



Seafood Research and Information

Consumers' Perceptions of **Frozen and Chilled Seafood**



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Consumers' lifestyles, preferences and tastes are constantly changing, giving way to demand for new food and seafood products. While overall consumption of seafood continues to grow, the picture across individual sectors shows great variation.

Over the last two years the chilled seafood sector has grown in both volume and spend whilst the frozen seafood sector has been suffering. It is not really clear however why this has been happening. It is most likely due to a combination of factors rather than just one. There is clearly a need for the frozen sector to be understood as the continued development of this sector is crucial to the growth of our industry, accounting for over half of all seafood bought by households in Britain.

We know from previous research that consumers' purchase of seafood is strongly influenced by their attitudes and perceptions. This research study set out to try to explain the differing consumer perceptions of frozen seafood relative to chilled seafood and what is influencing attitudes towards frozen food and seafood.

The aim of this research was to understand the way people view frozen seafood and how this differs from chilled.

We focused on two key areas:

- Consumers' perceptions and attitudes
- Consumers' behaviour where the purchase of frozen and chilled seafood is concerned. An examination of existing consumer behaviour and consumption is valuable in identifying opportunities to increase the consumption of frozen seafood in the future.

In particular the questions we answered were:

- What are consumers' perceptions and attitudes towards chilled and frozen foods in general, and what are the differences?
- What are consumers' perceptions of chilled and frozen seafood?
- What are the characteristics of people who consume frozen food and frozen seafood?
- What are consumers' perceptions of 'frozen-at-sea' products?
- How much do people understand about the use of frozen seafood in the out-of-home sector, specifically fish and chip shops, and what do they expect?
- Are people aware that the seafood served to them out-of-home is likely to be frozen and what do they feel about that?

The research process was divided into two stages:

- The first (qualitative) stage consisted of 30 in-depth interviews with consumers across Britain, each lasting approximately one and a half hours.
- The second (quantitative) stage consisted of a 15-minute face-to-face survey amongst a sample of over 600 people.

The first stage began in March 2002. The purpose was to explore the thoughts that occur to people and the things they spontaneously say when led into a discussion about frozen and chilled food and seafood. To ensure the sample reflected the structure of the population generally, a mix of social classes and locations were included, and light, medium and heavy purchasers of seafood represented.

With these findings, questions were formed to put to a larger group of consumers to give us a quantified view.

The second stage involved 626 face-to-face interviews and was undertaken in June/July 2002. The respondents were selected to represent the British population as a whole by setting quotas on age, social class, etc. Respondents had to be the principal purchasers of food and seafood in the household. Interviews took place in Scotland, S.E. England, North England and the Midlands.

For the purposes of this booklet, findings from both stages are amalgamated. We will start off by looking at consumers' perceptions and attitudes towards frozen and chilled foods in general, moving on to look at attitudes towards seafood and consumer behaviour:

- 4.1. Consumers' perceptions and attitudes towards chilled and frozen foods.
- 4.2. Consumers' perceptions of frozen and chilled seafood.
- 4.3. A profile of seafood consumers by their attitudes towards frozen food and frozen seafood.
- 4.4. Consumers' perceptions of 'frozen-at-sea' products and how these differ from perceptions of frozen seafood generally.
- 4.5. Consumers' in-store decision making and purchase of frozen and chilled seafood.
- 4.6. Consumers' perceptions of the use of frozen seafood in the out-of-home sector.

4.1 CONSUMERS' PERCEPTIONS AND ATTITUDES TOWARDS CHILLED AND FROZEN FOODS

4.1.1. What do consumers associate with chilled food?

On the whole, associations made with chilled food are very positive.

Chilled food is generally associated with being a **natural** rather than a **processed product**. Any negative associations are relatively minor. These include **inconvenience** and the **fragility** of chilled seafood.

Positive associations

- 'Fresh'
- 'Clean'
- 'Pure'
- 'Healthy'
- 'Nutritious'
- 'Sophisticated'
- 'Home cooking'
- 'Appetising'

4.1.2. What do consumers associate with frozen food?

Associations made with frozen food are more negative than those made with chilled. Frozen seafood is also suffering because of these negative associations.

On the positive side, consumers believe however that frozen food is easy to store and time-saving.

Positive associations

- 'More access to a wide variety of food'
- 'Less likelihood of wastage'
- 'Relatively longer shelf life'
- 'More economical than chilled'
- 'Ready to hand'
- 'Time-saving'

Negative associations

- 'Tampered with'
- 'Loss of goodness'
- 'Unappetising'
- 'Anaemic'
- 'Cheap'
- 'Synthetic'

Interestingly, peoples' perceptions and attitudes do not necessarily reflect behaviour. Many claim fresh or chilled tastes and looks better, and is healthier, but regularly buy and consume frozen food!

4.1.3. What do consumers think about the process of freezing?

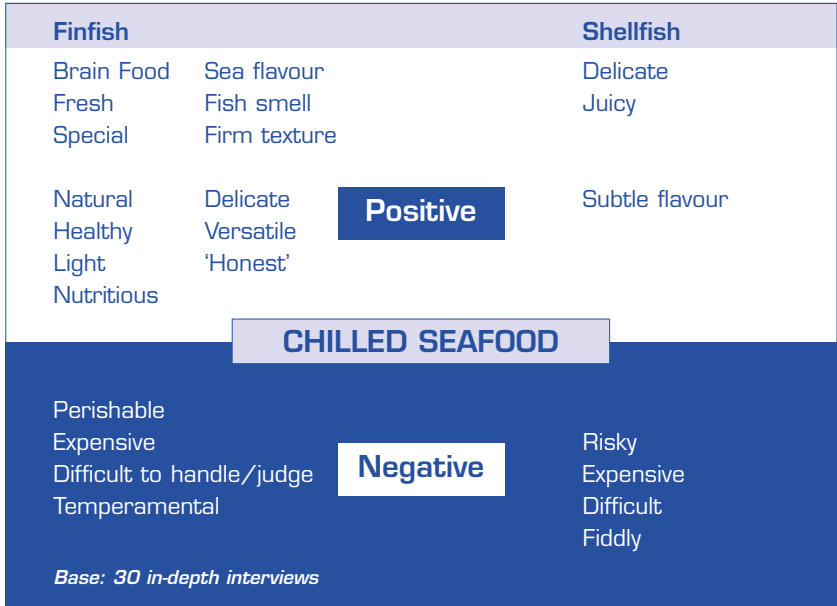
There was some inconsistency across the sample with regard to perceptions and attitudes towards the *process* of freezing. Some individuals think the freezing process automatically depletes the natural goodness in food, others believing that freezing food enables the goodness to be immediately locked in.

4.2. CONSUMERS' PERCEPTIONS OF FROZEN AND CHILLED SEAFOOD

4.2.1. What are consumers' perceptions of chilled seafood?

Associations with chilled seafood represent a mix of positive and negative. Associations with finfish are principally positive, that it is healthy, nutritious, and fresh. Shellfish is considered to be delicate and juicy but negative associations also arise.

Figure 1: Positive and negative associations with chilled finfish and shellfish



4.2.2. What are consumers' perceptions of frozen seafood?

Two main factors influence consumers' perceptions of frozen seafood:

- attitudes towards frozen food in general.
- the perceived intrinsic qualities of seafood (e.g. that it is delicate, has a subtle flavour, is easily spoiled, and that it has a short shelf life). A perceived intrinsic quality of seafood that it is delicate can lead to the perception that it is unsuitable for freezing.

The table below illustrates the positive and negative associations consumers have with frozen finfish and frozen shellfish.

Figure 2: Positive and negative associations with frozen finfish and shellfish

Finfish		Shellfish
Modern	Positive	Safe
Accessible		Reliable
Cheaper		Convenient
Longer life		
Convenient		
Variety (ready/coated)		
Fresh		
Odourless		
FROZEN SEAFOOD		
Bland	Negative	Watery
Mushy 'disguised'		Rubbery
Grey		Bland
Shapeless		
Odourless		
Thin		Defrosts quickly
Inferior quality (not fresh)		

In summary, issues raised for frozen seafood from this research relate to:

Texture: It is generally believed that the texture of seafood deteriorates with the freezing process because it absorbs water and loses moisture.

Taste: The taste of frozen seafood is perceived as less distinctive than the taste of chilled, becoming watery and bland.

Appearance: Consumers' familiarity with frozen processed seafood i.e. ready meals, leads to its appearance being less of an issue. Frozen 'natural'* seafood however is considered grey, unappealing, and as looking soft and mushy when defrosted.

Shelf life: While it is recognised that the freezing of seafood extends its shelf life, the issues are for how long it will keep and whether putting it in a freezer results in a further loss of flavour and texture.

* Seafood which is simply frozen and presented for sale without further processing

4 THE FINDINGS

4.2.3. So what is influencing consumers' perceptions of frozen Vs chilled seafood?

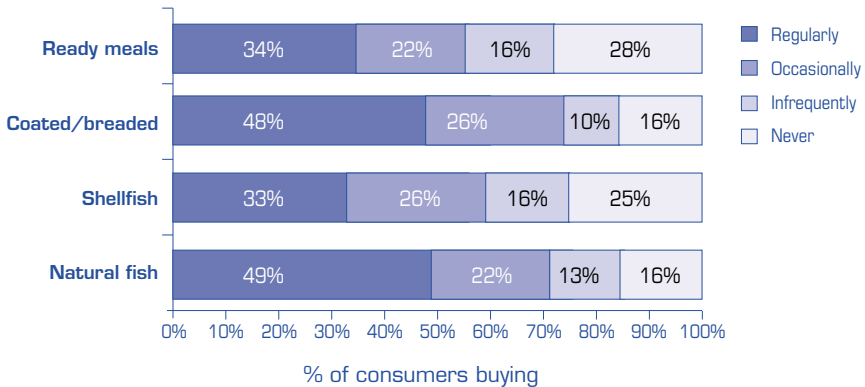
In general, consumers' perceptions are influenced by a range of factors.

Emotional factors often stem from a person's upbringing, their experiences and expectations. Negative associations consumers have with the frozen sector as a whole can be worsened by emotional factors.

Perceptions can also come from a lack of understanding on the part of the consumer as to what the process of freezing involves, its impact on flesh, the speed of the process and how long ago the fish was caught. Product packaging however can enhance consumers' understanding through:

- **Product positioning**
- **Product descriptors**
- **Overall appearance**
- **Presentation.**

Figure 3: Frozen seafood – frequency of purchase



Base: 626 respondents

4.2.4. How do perceptions differ across different categories of seafood?

Natural seafood

Perceptions of frozen **natural** seafood relate to how it looks, the difficulty in judging its quality and its loss of taste and texture. For the majority of consumers the shape, colour and solidity of frozen natural seafood, particularly finfish seems unnatural.

Prawns are the exception because their appearance is not affected as much. They are considered easy and safe to use.

Coated seafood

Frozen **coated** seafood is considered the most familiar and acceptable frozen category. This view comes from the perception that coated is the most 'natural' format for certain products, for example fish fingers.

The availability of a wide range of products in this category also helps positive perceptions. Because of the range and because of the different brands and product descriptors used (for example 'pure cod fillet', 'no artificial additives') consumers feel able to judge the quality of products as they do with chilled.

Ready meals

Since fish is not always the dominant ingredient in seafood **ready meals**, its flavour may not be as critical to overall enjoyment as in other categories. Also the perceived healthy status of seafood means that there is generally less questioning of the quality of seafood used compared with other proteins.

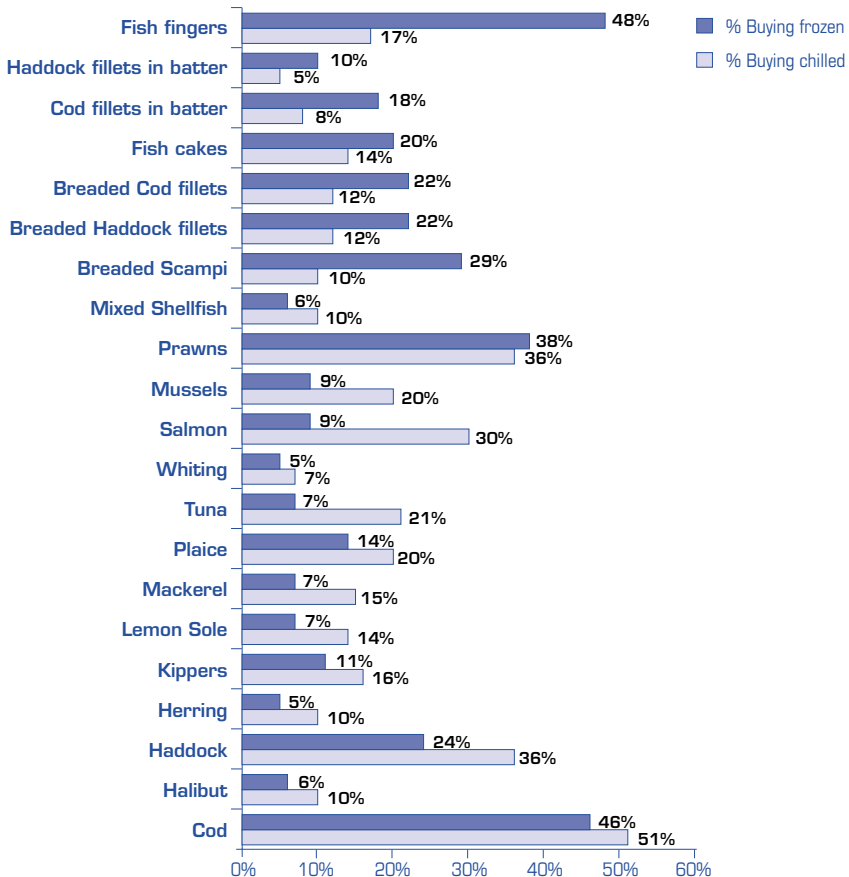
In any case, given that ready meals are seen chiefly as a convenience category, convenience tends to be the key decision factor.

4.3. PROFILING SEAFOOD CONSUMERS

4.3.1. Purchase of frozen seafood

We've spoken about perceptions and attitudes towards frozen and chilled food and frozen and chilled seafood and how they differ. The following chart illustrates the percentage of the sample that said they currently purchase a particular seafood product or species in chilled or frozen format.

Figure 4: Percentage of the sample who said they purchased a seafood product in chilled or frozen format

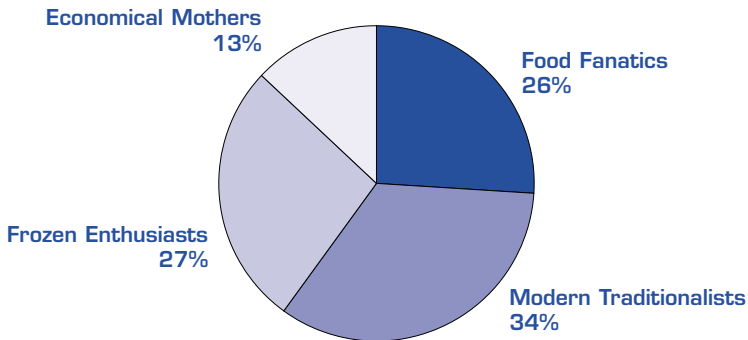


Base: 626 respondents

Looking at people's attitudes towards frozen food and frozen seafood, the researchers noted certain characteristics and behaviour which suggested that consumers could be grouped by four types for the purposes of this research study:

- **Food Fanatics**, who represented 26% of the sample
- **Modern Traditionalists** who represented 34% of the sample
- **Economical Mothers** who represented 13% of the sample
- **Frozen Enthusiasts** who represented 27% of the sample.

Figure 5: Breakdown of food and seafood consumers by category



Base: 626 respondents

'Food Fanatics'

Food Fanatics are very knowledgeable and confident about food and cooking and have high expectations. They enjoy everything about food, and taste and appearance are very important to them. Their main motivation when purchasing food is **quality**.

Food Fanatics believe strongly that frozen seafood is of inferior quality, based on their perceptions of its inferior flavour, texture and appearance. Food Fanatics will however buy chilled seafood and freeze it themselves, believing that they can then be sure of quality and freshness!

'You can really see a nice piece of fish that's fresh. When it's frozen you can't really see - the texture is completely different, the colour too. It's because anything frozen retains water which evaporates some of the flavour.'

Food Fanatic

'Modern Traditionalists'

Modern Traditionalists lack knowledge and confidence with food and cooking, and don't really enjoy cooking at all. In contrast with Food Fanatics, Modern Traditionalists believe cooking involves only pressure, based on their feelings that they are duty bound to feed the family 'properly', so their main motivation when purchasing food is **convenience**.

This group thinks that frozen seafood loses some nutrients but still believe that it presents a good choice for everyday eating and that quality can be ensured for them through careful selection of a brand with appropriate labelling and product packaging. Modern Traditionalists are also happy to buy chilled and to freeze it at home.

'Economical Mothers'

To Economical Mothers, food is a constant drain on both time and money and cooking a never-ending chore. Where food is concerned, taste and appearance are not the priorities, nutrition being more important. Their main motivation when purchasing food is **price** followed by convenience.

Economical Mothers perceive frozen seafood to be quick, economical and nutritious and more convenient than chilled. Some of this group sense that texture and taste may be affected by freezing it but this is generally not an issue, convenience and economy remaining the key considerations.

'Chilled fish does not impress me – it's nothing special. Saying that, frozen fish doesn't have anything special. I'm an economising mother. To me fish, more or less, tastes all the same.'

Economical Mother

'Frozen Enthusiasts'

While Frozen Enthusiasts enjoy eating and consider it an important part of life, they are not particularly knowledgeable about food and do not consider cooking to be a main priority. Their main motivation when purchasing food is **taste** followed by convenience.

Frozen seafood is perceived as good value, tasty and even 'fresh'. Quality tends not to be questioned, being determined by brand and communicated through product packaging. Natural seafood is seen as different however and considered best when bought chilled.

'It's been frozen for you to keep it fresh and then you can eat it when you like.'

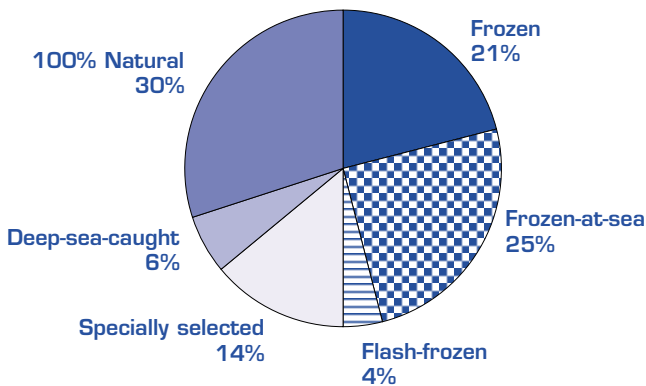
Frozen Enthusiast

4.4. CONSUMERS' PERCEPTIONS OF 'FROZEN-AT-SEA' PRODUCTS

4.4.1. When people purchase frozen fish, how effective is the label 'frozen-at-sea' versus other labels or product descriptors?

Before examining the issue of 'frozen-at-sea' in detail we first asked our consumers to make a choice. They were shown a range of labels and asked which they would choose when buying seafood. 'One hundred percent natural' emerged as the most popular choice. This was followed by those who chose the label 'frozen-at-sea'. The complete breakdown is given below.

Figure 6: Labels considered most effective by respondents



Base: 626 respondents

4.4.2. Why choose the 'frozen-at-sea' label over others?

For those who chose the 'frozen-at-sea' label the most common reasons given were that it 'sounds fresher' and that the product would be frozen more quickly after being caught. Other reasons given were:

- **More healthy**
- **More hygienic**
- **More tasty**
- **Less handled**

4.4.3. What does the term 'frozen-at-sea' mean to consumers?

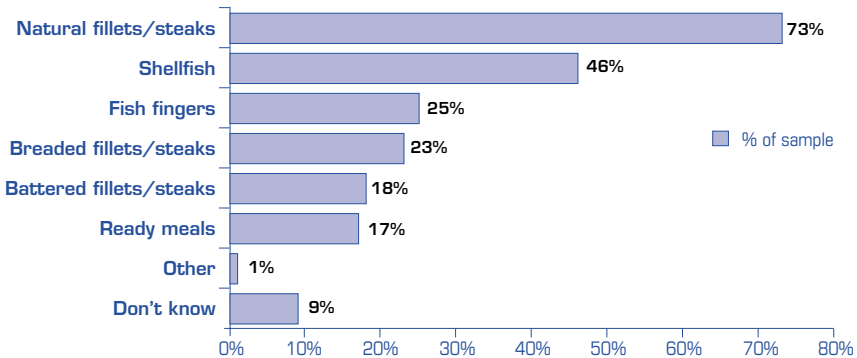
Across the sample as a whole there were mixed interpretations of the term 'frozen-at-sea'. Most people understand well what it means. The most common interpretation is that the fish is frozen as soon as it's caught or at least quickly, ensuring it is 'fresher'.

Other associations with the term included:

- **Less handled**
- **Good quality**
- **Very safe**
- **Very healthy**
- **Nutritious**
- **Easy to cook with**
- **Tasty**
- **More hygienic**
- **Natural**
- **Looks appealing**
- **Pure**
- **Expensive**
- **Has a nice flaky texture**
- **Fresher than fresh**

Products most commonly associated with 'frozen-at-sea' are natural fillets/steaks and shellfish.

Figure 7: Products associated with 'frozen-at-sea' label



Base: 626 respondents

4.4.4. Price

When asked whether they expected frozen products and 'frozen-at-sea' products to be priced differently, respondents gave mixed replies. The greatest proportion said they thought there would be a difference. The consensus was that 'frozen-at-sea' products would command a premium price.

4.4.5. Is there potential for increasing sales of frozen seafood by using the 'frozen-at-sea label'?

There appears to be little potential for increasing sales of frozen seafood purely by using the 'frozen-at-sea' label. Linking the 'frozen-at-sea' attribute with a better eating experience however, focusing on those factors which are top of mind in relation to frozen seafood's negative image i.e. the damage to texture and diminishing of flavour, may represent an opportunity.

4.5. CONSUMERS' IN-STORE DECISION MAKING AND PURCHASE OF FROZEN AND CHILLED SEAFOOD

4.5.1. How important is packaging?

Packaging has an important role to play, providing the consumer with a cue for judging the quality of the product, communicating product descriptors and brand values. Through offering detailed product information the right packaging can also address any uncertainties the consumer may have about how to store, handle or cook the seafood.

Consumers can be cynical however. While many are happy to take on board packaged products on an individual basis, others refuse to 'be fooled' by what the manufacturers say on the pack, for example possibly believing claims are over-stated.

4.5.2. What do people want from packaging?

Consumers express very different needs where packaging is concerned, some liking the way boxes enable them to have a neat and tidy fridge or freezer, others preferring the way bags can be jammed into any spare space.

The packaging of frozen natural proteins is a particular issue. Some see see-through packaging as important in the purchase of frozen natural seafood allowing the evaluation of product quality and size. But for those who don't like the look of frozen proteins to start with, this type of packaging just reinforces the negative quality associations they have.

4.5.3. How important are seafood brands, particularly for frozen?

Brands, like packaging, have a key role to play. They can:

- **enhance perceptions of frozen foods as a format**
- **increase the likelihood of trial and purchase of the product**
- **reassure the consumer of the product quality**

Besides this, actual species used are not always named on frozen seafood products. Specifying species can however be important, as it makes consumers feel happier about what is included in the product.

4.6. CONSUMERS' PERCEPTIONS OF FROZEN SEAFOOD IN THE OUT-OF-HOME SECTOR

Consumers' perceptions about seafood out-of-home really depend on the type of outlet in question. Eating out-of-home can mean very different things. We looked at two particular categories because of their importance in the seafood sector.

4.6.1. Consumers' perceptions about seafood in restaurants and pubs

Where restaurants are concerned, consumers anticipate that *fresh* seafood is always bought daily, ensuring the restaurant safeguards its reputation.

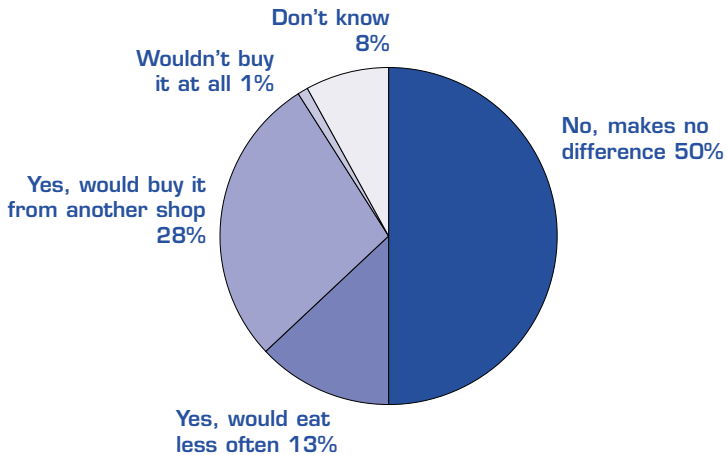
Expectations are different where pubs and chains are concerned. Consumers recognise that pubs and chains may use frozen seafood, as they believe that they charge less for their food and deal in bulk.

4.6.2. Consumers' perceptions about seafood in fish and chip shops

The use of frozen fish in fish and chips shops was generally not an issue for consumers interviewed, most saying they didn't stop to think about it. When asked, sixty three percent of consumers said they would expect fish sold in fish and chip shops to be fresh. Sixteen percent said they would expect it to be frozen.

When asked how they would react to the use of frozen fish in fish and chip shops, half of consumers overall said that the use of frozen fish would make no difference to them.

Figure 8: 'Do you think the use of frozen fish in fish and chip shops would change your fish and chip consumption in any way?'



Base: 626 respondents

Amongst *regular* purchasers of fish from fish and chip shops, 56% said it would make no difference to them. Forty five percent of *occasional* purchasers also said it would make no difference.

Across consumer types Frozen Enthusiasts and Economic Mothers were most likely to say that the use of frozen seafood would not affect them negatively (by making them buy less) with Modern Enthusiasts and Food Fanatics tending to say it would affect them negatively.

- Chilled food is generally associated with being a natural rather than a processed product. Associations that people make with frozen seafood are more negative.
- Two factors influence consumers' perceptions of frozen seafood:
 - attitudes towards frozen foods in general.
 - what they perceive to be the intrinsic qualities of seafood (e.g. that it is delicate, has a subtle flavour, is easily spoiled).
- The negative issues raised for frozen seafood from this research relate to its texture, taste, appearance and shelf life.
- Across categories of frozen seafood, **coated** seafood is considered the most acceptable frozen category because it is the most familiar. **Ready meals** follow this. For the majority of consumers the shape, colour and solidity of frozen **natural** seafood, particularly finfish, seem unnatural.
- Looking at people's attitudes towards frozen food and frozen seafood, and at their characteristics and behaviour, this research suggests there are different types of food and seafood consumers - **Food Fanatics** who represented 26% of our sample, **Modern Traditionalists** who represented 34%, **Economical Mothers** who represented 13% and **Frozen Enthusiasts** who represented 27%. It could therefore be assumed that amongst consumers generally across the population the same pattern might be apparent.
- The most common interpretation of the term 'frozen-at-sea' is that the fish is frozen as soon as it's caught or at least soon after, ensuring it is 'fresher'. Products most commonly associated with 'frozen-at-sea' are natural fillets/steaks and shellfish. The consensus is that 'frozen-at-sea' products would command a premium price.
- The use of frozen fish in fish and chips shops was generally not an issue for consumers interviewed, most saying they didn't stop to think about it. Sixty three percent of consumers we interviewed said they would expect fish sold in fish and chip shops to be fresh. Sixteen percent said they would expect it to be frozen. Half of consumers overall said that the use of frozen fish would make no difference to them.

FOOD AND CONSUMER TYPES - THEIR BEHAVIOUR AND ATTITUDES TOWARDS FROZEN SEAFOOD

	'Food Fanatics'	'Modern Traditionalists'	'Economical Mothers'	'Frozen Enthusiasts'
Demographic profile	Upper social classes without children.	Across social classes, living busy lives, either independents or families.	Lower social class groups, dependent on one income, families with 2+ children.	Younger, living alone or with partner.
Motivation when buying frozen food	Quality.	Convenience.	Price, convenience.	Taste.
Consumption behaviour (frozen foods generally)	Light consumers of frozen foods or do not consume frozen food at all.	Buy frozen food regularly, buying more than they are prepared to admit.	Heavy consumers of frozen food particularly natural and coated products.	Heavy consumers of frozen meals, infrequently consume natural frozen products.
Attitudes towards frozen foods	Generally negative - recognise convenience, frozen foods being considered unsafe, not healthy, having a different taste and to be of lower quality.	Generally positive - appreciate the convenience of frozen foods although feel a little guilty. Believe using frozen foods is acceptable in certain situation and if the meal is cooked from scratch.	Positive - value for money, tasty, convenient, little wastage. But deep down feel guilty for buying frozen as they believe chilled is better quality.	Positive – convenient, tasty, offer variety. But consider 'natural' frozen products more negatively.
Consumption behaviour (frozen seafood)	More inclined to buy shellfish regularly. Tend not to purchase frozen ready meals.	Purchase frozen natural fish and coated or breaded fish most often. Least likely to buy frozen ready meals.	Generally heavy consumers. Purchase frozen coated or breaded fish most often. Least likely to buy frozen shellfish.	Generally heavy consumers. Purchase frozen ready meals and frozen coated or breaded fish most often.
Attitudes towards frozen seafood	Food fanatics believe strongly that frozen seafood is of inferior quality based on perceptions about inferior flavour, texture and appearance.	While associating frozen seafood with a loss of nutrients this group believes that frozen seafood presents a good choice for everyday eating and that quality can be ensured through careful selection.	Where quality and nutritional value is concerned economical mothers feel that while not as good as chilled, frozen seafood is not poor quality, freshness also generally not being questioned.	Perceived as good value, tasty and fresh. Frozen natural seafood is seen as different however and considered best when bought chilled.

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