Using the Theory of Planned Behaviour to Understand the Ethical Purchasing Gap of Sustainable Seafood Consumption in the UK.

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Abstract

The sustainable seafood movement has the potential of reversing the current trends of seafood consumption which are leading toward a global breakdown of seafood species. A series of initiatives have been created to cultivate interest in consumption of sustainable seafood. However, research indicates that consumers' intention to purchase sustainable seafood does not always translate into actual purchase behaviour, which creates an Ethical Purchasing Gap (EPG). The Theory of Planned Behaviour (TPB) is used to identify affordability, lack of awareness of sustainability, lack of knowledge and confidence in cooking as key barriers and awareness of sustainability, attitudes and preferences toward fresh seafood as key drivers for consumption of sustainable seafood. Findings also reveal that a favourable attitude toward sustainable seafood can increase consumption of sustainable seafood while understanding of the 'sustainable seafood' concept and knowledge of sustainable seafood availability does not necessarily increase consumption of sustainable seafood.

Key words: Sustainable Seafood; Theory of Planned Behaviour; Ethical Purchasing Gap; Drivers; Barriers.

Track: Food Marketing

1.0 Background

Decline in seafood species, damage to the oceans' physical environment, overfishing, and by-catch have all contributed to the decline in fish stocks (Carrell 2013; Harvey 2013; Ocean Wise 2013). It has been reported that the current trends in seafood consumption will lead to a global breakdown of seafood species by 2048 (Branson 2013; MCS UK 2013). Government agencies as well as some industry players have already provided a series of initiatives to educate consumers about availability and the importance of consumption of sustainable seafood. However, despite the aforementioned efforts, the consumption of responsibly sourced seafood is not guaranteed. Research suggests that even when the consumer is knowledgeable about the benefits of a specific behaviour and exhibits intent to act upon that behaviour, the purchasing act may not occur due to a phenomenon called the 'Ethical Purchasing Gap' (Nicholls and Lee 2006; Moraes et al. 2012). This phenomenon is the outcome of the disparity between consumers' intent to purchase and the actual purchase act.

The purpose of this study is to identify key drivers and barriers of sustainable seafood consumption in order to then identify approaches which will facilitate the closure of the EPG between purchase intention and actual consumption of sustainable seafood in the UK.

2.0 Sustainable Seafood Consumption

Consumption of sustainable seafood is becoming more and more popular as consumers become more focused on preserving the environment and diversifying their source of protein (APJ 2005; Reese 2013). Indeed, according to a report published by Mintel (2010), there are 16 million UK consumers who consider consumption of sustainable seafood as an important behaviour.

Environmental movement agencies, the seafood industry and the UK's government are turning to this market-driven cause for assistance in creating initiatives to encourage sustainable seafood consumption and sustainable fishing practices (Konefal 2013). According to Reese (2013), sustainable seafood initiatives can engage consumers by empowering them to shape the world with food choices. These initiatives include eco- labelling, certifications, and TV shows, to name just a few.

However, despite reports of the success of sustainable seafood initiatives, UK consumers do not always follow through with their intent to purchase sustainable seafood. Moreover, a survey conducted in 2009 states that sustainable seafood is last on the list of consumers' environmental concerns (The Grocer 2009). The survey found that 43% of the UK consumers had not considered purchasing alternative or sustainable seafood, while further 10% of consumers had consciously rejected commitment to such purchases (The Grocer 2009). Additionally, according to a report by Mintel (2010), two in five households find consumption of alternative seafood appealing, however, they do not purchase it due to lack of knowledge of which species are underutilised and where to purchase such species.

3.0 Drivers and Barriers to Sustainable Seafood Consumption

Previous studies have identified some of the drivers for sustainable seafood consumption as being flavour, convenience, diet variety, quality, health benefits, as well as positive attitude toward and familiarity with the product (Birch and Lawley 2014; Pieniak et al. 2013). Additionally, key drivers such as awareness of the sustainable seafood concept and cooking knowledge can help increase levels of consumption (Kemmerly and Macfarlane 2009; Fitzpatrick 2014).

Some of the key barriers to consumption of sustainable seafood have been identified as lack of preparation knowledge, inability to identify seafood varieties, lack of accessibility to seafood varieties, smell, taste, packaging, and lack of familiarity (Altintzoglou et al. 2010; Birch and Lawley 2014; Mayer 2014) . Negative attitude and affordability have also been identified as key barriers to sustainable seafood consumption (Kemmerly and Macfarlane 2009; Birch et al. 2012).

This study aims to identify key drivers and barriers of sustainable seafood consumption in the UK and understand their impact on the EPG.

4.0 Research Questions and Hypotheses

The first aim of this study is to identify the key drivers and barriers to sustainable seafood consumption in the UK. The second aim is to examine UK consumers' attitude towards, awareness of, and consumption habit of sustainable seafood. Therefore the following questions and hypotheses are put forward:

RQ 1: What are the drivers and barriers of sustainable seafood consumption in the UK?

RQ 2: What are UK consumers' attitudes toward, awareness of, and consumption habits of alternative and more sustainable seafood products?

RQ 3: How can the Ethical Purchasing Gap between purchase intention and actual consumption of sustainable seafood in the UK be reduced?

RH 1: A favourable attitude toward sustainable seafood will increase consumption of sustainable seafood.

RH 2: Understanding of the concept of 'sustainable seafood' will increase consumption of sustainable seafood.

RH 3: Ready availability of sustainable seafood will increase consumption of sustainable seafood.

RH 4: Knowledge of sustainable seafood availability in a grocery store will increase consumption of sustainable seafood.

5.0 Methodology

An in-depth interview was conducted with 13 individual grocery shoppers in Bournemouth, UK. Respondents were screened to ensure they were over 18 years of age and were the main/joint grocery shopper in their household. Out of the 13 interviewees, 11 were female and two were male, the gender difference is supported by research which reports that over 70 percent of grocery shoppers in the UK are female (Bignell 2013; Key Note 2008). The interview contained open ended questions related to sustainable seafood consumption habits, attitudes towards and awareness of sustainable seafood. Results were analysed by comparing and dividing the answers into appropriate themes and sub-themes. Once the data was organized it was analysed through the use of three key constructs from the Theory of Planned Behaviour which are attitude, subjective norms, and perceived behavioural control in order to identify links between beliefs and behaviour.

Surveys were administered to 152 respondents at the Castlepoint Shopping Centre in Bournemouth, UK. Of these respondents, 57% were female and 43% were male. The majority of the respondents (29%) were in the 60-69 age group, 25% were 70 plus, 24% were aged 50-59, 15% were aged 40-49, 4% were aged 25-29, 2% were aged18-24, and 1% were aged 30-39. Questions aimed at finding out the frequency of consumption, species consumed, awareness of sustainability concept, and drivers and barriers to consumption of sustainable seafood. Answers

were measured by using either a Likert scale method (strongly agree-strongly disagree, always – never) or by providing the respondent with a multiple choice answer.

6.0 Analysis and Results

All interviewees (n = 13) and several survey respondents indicate that price (affordability) is the main barrier to consumption of sustainable seafood. Interviewee 11 indicates that "you can't really have sustainable seafood without an increase in price" and "not everyone can afford it". Lack of understanding of the sustainable seafood concept is another key barrier to enabling higher levels of its consumption. Four interviewees do not know what the term means, with Interviewee 9 stating that "to be honest it doesn't mean anything to me, I don't know what it is," and Interviewee 12 admitting that "maybe if I knew what it meant I would buy more of it". Survey results also indicate that consumers either don't understand (16%) or are unclear (17%) about the meaning of the term. Another key barrier to a higher level of sustainable seafood consumption is the lack of preparation and cooking knowledge, as indicated by 5 of the interviewees. For instance, Interviewee 1 and 2 state the following, respectively:

> "I can only cook it if I have recipes or a friend or somebody from my family explains to me how to prepare it. Since I don't have recipes and seafood is not something that I talk about with people, I don't cook it very often."

In contrast, a major driver for the consumption of sustainable seafood in the UK is the awareness of the importance of sustainability and preservation of seafood itself. Another key driver of the consumption of sustainable seafood in the UK is the attitude and preference toward fresh seafood. Interviewee 2, 6, 9, and 11 take time to find fresh seafood and are willing to pay premium.

UK consumers hold a favourable attitude toward sustainable seafood consumption as indicated in the findings of the in-depth interviews and the survey. Over a third (36%) of the respondents indicate that it is *very important* for them to purchase sustainable seafood, about one third (34%) indicate that it is *important*, while another one-fifth (22%) indicate that it is *moderately important*. Additionally, when respondents were asked "If sustainable options are available, how often do you choose it", almost half (49%) report *always*, and another 16% report *very frequently*. Less than one-third (29%) of respondents report choosing sustainable seafood *occasionally* when it is available, while very few report *rarely* (5%) or *never* (2%).

The awareness of sustainable seafood is important as it provides the initial interest in or a potential purchase of sustainable seafood. About two-thirds (67%) of the respondents demonstrate understanding of the meaning of the term 'sustainable seafood'. However, 16% and 17% of the respondents *don't understand* or are *unclear* about the term, respectively.

With respect to consumption habits of alternative and more sustainable seafood products, just over half (51%) of the respondents indicate that they do try unfamiliar species, while almost half (49%) say that they do not try alternative seafood.

The majority (92%) of the respondents and all interviewees (n=13) display a positive attitude toward sustainable seafood consumption. Furthermore, 93% of the respondents show intent to purchase sustainable seafood. Consequently, based on the cross-examination of the positive attitude toward sustainable seafood consumption and the intent to purchase sustainable seafood (Table 2), it is evident that these two factors can help reduce the EPG in consumption of sustainable seafood in the UK.

Table 2 - The relationship between the importance of purchase of sustainable seafood and the frequency of choosing sustainable seafood if it is available.

How important is it that the seafood you purchase is sustainable?	If sustainable options are available, how often do you choose it?					Total
	Always	*Very Frequently*	*Occasionally*	*Rarely*	*Never*	
Count	39	7	9	0	0	55
% within *very important*	70.9%	12.7%	16.4%	0.0%	0.0%	100.0%
Count	24	11	13	3	0	51
% within *important*	47.1%	21.6%	25.5%	5.9%	0.0%	100.0%
Count	9	4	18	2	1	34
% within *moderately important*	26.5%	11.8%	52.9%	5.9%	2.9%	100.0%
Count	2	2	3	2	1	10
% within *of little importance*	20.0%	20.0%	30.0%	20.0%	10.0%	100.0%
Count	0	0	1	0	1	2
% within *unimportant*	0.0%	0.0%	50.0%	0.0%	50.0%	100.0%
Total Count	74	24	44	7	3	152
% of Total	48.7%	15.8%	28.9%	4.6%	2.0%	100.0%

The one-way ANOVA was used to determine if there are any substantial differences between the means of independent groups, based on the answered questions from the survey, “How important it is that the seafood you purchase is sustainable?” and “If sustainable is always available, how often do you choose it?”. A statistically significant difference was found between importance groups ($F(4,147) = 11.381$, $p = 0.00$) indicating that the higher the importance of sustainable seafood as the choice of purchase, the higher is the probability of sustainable seafood being chosen when it is available.

Table 3 – Importance of sustainable seafood purchase across likelihood of choosing sustainable seafood.

	Likelihood of purchasing sustainable seafood if it is available (Mean)		
Importance of purchasing sustainable seafood	*Very rarely-never*	*Occasionally-rarely*	*Always-very frequently*
Very important			5.5[c]
Important		5.1[b]	5.1[b]
Moderately important		4.5[b]	4.5[b]
Of little importance		4.1[b]	
Unimportant	2.5[a]		

(6-point scale: 6= *Always* to 1=*Never*)
ANOVA F-tests with corresponding p-value.
Different letters (a, b, c) indicate significantly different means using post hoc Tukey B tests.

An independent sample T-test was conducted to investigate the connection between understanding and purchase of sustainable seafood. Results of this test indicates that there is no significant difference between the two groups, indicating no association between understanding of the term ‘sustainable seafood’ and likelihood of sustainable seafood being purchased if available.

A non-parametric test (Mann Whitney U) was conducted, showing that the distribution of the frequency of seafood consumption is the same across categories of the likelihood of the consumer to purchase sustainable seafood (Sig.=0.71). As such, availability of sustainable seafood does not directly increase its consumption. The aforementioned results suggest that other aspects, such as

attitude, preference, etc., could carry greater influence on the frequency of sustainable seafood consumption.

Furthermore, one-way ANOVA test indicates that the knowledge as to whether or not one's grocery store provides sustainable seafood has no bearing on the likelihood of it being purchased if it is available (Sig.=0.23). The findings suggest that there is no direct relationship between knowledge of sustainable seafood availability in ones' grocery store and higher levels of purchase intention. The intent of sustainable seafood purchase remains relatively high regardless of consumers' knowledge, or lack thereof, of its availability in consumers' grocery store.

Overall this analysis resulted in support for RH1 and rejection for RH2, RH3, RH4. Further investigation is suggested in order to gather a more in-depth understanding of relationship between above mentioned factors and an increase in consumption of sustainable seafood.

7.0 Conclusions

The aim of this research was to identify drivers and barriers to sustainable seafood consumption in the UK and to use the finding to create methods of closing the Ethical Purchasing Gap. Results confirm that a positive attitude toward consumption of sustainable seafood is one of the key drivers toward an increase in this behaviour, thus a catalyst for closing the EPG.

This research adds to the current literature by establishing that knowledge of sustainable seafood and its availability do not necessarily increase the consumption habit. Further research is proposed to study the relationships between these factors and the closing of the EPG.

Research finding suggest that availability of recipes and explanations of how to prepare various seafood species can generate sales. Interviewees indicate that television cooking shows and taste testers at supermarkets are the preferred methods of gaining the needed information in order to stimulate sustainable seafood consumption. Additionally, policymakers and health organizations need to look at the effectiveness of the current educational programs regarding seafood consumption and its benefits and make the necessary changes to appeal and be more visible to mass audiences across the nation. Moreover, supermarkets can create campaigns which include introduction of alternative seafood species, price promotions, and the ability for consumers to switch their usual seafood option for an alternative species at a lesser price, a method which has proven to be successful in Sainsbury's stores with their Switch the Fish campaign.

8.0 Limitations

First, there are few academic sources concerned with the ways of reducing the EPG. Second, due to a limited time frame only 13 people were able to answer all of the interview questions and only 152 survey responses were collected and accepted as eligible. Third, the survey respondents were predominantly elderly people who might have a different outlook on the issue of sustainable seafood consumption as opposed to their younger counterparts. Finally, this study was conducted in Bournemouth, UK only. A wider area could not only increase the number of participants but also provide a more diverse sample size to offer further validity of the results.

9.0 Future Research

Finally, one area for future research is concerned with a more profound study of methods which could lead to changes in consumer purchase behaviour, more specifically an investigation into

methods that can yield higher levels of transference between purchase intention and actual consumption of sustainable seafood. Such study can be conducted by applying the Transtheoretical model and examining the impact and effectiveness of various habit change intervention methods on consumption levels and frequencies.

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