlands).

It shows the use of discount label as well as atmosphere and detailed product information level sought.
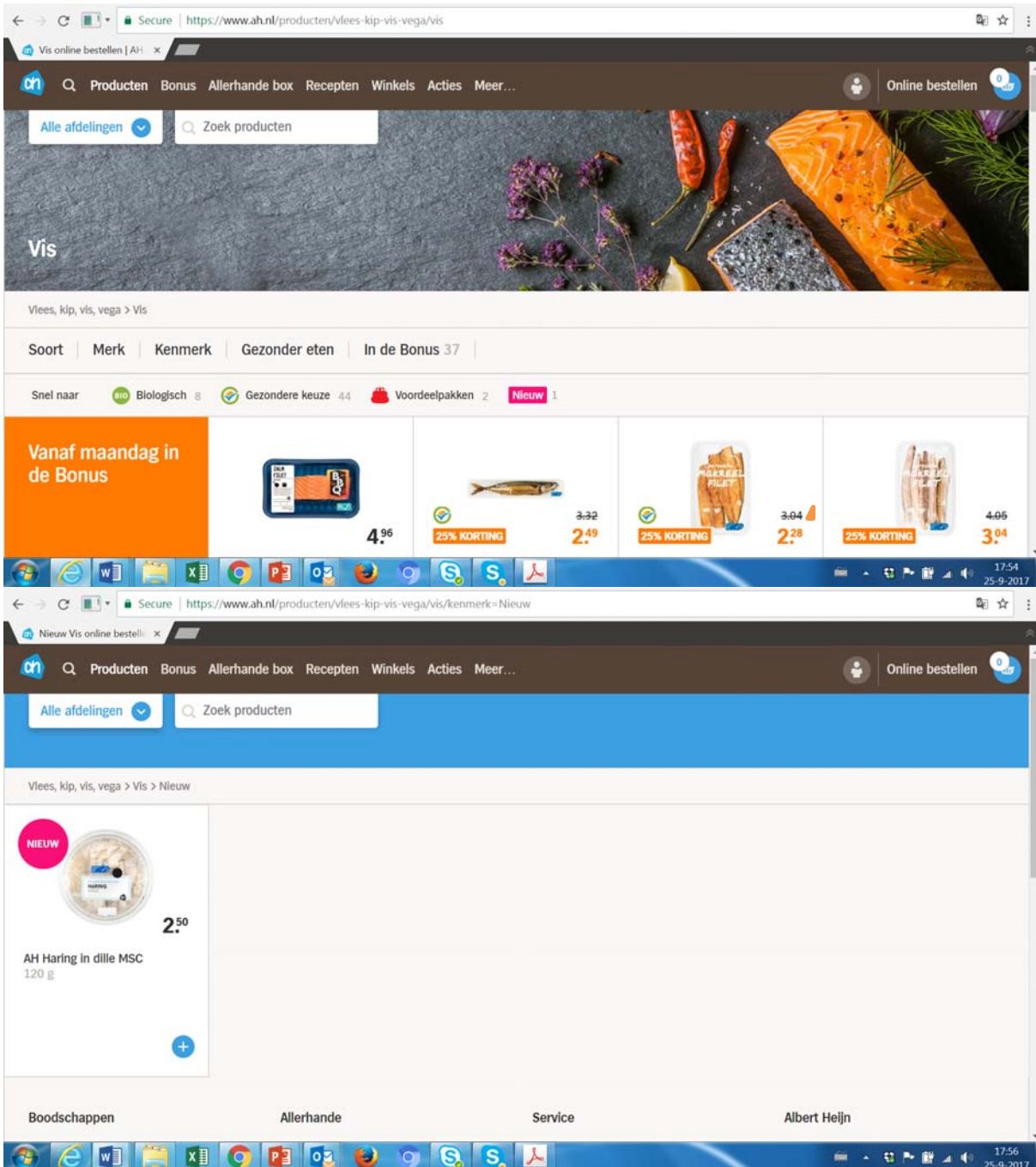
APPENDIX B

Page for traceability information for experiment; To be presented on deeper page, which could like this:

The MSC label
This label you can find on wild catch. It means that the fish was caught in a sustainable manner. It refers to fishing that limits damage to the environment and that prevents overfishing of the sea.

The ASC label
This label shows that the farmed fish you buy is produced by producers with minimal impact on water, environment and nature. They take excellent care of their life stock, employees, and people living close to these production sites.

The e-locate label
EU label that makes specific stipulations regarding traceability information for fish and aquaculture products. It requires all products can be traced back at all stages of production, processing and distribution, from catching or harvesting, to sale to the final customers. It ensures accuracy and authenticity of information.

Note the information from first to labels is based on Albert Heijn website, The Netherlands. The information for 3rd label was borrowed from EU website –see below:

The e-LOCATE Fish Traceability Framework

The European regulations, EC 1224/2009 and EC 404/2011, make specific stipulations regarding the capturing and sharing of traceability information for fish and aquaculture products. The regulations require that all lots of fisheries products are traceable at all stages of production, processing and distribution, from catching or harvesting, to sale to the final consumer. This requirement places particular demands on the way product is handled, packaged, stored, sold and processed, right along the supply chain, from the fishing vessel to the end consumer, to ensure the accuracy and authenticity of the information.