New Zealand seafood consumer preferences

A snapshot

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Ministry for Primary Industries
Manatū Ahu Matua
ECONOMIC INTELLIGENCE UNIT

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NOTE:
Seafood was defined in the report as “fish and other shellfish such as prawn, abalone, or squid. It doesn’t include seaweed in this context”.
The survey samples for the Japanese and Chinese markets have a greater representation of younger respondents than the general population. Keeping this in mind, results should be interpreted with caution.

Overview

Fish and Chips.

The classic fast food of crumbed or battered fish served with a side of crispy chips is a central part of New Zealand's recent culinary history. Going back further, kai moana- for Maori and Pacifica has been, and continues to be, an important contemporary and traditional food source.

Seafood is one of New Zealand's key exports and important domestic food source, whether it is fish and chips by the beach or a hasty tin of tuna while tramping. Some seafood are iconic local delicacies such as Kaikoura crayfish, West Coast whitebait, Mount Cook Salmon, or Bluff Oysters.

But what factors influence New Zealand consumers when purchasing seafood? How and where do they purchase seafood? To answer these, and other questions, the EIU undertook an investigation into New Zealand consumer preferences around seafood purchasing and the drivers behind these preferences.

The EIU surveyed over 6,000 domestic and international consumers and interviewed 16 New Zealand chefs/ restaurant owners to gain insights into:

- What the current trends in the consumer and restaurant market for seafood products,
- Which product categories consumers purchase,
- Where consumers often shop, and
- How consumers make their purchasing decisions.

The information informs both industry and policy makers of domestic consumer tastes. It also compares and contrasts New Zealand consumer preferences with key export markets.

Key Findings

Seafood is an important staple for New Zealanders

91 percent of New Zealand respondents purchased seafood. Two in five bought seafood at least once a week. Saltwater fish species were the most common choice accounting for over 50 percent of respondents' seafood purchases.

New Zealand respondents preferred products that are convenient and easy-to-consume.

The majority of New Zealand respondents chose products in easy-to-consume format (e.g. ready-to-eat products, restaurant-prepared meals or take-way meals) in their diet. Products such as fresh/chilled/frozen raw seafood require more time and preparation from consumers.

Supermarkets, grocery stores are the dominant retail channel for seafood purchases in New Zealand.

50 percent of all seafood purchases by New Zealand respondents occurred via the supermarkets and the grocery stores. Different age groups identified with different purchasing channels. Notably, young New Zealand respondents were more likely to purchase seafood at a restaurant than older age groups.

The provision of information at the point of purchase is the preferred way to inform purchase choices.

New Zealand respondents indicated that they preferred to get information at point of purchase, the internet, and from family/friends. The internet was the leading information channel for respondents aged 18-29 years.

Quality is the leading factor for consumers when purchasing seafood.

Quality and appearance factors are at the forefront of New Zealand respondents' minds when purchasing seafood. Respondents ranked sustainability factors, such as methods of capture or ethical consideration lower than quality and price.

New Zealand restaurants and food retailers ranked quality highly.

Restaurants rated quality as the most important factor, followed by sustainability. Several chefs observed an increasing interest in sustainable seafood among consumers, particularly young consumers.

Food retailers indicated quality and consistent supply were important in their seafood sourcing decisions.

New Zealand and Australian respondents shared similar purchasing patterns and preferences.

There are visible differences in seafood purchasing behaviour between English-speaking and Asian markets surveyed. Asian respondents are more likely to purchase seafood more frequently, and to choose seafood products for meal preparation. Additionally, online seafood purchasing is popular in China compared to other markets.

The majority of consumers indicated their seafood consumption would increase in the next five years.

One in three New Zealand respondents indicated that their future seafood consumption would likely be higher or much higher than their current consumption. Chinese respondents indicated the highest likely increase.

Consumer Insights

72 percent of New Zealand survey respondents purchased seafood at least once a month

Frequency of purchase varies by age group and gender

New Zealanders love their seafood

Seafood is a key staple for a number of New Zealanders. Analysis of the EIU survey sample revealed that for New Zealand respondents:

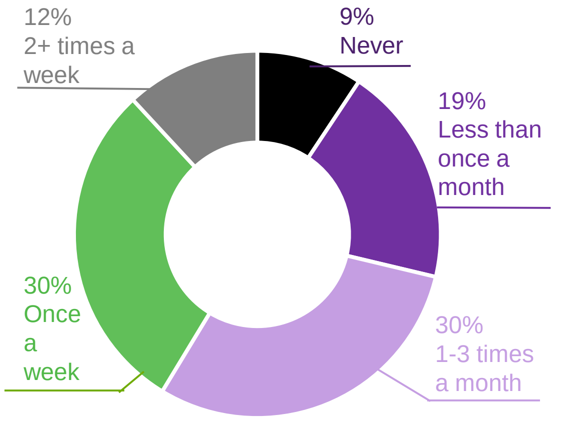
- 91 percent purchased seafood with 72 percent purchasing seafood at least once a month.
- 42 percent of respondents included seafood at least once or more a week in their food purchases.
- Overall, of those who purchase seafood, the purchases were evenly split across genders, though males were predominately the higher frequency purchasers.

Younger New Zealand respondents are more frequent purchasers of seafood

- 52% of respondents in the 18-29 age category indicated they purchased seafood at least once a week, or more.
- Those in the 45-60 age group had the lowest frequency of purchasing with only 33% indicating a similar frequency to the 18-29 age group.
- 95 percent of respondents aged over 60 purchased seafood though only 35 percent of them were regular (purchasing at least once a week) consumers.

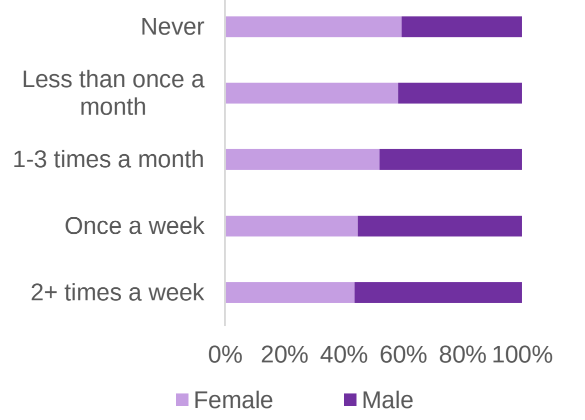
Figure 1: How often do you purchase seafood?

New Zealand market



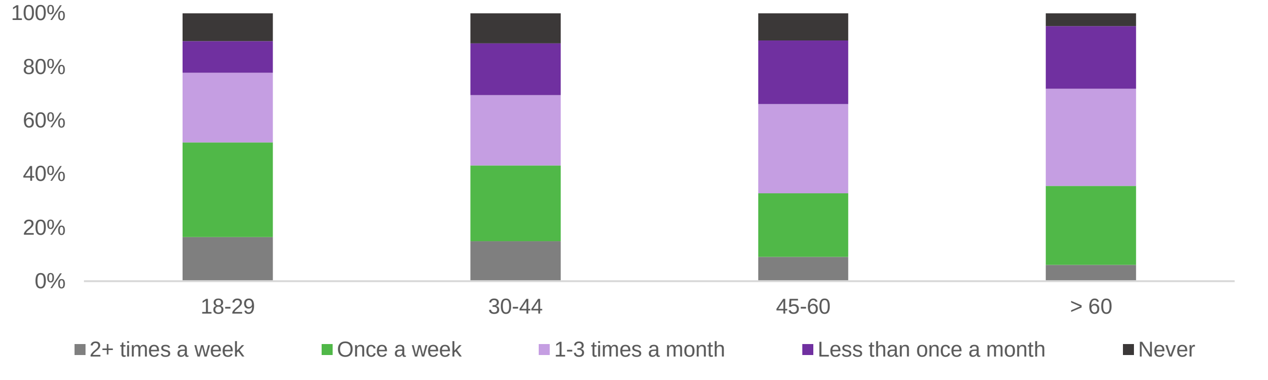
Source: EIU Consumer Survey (2019)

Figure 2: Seafood purchasing frequency by gender of New Zealand sample



Source: EIU Consumer Survey (2019)

Figure 3: Age breakdown of New Zealand sample purchasing seafood



Source: EIU Consumer Survey (2019)

Seafood is a popular meal choice with at least 80 percent of respondents in five countries indicating they purchased seafood

Chinese respondents had the highest proportion of regular purchasers.

- Compared with other countries, New Zealand and Australian respondents shared very similar purchasing patterns.
- The United States (US) had the lowest proportion of respondents who regularly purchased seafood which aligns with reported preferences and consumption patterns for US consumers.[1]
- Chinese respondents indicated the highest seafood consumption rate and the highest purchasing frequency amongst the countries surveyed. Almost every Chinese respondent had purchased seafood and seven in ten were regular purchasers.[2]
- As shown in Figure 5, seafood was more popular among younger Chinese respondents than older, with a distinct decline in the frequency of purchase as age increased.[3]
- In contrast, this trend reverses in Japanese respondents, where the frequency of purchase increases as age increased.[4] It is worth noting that in the sample, Japanese respondents had the lowest proportion of seafood purchasers.[5]

Looking across the countries surveyed it is apparent that seafood is a well-known food purchase to consumers in these markets. Chinese and Japanese respondents were more likely to purchase seafood more frequently than respondents in the US, Australia and New Zealand.

Figure 4: The proportion of seafood purchasers

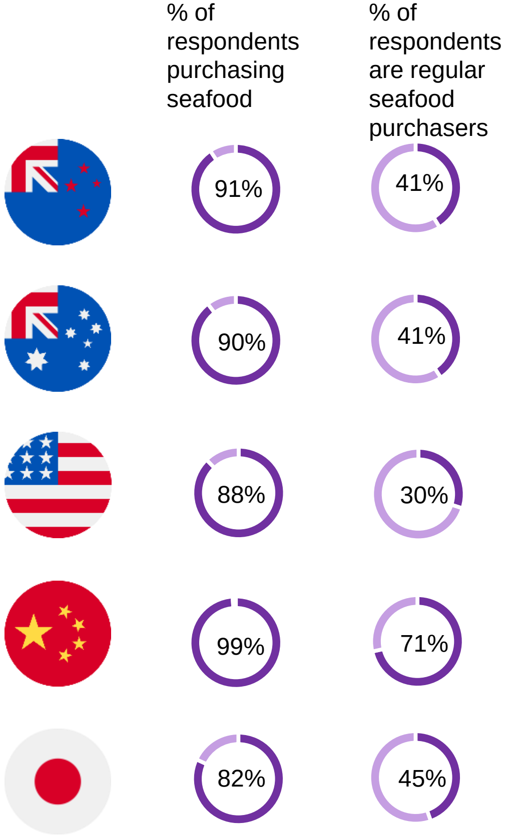


Figure 5: Chinese consumers' demographic purchasing results

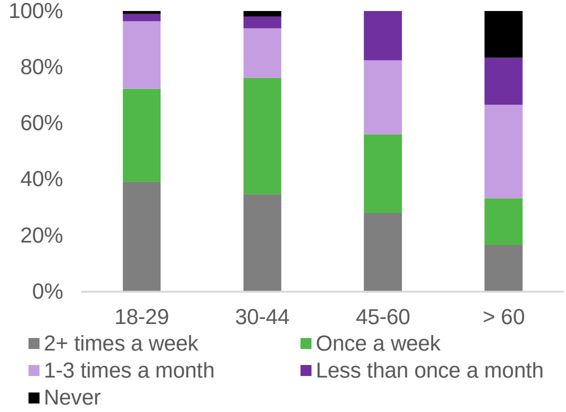
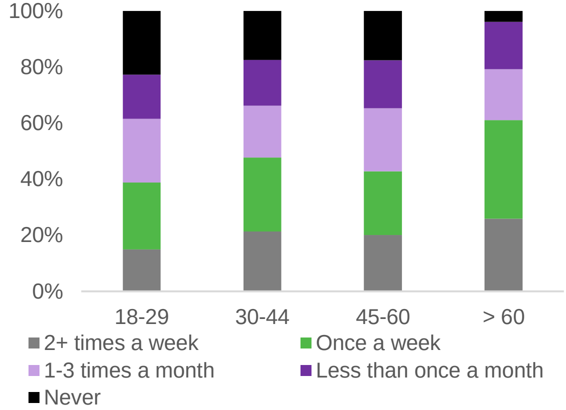


Figure 6: Japanese consumers' demographic purchasing results



[1] Neff et al (2018) showed that US red meat and poultry consumption frequency was higher than seafood.

[2] A regular seafood purchaser is someone who buys seafood one or more times a week.

[3] This is consistent with findings in Wang et al (2015), which found that younger Chinese adults tend to have higher seafood consumption rate.

[4] Japan Today indicated that a Japanese government report found Japanese seafood consumption has decreased, especially among the younger generation who are replacing seafood with other meats in their diet.

[5] This may reflect identified bias in the sample as the EIU survey had a higher response rate from a younger demographic relative to the whole population. For further information, see the Appendix 3.

Saltwater species account for over 50 percent of seafood purchases in New Zealand

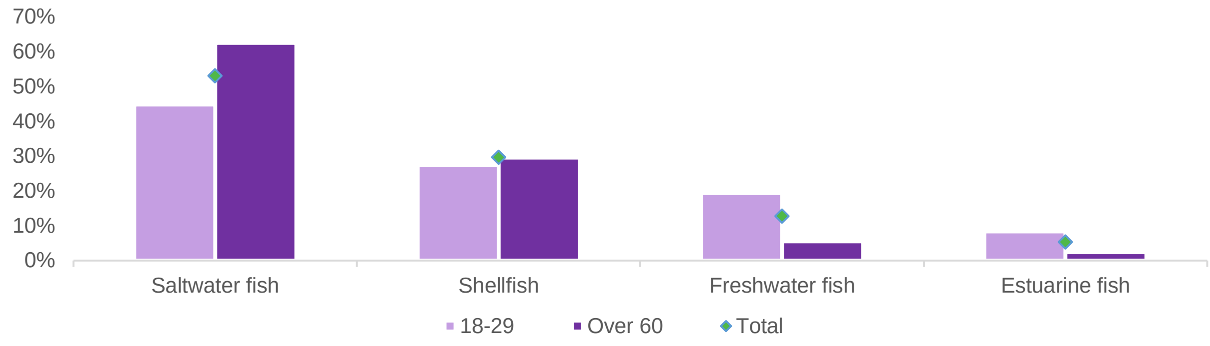
They are the most frequently purchased species in the remaining three markets with the exception of China

In contrast, estuarine fish are the least purchased seafood type.

Respondents who indicated that they purchased seafood were asked further questions to explore their preference around fish type and purchase behaviour. This found:

- Saltwater fish and shellfish were the most common choices. This likely reflects the range and types of seafood available to purchase commercially through various channels.
- Older New Zealand respondents were likely to purchase saltwater fish and shellfish more often than younger respondents. Younger respondents were likely to purchase freshwater fish (e.g. whitebait) and estuarine fish (e.g. sand flounder) more often.

Figure 7: What types of seafood do you purchase most often?[1]
New Zealand market

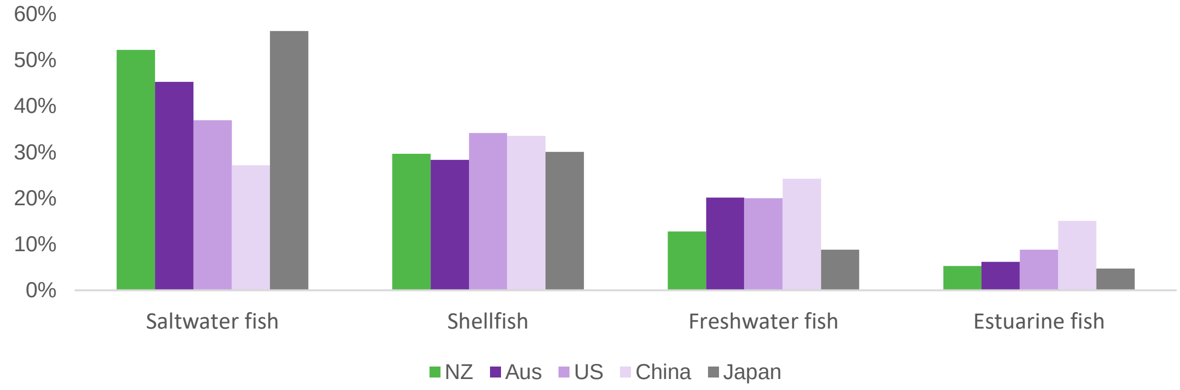


Source: EIU Consumer Survey (2019) © all rights reserved.

Saltwater fish represent the largest proportion of respondents' preferences across four of the five markets.

- A preference for saltwater species was evident via the high response rate for New Zealand, Australia, the US, and Japan.
- Shellfish was the most popular choice among Chinese respondents with 34 percent of seafood purchases, edging out saltwater fish. The consumer category purchasing most often were respondents aged 60 and over.
- Chinese respondents' preference was the most evenly split amongst seafood types, compared to other markets. We speculate this reflects the diversity of consumer preferences, the historical role of freshwater fish in diets and the high availability of freshwater species in China.[2]

Figure 8: How New Zealand seafood type preferences compare to other countries



Source: EIU Consumer Survey (2019) © all rights reserved.

[1] Multiple answers are allowed in this question. For further information, see the Appendix 2.

[2] According to China Statistical Yearbook 2018, the Chinese reported production of freshwater seafood was 31 thousand tons, which was slightly lower to that of ocean seafood in 2017 (33 thousand tons). Blomeyer et al (2012) indicated that China has a high consumption per capita of freshwater fish and shellfish.

Product Categories

Convenience is a key driver in choosing seafood products for the majority of New Zealand respondents.

Fresh/Chilled and Frozen seafood for meal preparation was still popular among Asian respondents

Fresh/Chilled seafood was the most often purchased category, and combined with Frozen seafood, these account for 43 percent of purchased product categories.

- However, these product categories require additional preparation and time in order to prepare and consume. In contrast, 57 percent indicated they more often purchased seafood in a more ready-to-consume format.
- Analysis of the New Zealand respondents and restaurant interviews found that convenience, accessibility, knowledge of preparation and fish types, time and price are all factors which affect consumers' choices.
- Interviews with New Zealand retailers confirmed that convenience and price were the driving factors when purchasing seafood, noting a clear preference for seafood products with immediacy and availability over other choices.

New Zealand and Australian respondents have a similar distribution of seafood product preferences.

- Fresh/Chilled seafood is the most often purchased category in Australia, New Zealand, and China. Chinese respondents had the highest response to purchase fresh/chilled seafood amongst all the countries surveyed. While not the leading category in Japan, fresh/chilled seafood was only slightly behind the leading categories.
- US respondents purchased seafood at restaurants more often than other countries. Japanese respondents were the least likely to purchase seafood at a restaurant.
- When comparing product formats, products in ready-to-consume format were purchased most in English speaking countries while products for meal preparation were popular amongst Asian respondents.

Figure 9: What product categories do you purchase most often?

New Zealand market

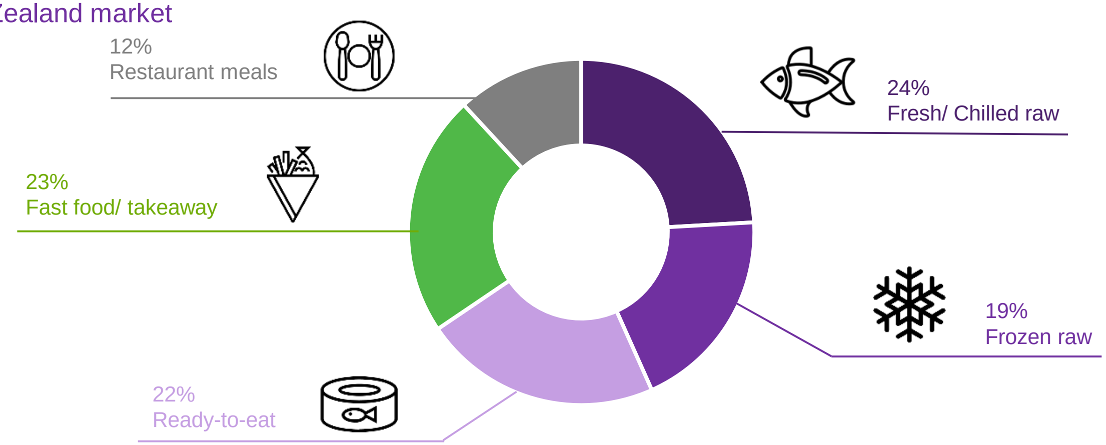


Figure 10: How New Zealand product preferences compare to other countries

	Fresh/Chilled	Frozen	Ready-to-eat	Fast food	Restaurant meals
	24%	19%	22%	23%	12%
	23%	22%	22%	19%	14%
	19%	27%	17%	13%	24%
	34%	23%	17%	10%	16%
	26%	28%	28%	9%	9%

Product Categories

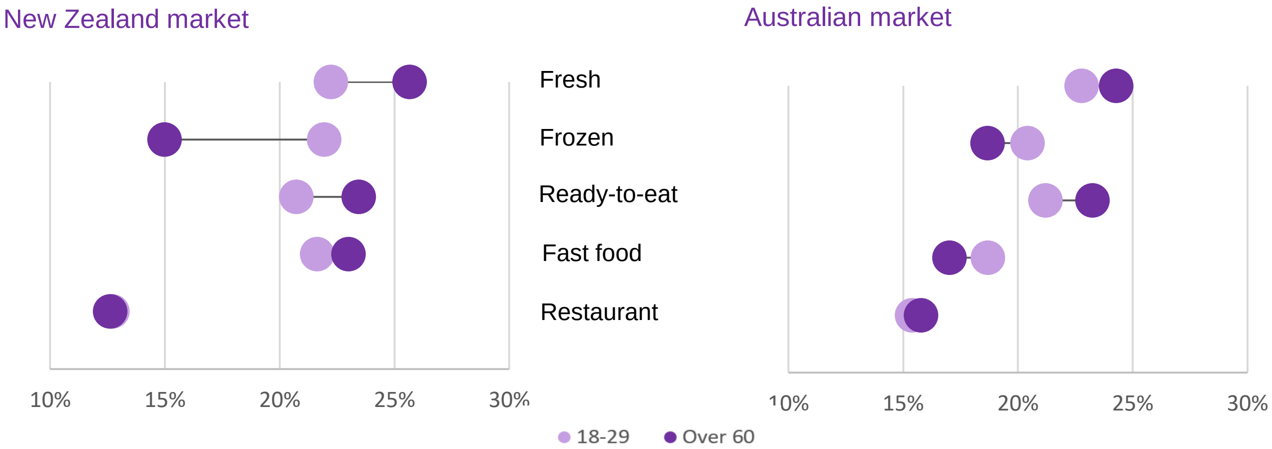
Preference for product category differs by life stages and geographic areas

Respondents in 60 and over age category are more likely to purchase fresh raw seafood

- Across all five markets, respondents aged over 60 were more likely to purchase fresh or chilled seafood than 18-29-year-olds. In contrast, respondents in the 18- 29 age category were more likely to purchase frozen seafood than other age groups in all surveyed countries except Japan.
- This would indicate that older respondents were purchasing seafood to consume in a more immediate timeframe than younger respondents.
- Japanese respondents aged 18-29 were more likely to choose convenient seafood such as ready-to-eat products, fast food or seafood at restaurants than other age groups. This may indicate that this age group is less likely to cook at home than the older age groups. This is in contrast to the preference for frozen/ready to eat product categories for the overall sample.
- Regardless of age, the proportion of Asian respondents purchasing fresh/chilled and frozen seafood for home-preparation was higher than other countries surveyed.

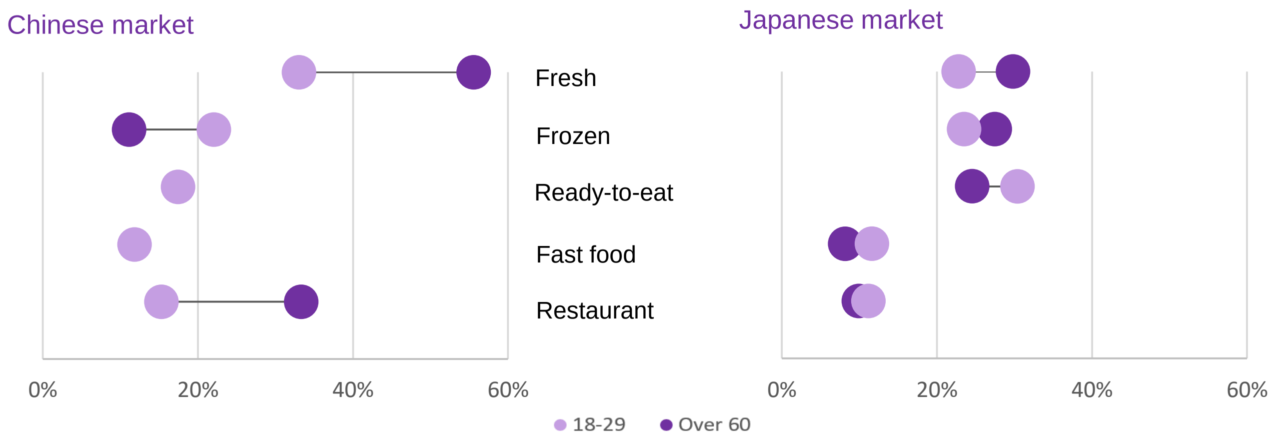
The survey findings indicate that consumer preferences vary by age and product category within each country. There are opportunities to differentiate target markets in each country around these product preferences.

Figure 11: Product category choice of New Zealand and Australian respondents aged 18-29 and over 60 [1, 2]



Source: EIU Consumer Survey (2019) © all rights reserved.

Figure 12: Product category choice of Chinese and Japanese respondents aged 18-29 and over 60



Source: EIU Consumer Survey (2019) © all rights reserved.

[1] Multiple answers were allowed in this question. For further information, see the Appendix 2.
[2] For the finding of the US seafood market, see the Appendix 4.

Retail Channels

Supermarkets and grocery stores account for half of seafood purchases

Younger respondents were more likely to purchase seafood via a restaurant or fast food channel

Supermarkets and grocery stores are the dominant retail channel for seafood purchasing.

- The majority of New Zealand respondents purchased seafood at supermarkets and grocery stores.
- Traditional retailers, such as fishmongers and other specialty seafood stores were less frequent retail channels.
- Consistent with our previous findings, convenience driven purchasing was a preferred option for many New Zealand respondents. One in three seafood purchases occurred via fast food, takeaway shops, and restaurant retail channels.

This reinforces previous findings which suggest that convenience and ease of consumption are key factors for consumers.

Different retail channels appeal to consumers at different life stages.

- New Zealand respondents in the 45-60 and the over 60 age group were more likely to purchase seafood at supermarkets and specialty stores than the other age segments.
- 18 to 29 year-old respondents were more likely to purchase seafood at restaurants than other age groups.
- There is no clear difference in purchasing seafood at fast food shops and online across all age groups.
- Male New Zealand respondents were more likely to shop for seafood at specialty stores and online than female respondents.

Figure 13: Where do you most purchase seafood? [1]
New Zealand market

Figure 14: Age breakdown of New Zealand sample purchasing channels

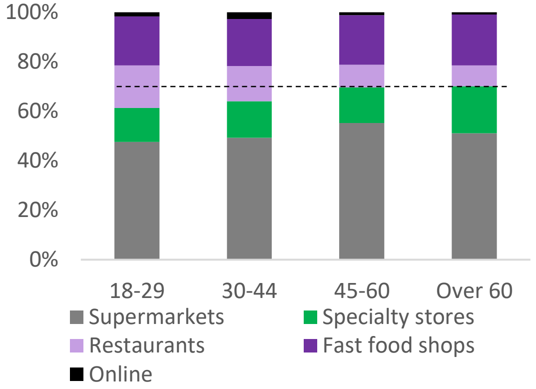
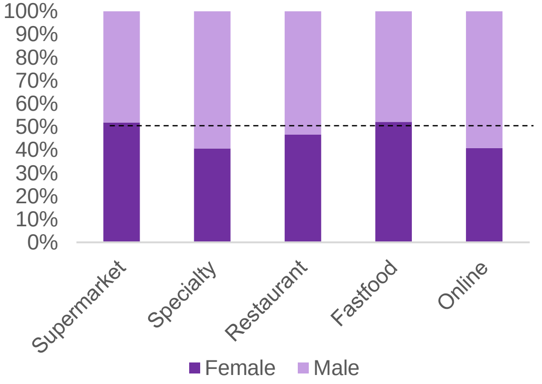


Figure 15: Seafood purchasing channels by gender of New Zealand sample



[1] Multiple answers are allowed in this question. For further information, see the Appendix 2.

Retail Channels

Retail channels for seafood purchasing vary across different markets with supermarkets and grocery stores the largest channel

Shopping for seafood online is common amongst Chinese respondents

Supermarkets and grocery stores are the most common point of purchase for seafood by respondents in all countries except China.

71 percent of Japanese respondents purchased their seafood via this channel.

Traditional retailers, such as fishmongers and other **specialty seafood stores** are the leading seafood retail channel for Chinese respondents.

This likely reflects the continued importance of the 'wet market' in China for seafood.

Fast food and take-way shops are an important channel for Australian and New Zealand respondents compared to other countries.

We speculate this reflects the popularity of meals, such as 'fish and chips' to these markets as well as a convenience factor.

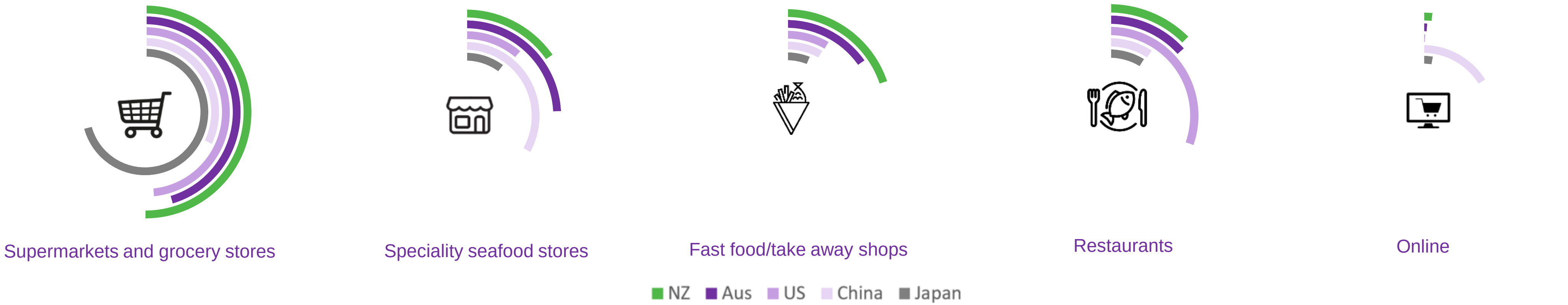
Nearly a third of American respondents choose to purchase their seafood at **restaurants**.

This underscores the potential significance of **restaurants** as a marketing channel to US consumers.

Online seafood purchasing is significant for Chinese respondents.

This reflects the important role e-commerce plays in the Chinese market.
In contrast, it is still an emerging channel in other markets, particularly for food and beverages.

Figure 16: Percentage of people indicated their point of seafood purchase



Source: EIU Consumer Survey (2019) © all rights reserved.

Communication

Provision of information at the point of purchase is the preferred way to get information on seafood

As to be expected, the Internet is the leading information channel for younger New Zealand respondents

Traditional media sources (e.g. media, brochures, books) are the least preferred channels to learn about seafood.

- The three leading channels for New Zealand respondents are point of purchase (24 percent), internet (20 percent) and family/friends (18 percent). This indicates many consumers prefer to seek out product information when purchasing rather than seeking information in-advance.
- The communication preferences vary by age groups with the most significant difference between the 18-29 and over 60 age groups. The preference for traditional media (e.g. books, brochure) gradually increases with age. On the other hand, younger respondents put more emphasis on more modern media channels such as the internet and cooking shows.

Information on seafood at point of purchase is the most preferred communication channel amongst countries surveyed.

- English speaking countries share a similar profile to New Zealand respondents in terms of communication preferences.
- The point of purchase remains the most favourite information channel for Asian respondents, regardless of age group. In addition, Japanese respondents also value in-store signage to obtain seafood information.

Figure 17: What is your preferred way to get information about seafood? [1]

New Zealand market

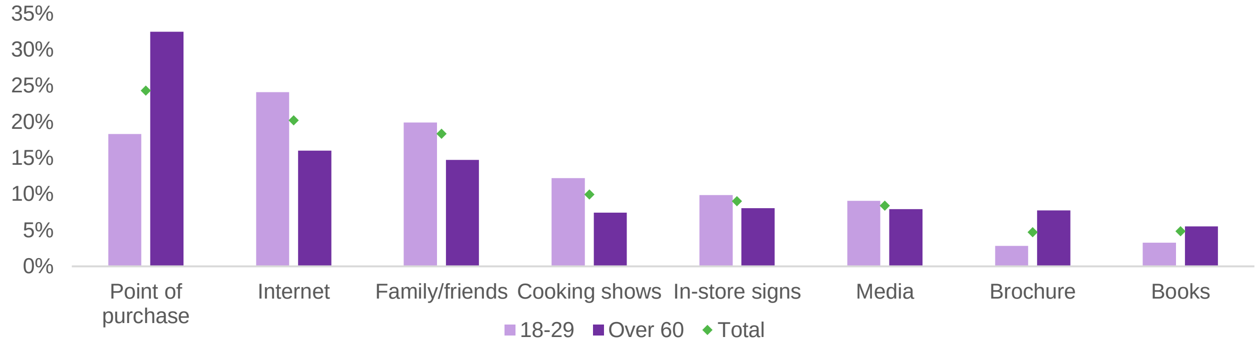
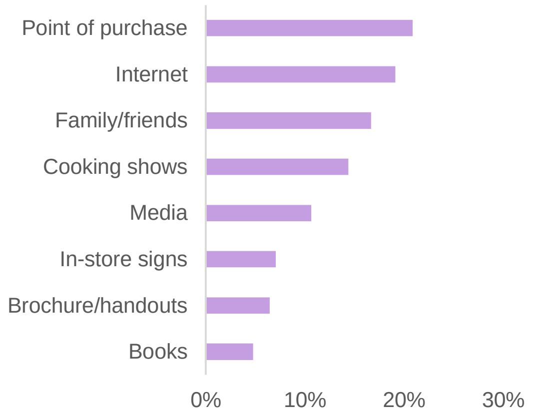
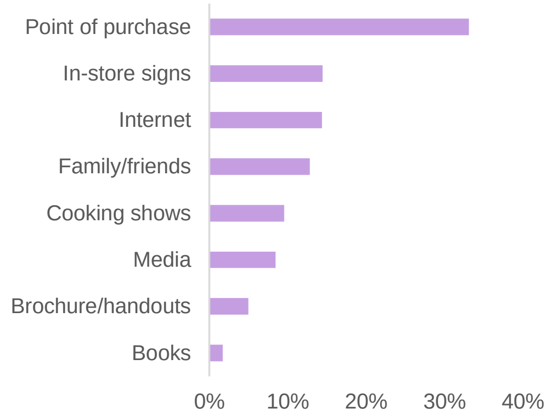


Figure 18: Preferred communication method in Asian markets

Chinese market



Japanese market



[1] Multiple answers are allowed in this question. For further information, see the Appendix 2.

Quality is the leading factor when purchasing seafood

Respondents were concerned less about sustainability factors such as ethical seafood and capture method than other factors

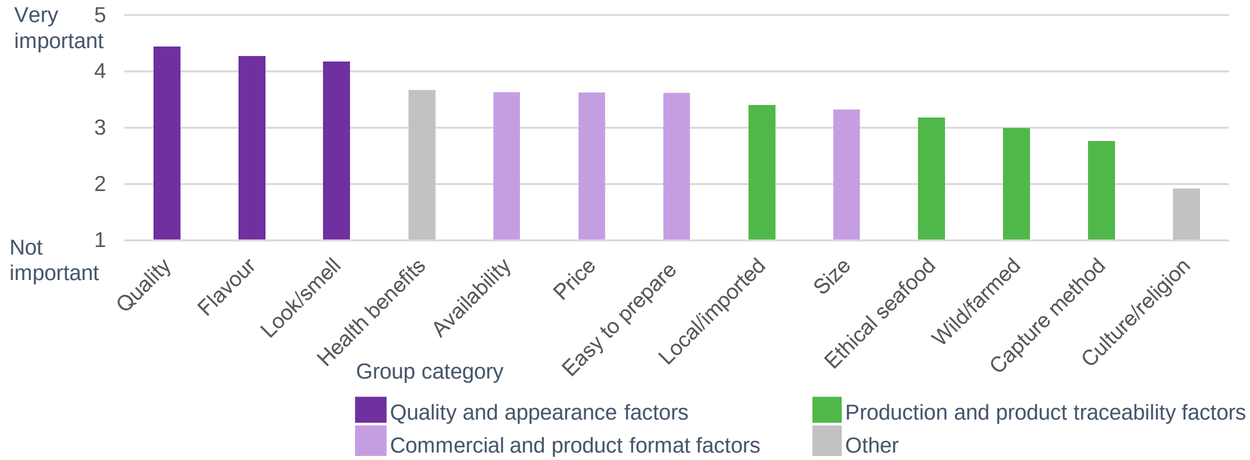
Quality, followed by appearance, were rated as the most important factors when purchasing seafood for New Zealand respondents.

We asked respondents to evaluate the relative importance of three groups of factors when purchasing seafood. These included product quality and appearance, commercial and product format, and product traceability.

- Respondents consistently ranked quality and appearance factors as the most important, including over commercial factors such as price. This suggests factors such as freshness, flavour, look, smell, and health benefits are at the forefront of respondents' minds when purchasing.
- Respondents were least concerned about product traceability and rated sustainability factors including capture method as less important. There was little difference in preference between wild and farmed seafood.
- The ranking order of factors by age and gender was consistent overall. Young respondents rated sustainability factors such as ethical seafood[1] and capture method slightly higher than other age groups.

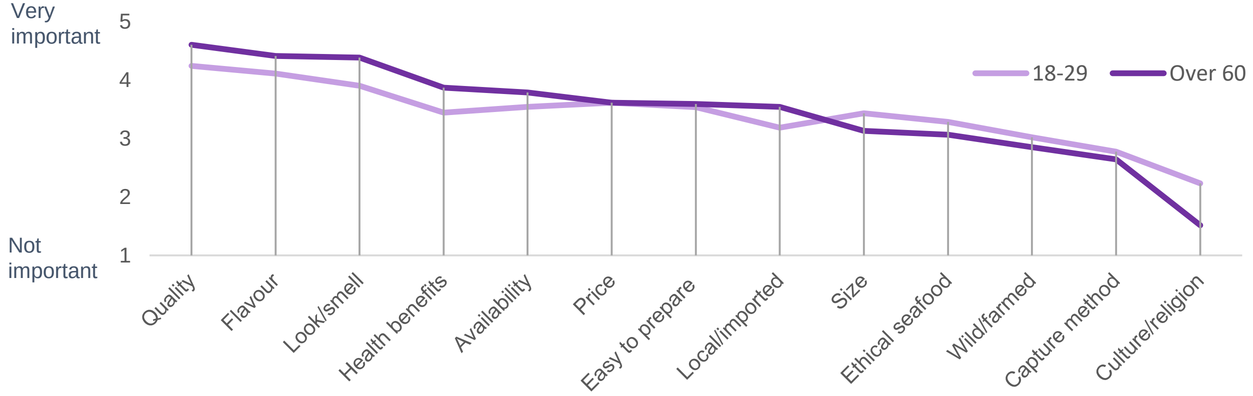
Our discussion with retailers and restauranteurs reinforced the survey findings. The discussion revealed that consumers often looked for quality and price more than other factors. Retailers observed that many New Zealand consumers were not interested in traceability narrative because they believed this was met through the existing quota management system.

Figure 19: Factors influencing New Zealand respondents' purchase decision [2]



Source: EIU Consumer Survey (2019) © all rights reserved.

Figure 20: Comparison of factors influencing New Zealand respondent purchase decision by age group



Source: EIU Consumer Survey (2019) © all rights reserved.

[1] In this report, ethical seafood refers to seafood sourced in a relatively humane manner (e.g. less pain and distress during the farming/harvesting of fish). However, surveyed respondents can interpret differently.
[2] The level of importance is ranked as (1) not important, (2) slightly important, (3) moderately important, (4) important and (5) very important in the question.

Quality and flavour remain the leading factor when purchasing seafood across five countries surveyed

Asian respondents placed a higher emphasis on products easy to prepare

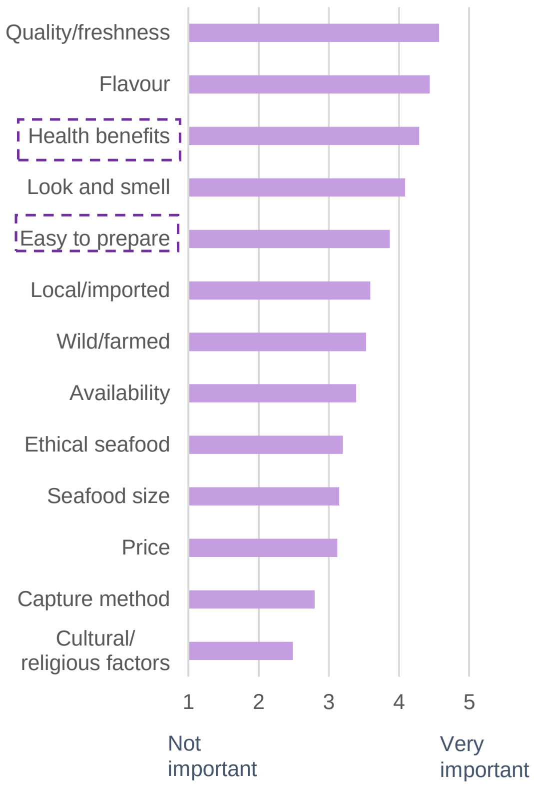
Ease of preparation was rated higher by Asian respondents than English speaking respondents.

- Overall, respondents in English speaking countries ranked factors influencing their purchasing decision similarly with quality and appearance factors driving purchases.
- Quality and flavour are the most important factors amongst all five countries. The consistently high ranking of quality and appearance indicates seafood has an important sensory element (visual, or otherwise) influencing consumers' purchase drivers.
- Chinese respondents placed the strongest emphasis on health benefits of seafood as a purchase influence amongst surveyed countries. This is consistent with findings that Chinese consumers often look for quality and health benefits in food products.[1]
- Asian respondents place more emphasis on the ease of preparation than respondents from other countries. This consistent with prior findings that suggest convenience is important. This suggests Asian consumers are more likely to buy seafood products for cooking at home and doing so they are driven by convenience and ease of preparation factors.

Whilst the leading factors were consistent across all the markets surveyed, there is a significant difference in ranking. This suggests a requirement to market and differentiate products to meet consumer needs in each market.

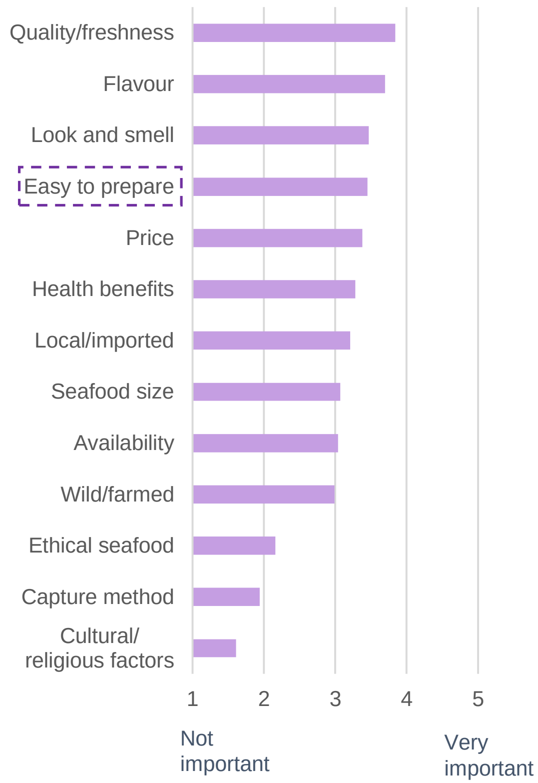
Figure 21: Important factors on the seafood purchase decision of Asian consumers

Chinese market



Source: EIU Consumer Survey (2019) © all rights reserved.

Japanese market



Source: EIU Consumer Survey (2019) © all rights reserved.

[1] https://www.plantandfood.co.nz/file/insight-edition-2.pdf

New Zealand restaurants and food retailers ranked quality highly

This aligns with consumer ranking. Factors such as availability, consistency of supply and locality were also important

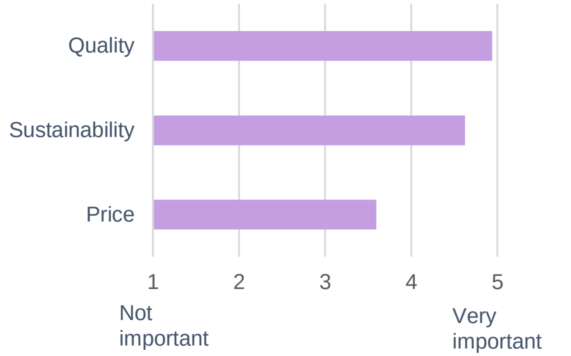
Interviewed chefs rated sustainability higher than price in their purchase decision

- The EIU interviews with chefs/owners found that all chefs and owners thought quality was the most important factor relative to others. They considered high-quality ingredients used to produce great food would ensure customers return or would entice new customers.
- There is a high level of support for sustainability[1] amongst chefs indicating a measure of support for efforts to ensure future quality and supply are not compromised. Some interviewees referred to the importance of securing New Zealand seafood sources for future generations.
- Several chefs saw sustainability as a growing trend among their consumers. They noted that consumers love hearing stories behind the food and there was an increasing demand/awareness of sustainable seafood, particularly from young consumers.
- Price was the least important factor, particularly for restaurants identifying as fine dining establishments. These restaurants indicated an ability to pass the cost to their customers. This view was not shared across all interviewees. Some noted their inability to pass the cost to consumers.
- Other factors identified as important by restauranteurs were availability, quality of service (e.g. delivery, consistent supply), and local sourcing. Some restaurants expressed their desire to support local businesses and consider local sourcing of ingredients as a selling point (e.g. Akaroa salmon, Bluff oyster).

Food retailers value quality and consistency of supply.

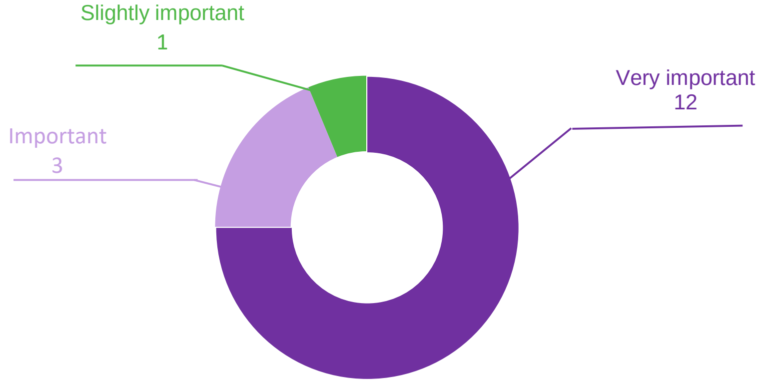
- The EIU discussions with retailers found that quality and consistent supply were important factors in their seafood sourcing decisions.
- For retailers, price was an important determining factor as part of their decision making process. Sustainability, while not the main factor, is increasingly considered in sourcing.
- It is interesting that some restaurants and retailers' consumers associated sustainability with the quota management system. This reflects a perception that the quota management system inadequately managing New Zealand seafood resources.

Figure 22: Ranking of important factors in the New Zealand restaurants purchasing decision [2]



Source: EIU Restaurant Interview (2019) © all rights reserved.

Figure 23: How important to your business is sourcing sustainable seafood? New Zealand market



Source: EIU Restaurant Interview (2019) © all rights reserved.

[1] Sustainable seafood was defined in the interview as "sustainable seafood is from fisheries that are maintained in a way that considers the needs of future generations are met as well as the long-term well-being of the oceans".

[2] The level of importance is ranked as (1) not important, (2) slightly important, (3) moderately important, (4) important and (5) very important in the question

The majority of restaurant interviews used both wild and farmed seafood in their menu

Restaurants sold more seafood dishes in summer

Chefs are flexible around wild and farmed seafood

- 14 out of 16 interviewed chefs/owners offered both wild and farmed seafood in their restaurant menu. Some considered farmed seafood a sustainable option with less damage to the environment. Farmed seafood also provided a consistent supply and an easily sourced option for the restaurants.
- A few fine dining restaurants only offered line caught and "novel" seafood to create a point-of-difference for their diners. Additionally, these restaurants had the ability to change their menu regularly and as a result was able to easily accommodate new seafood ingredients, including fish types.
- Many chefs associated freshness and high quality with the method of capture, particularly the line-caught method.

Growing ethnic diversity in New Zealand brings an opportunity to expand the customer base.

- Our interviews found that several Asian restaurants observed an increase in seafood sales during the Lunar New Year period.
- A similar trend was observed by food retailers regarding the growing popularity of the Lunar New Year in addition to other holiday periods.

The growing ethnic diversity in New Zealand provides an opportunity to increase the diversity of products (e.g. fish species, product formats) to capture these growing consumer groups.

Seafood is synonymous with summer.

MPI's interviews with New Zealand restaurant chefs also found that:

- 9 out of 16 interviewed chefs/owners observed an increase in seafood sales in summer.
- Some chefs noted consumers prefer fresh and light food in summer and are more likely to choose seafood.
- The interviewed chefs suggested the drivers can be the growth in visitor number and the popularity of fish and chips by the beach in summer.

Figure 24: What types of seafood do you source?
New Zealand market

Only wild	Both wild and farmed
2	14

Source: EIU Restaurant Interview (2019) © all rights reserved.

Figure 25: Is there a particular season when you sell more seafood dishes?
New Zealand market

Summer	All year round
9	7

Source: EIU Restaurant Interview (2019) © all rights reserved.

Future Outlook

Future outlook for seafood consumption looks positive

Seafood consumption per person is expected to increase in all countries except Japan

Across all countries surveyed, the majority of respondents indicated their future seafood consumption would be higher.

The results of the EIU surveys showed that a number of respondents indicated that their seafood consumption in the next five years will be higher or much higher than the current consumption.

- One in three New Zealand respondents indicated that their future seafood consumption would be higher or much higher than their current consumption.
- Across five countries, China would experience the highest increase in seafood consumption. Four in five Chinese respondents said their future consumption would be higher or much higher than current levels.

These findings are consistent with other forecasts on the level of seafood consumption. It is expected that seafood consumption per capita would remain stable in New Zealand and increase significantly in China. The projected growth in seafood consumption, particularly in China, represents an export opportunity for New Zealand fisheries.

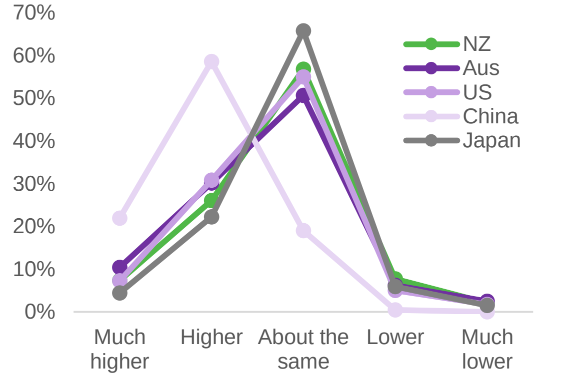
In contrast, the forecasted seafood consumption per capita is expected to decrease in Japan. We speculate this reflects a changing consumer preference. Younger Japanese respondents in the EIU surveys indicated a lower frequency of seafood purchasing than older age groups.

Male New Zealand respondents are likely to increase their seafood consumption in the future.

Male New Zealand respondents frequently purchased seafood and would continue doing so in the future. The majority of respondents who indicated a higher or much higher future seafood consumption were male New Zealanders aged under 45 years.

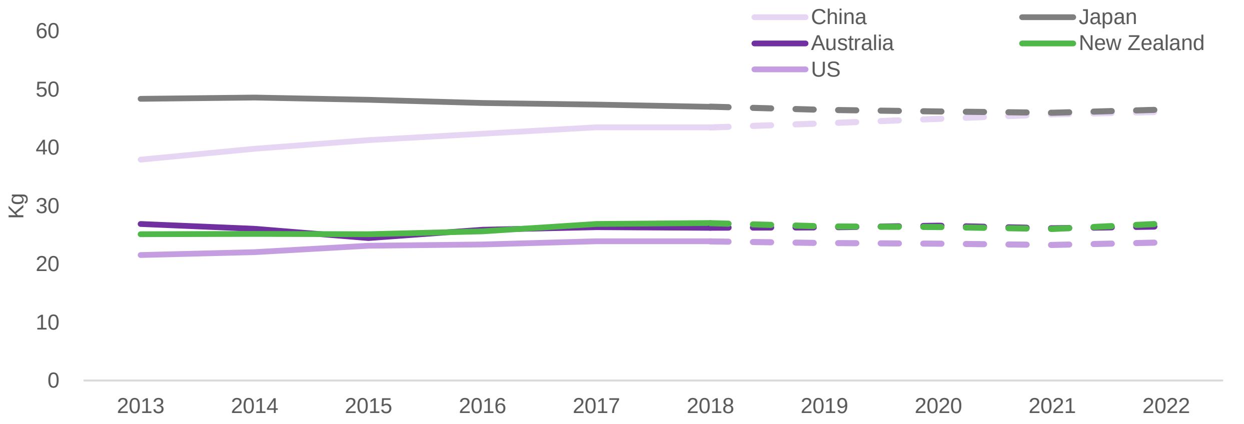
The findings are similar in other markets except for China. Chinese respondents who indicated a higher or much higher future seafood consumption were predominately females.

Figure 26: Looking out five years in the future, what do you think your seafood consumption will be compared to current consumption?



Source: EIU Consumer Survey (2019) © all rights reserved.

Figure 27: Seafood consumption (kg) per capita, 2013-2022 [1]



Source: MPI, OECD-FAO (2019).

[1] The seafood consumption per capita ranking is consistent with our survey results on the seafood consumption frequency.

Appendices

Appendix 1

Methodology

Seafood Consumption Survey

- The EIU survey consisted of up to 14 questions depending on responses and was deployed via a paid Monkey Survey panel from 07 to 08 March 2019. The sample size included more than 6,200 completed responses in New Zealand, Australia, the United States, Japan, and China.

Country	The number of survey respondents	The number of seafood purchasers
New Zealand	1,135 [1]	1,029
Australia	1,142	1,023
The US	1,447	1,270
Japan	1,260	1,032
China	1,216	1,202
Total	6,200	5,556

- Caution should be used around some survey data. The survey had a high response rate from the younger Chinese and Japanese respondents. This may limit the utility of the responses. In New Zealand, Australian and the US market, the responses reflected the general population closely. See appendix 3 for further information.

Restaurant and Retailer Interview

- The EIU contacted 150 restaurants in Auckland, Wellington, and Christchurch to invite them to participate in the study. We interviewed 16 restaurants between 20 February and 15 March 2019.
- The EIU also discussed trends with one seafood market, one seafood wholesaler and supermarket representatives.

Participants	Contacted	Interviewed
Restaurants	150	16
Seafood markets	4	1
Wholesalers	4	1
Supermarkets	3	1

Literature Review

- Background information was collected through an open-source literature review examining news articles, academic journals, and business information.

[1] The New Zealand survey sample had 1,135 completed responses. Given the New Zealand population of 4.96 million as at March 2019, this represents a 95 percent confidence level at 3 percent margin of error.

Appendix 2

Survey questions in the New Zealand, Australian and US market

Q1. How often do you purchase seafood?

*Seafood includes fish and other shellfish such as prawn, abalone, or squid. It doesn't include seaweed in this context.

- Two or more times a week
- Once a week
- 1-3 times a month
- Less than once a month
- Never

Q2. Where do you most often purchase seafood? (select all that apply)

- At a supermarket/grocery store
- At a specialty seafood store
- At a restaurant
- At a fast food or take-away shop
- Online
- Other (please specify)

Q3. What product categories do you purchase most often? (select all that apply)

- Ready-to-eat products (e.g. canned seafood, smoked salmon, etc.)
- Frozen raw seafood (e.g. frozen fillets, etc.)
- Fresh/chilled raw seafood (e.g. chilled fresh fillets, etc.)
- Seafood as part of a restaurant meal
- Fast food or take-away food (e.g. sushi, fish and chips, etc.)
- Other (please specify)

Q4. What types of seafood do you purchase most often? (select all that apply)

- Freshwater fish (e.g. trout, eels, etc.)
- Saltwater fish (e.g. tuna, flounder, etc.)
- Estuarine fish (e.g. catfish, sand flounder, etc.)
- Shellfish (e.g. mussels, oyster, shrimp, lobster, etc.)
- Other (please specify)

Q5. Can you rate the importance of these following factors on your purchase?

- Price
- Size of the seafood
- Quality (e.g. freshness)
- Flavour
- Health benefits
- Easy to prepare at home
- Origin (e.g. wild or farmed)
- Source of the product (e.g. local or imported products)
- Method of capture (e.g. line or net caught)
- Seafood sourced in a relatively humane manner (e.g. less pain and distress during the farming/harvesting)
- Availability of the seafood
- Cultural/ religious factors
- Look and smell of the seafood

Q6. What is your preferred way to get information about seafood?

- Media
- Internet
- Family/friends
- Point of purchase (e.g. supermarket, etc.)
- Cooking shows and celebrity chefs
- In-store signs
- Books
- Brochure/handouts
- Other (please specify)

Q7. Looking out five years in the future, what do you think your seafood consumption will be compared to current consumption?

- Much higher
- Higher
- About the same
- Lower
- Much lower

Q8. Would you buy more fish from a company that can demonstrate that it causes less pain and distress during the farming/harvesting of fish?

- Yes
- No

Q9. Would you pay more for seafood sourced in a sustainable manner?

*Sustainable seafood is from fisheries that are maintained in a way that considers the needs of future generations are met as well as the long-term well-being of the oceans.

- Yes
- No

Q10A. How much more would you be willing to pay for certified sustainable seafood compared to a normal product?

- Under 5%
- 5-9.9%
- 10-14.9%
- 15-19.9%
- 20-25%
- More than 25%

Q10B. Why do you choose to not pay more for sustainable seafood?

- I am on a limited budget
- I want the best value for money from my grocery
- I do not trust the sustainable label in seafood products
- Sustainable seafood is not my concern.
- Other (please specific)

Q11. How likely are you to try a new species of seafood?

*A new species of seafood is a seafood type you haven't tried before.

- Never
- Not likely
- Neutral
- Likely
- Very likely
- It depends

Q12A. Why are you not likely to try a new seafood type? (Select all that apply)

- I have a specific/personal taste preference
- I concern about the risk of poison/allergy
- Other (please specific)

Q12B. What would make it easier for you to try new seafood species? (Select all that apply)

- Well-informed staff at retailers and restaurants
- Recipes/cooking tips
- Better seafood selection in stores
- Promotion of new species in stores
- Better information about the products (e.g. if it might cause allergies or if it is sustainably caught)
- Other (please specify)

Appendix 2

Survey questions in the Chinese market

Q1. 您多久购买一次海鲜？

*海鲜包括鱼类和其他贝类，如虾、鲍鱼或鱿鱼。本问卷中，海鲜不包括海带

- 每周两次或两次以上
- 每周一次
- 每月1-3次
- 少于每月一次
- 从不购买

Q2. 您最常去哪些地方购买海鲜？（可多选）

- 超市/杂货店
- 海鲜专卖店
- 餐厅
- 快餐或外卖
- 网上
- 其他（请列举）

Q3. 您最常购买哪些类型的海鲜？（可多选）

- 即食（例如罐装海鲜、烟熏三文鱼等）
- 速冻生海鲜（例如速冻鱼柳等）
- 新鲜/冷藏生海鲜（例如冷藏新鲜鱼柳等）
- 在餐厅用餐时食用的海鲜菜肴
- 快餐或外卖（如寿司、炸鱼薯条等）
- 其他（请列举）

Q4. 您最常购买哪些海鲜品种？（可多选）*

- 淡水鱼（如鳟鱼、鳗鱼等）
- 海鱼（如金枪鱼、比目鱼等）
- 河鱼（例如鲶鱼、菱鲽等）
- 贝类（如青口、生蚝、虾、龙虾等、螃蟹）
- 其他（请列举）

Q5. 您购买海鲜时侧重以下哪些因素？

- 价格
- 体积大小
- 质量（例如是否新鲜）
- 味道
- 健康益处
- 是否方便在家处理及烹饪
- 原产地（例如野生或养殖）
- 产品来源（例如本地或进口）
- 捕捞方式（例如竿钓或渔网捕捞）
- 是否以相对人道方式取得的海鲜（例如在海产养殖/收获期间动物少受痛苦）
- 供应情况
- 文化/宗教因素
- 海鲜的外观及气味

Q6. 你倾向通过以下哪些方式获得海鲜的有关信息？（可多选）

- 媒体
- 互联网
- 家人/朋友
- 购买场所（例如超市等）
- 烹饪节目和名厨
- 店内标志
- 书籍
- 宣传册/传单
- 其他（请列举）

Q7. 展望未来五年，您的海鲜消费量与目前相比将会？

- 高很多
- 更高
- 大致相同
- 更低
- 低很多

Q8. 如果一家公司能够在海产养殖/收获过程中减少动物的痛苦，您是否会从该公司购买更多海鲜？

- 是
- 否

*We include crab (螃蟹) in question 4 as it is a common choice for Chinese consumers

Q9. 您是否愿意以更高价格购买通过可持续方式捕获的环保海鲜？

*生产环保海鲜所采用的渔业管理方式主要考虑子孙后代的需求并维护海洋环境的长期健康

- 是
- 否

Q10A. 与普通水产相比，您愿意为经过认证的环保海鲜额外支付多少钱？

- 不超过5%
- 5-9.9%
- 10-14.9%
- 15-19.9%
- 20-25%
- 25%以上

Q10B. 您不愿为环保海鲜支付更多费用的原因是什么？（可多选）

- 我的预算有限
- 我在购买副食品方面比较精打细算
- 我无法信赖海鲜产品中的环保标签
- 环保海鲜不是我担心的问题
- 其他（请列举）

Q11. 您有多大可能会尝试一种新的海鲜？

*是您从未尝试过的新的海鲜品种 .

- 决不
- 不太可能
- 中立
- 有可能
- 非常可能

Q12A. 您不愿尝试新品种海鲜的原因是什么？（可多选）

- 我有自己特定的口味偏好
- 我担心可能会中毒或过敏
- 其他（请列举）

Q12B. 怎样能够令您更愿意地尝试新品种海鲜？（可多选)

- 商店和餐厅里有懂行的员工
- 食谱/烹饪技巧
- 商店里有更好的海鲜选择
- 商店里有新品种海鲜的推广优惠
- 提供有关新品种海鲜的更全面信息（例如它是否可能引起某些过敏症状或是否通过可持续方式捕获）
- 其他（请列举）

Survey questions in the Japanese market

Q1. どれくらいの頻度でシーフードを購入しますか。

*シーフードには魚類のほか、エビ、アワビ、イカなどの貝類・甲殻類も含まれます。但し、海藻類は含みません。

- 週2回以上
- 週1回
- 月1～3回
- 月1回以下
- 購入しない

Q2. 最も頻繁にシーフードを購入する場所はどこですか。（当てはまるもの全てを選んでください）

- スーパー/食料品店
- 魚屋
- レストラン
- ファストフード店またはテイクアウト店
- オンライン
- その他（具体的に）

Q3. 最も頻繁に購入するシーフードは、以下のどの項目に当てはまりますか。（当てはまるもの全てを選んでください）

- そのまま食べられる食品（水産物缶詰、燻製サーモンなど）
- 生鮮冷凍水産物（冷凍切り身など）
- 常温/冷蔵の生鮮水産物（冷蔵切り身など）
- レストランの食事
- 貝類、甲殻類（カキ、エビ、ロブスターなど、伊勢エビ）
- その他（具体的に）

Q4*. 最も頻繁に購入するシーフードの種類は何ですか。（当てはまるもの全てを選んでください）

- 淡水魚（マス、ウナギなど）
- 海水魚（マグロ/ツナ、ヒラメなど）
- 河口魚（ナマズ、カレイなど）
- 貝類、甲殻類（ムール貝、カキ、エビ、ロブスターなど）
- その他（具体的に）

Q5. シーフードを購入する際、以下の項目を重視するかどうか、5段階評価で回答してください。

- 値段
- サイズ
- 品質（鮮度など）
- 味
- 健康上のメリット
- 調理のしやすさ
- 出所（天然または養殖）
- 産地（国産品または輸入品）
- 漁法（延縄漁、網漁など）
- 人道的な方法で調達された水産物（養殖/漁の最中に痛みやストレスを感じさせない）
- 入手しやすさ
- 文化/宗教的な要素
- 外観と臭い

Q6. どのような経路でシーフードに関する情報を入手していますか。（当てはまるもの全てを選んでください）

- マスコミ
- インターネット
- 家族/友人
- 購入先（スーパーなど）
- 料理番組、有名な料理人
- 店内の宣伝
- 書籍
- パンフレット/チラシ
- その他（具体的に）

Q7. あなたが食べるシーフードの摂取量は今後5年間に変わると思いますか。

- 非常に多くなる
- 多くなる
- 同じ
- 少なくなる
- 非常に少なくなる

Q8. 養殖/漁の最中に痛みやストレスを感じさせない方法を採用している水産会社からの購入量が増えると思いますか。

- はい
- いいえ

*We include crayfish (螃蟹) in question 4 as it is a common choice for Japanese consumers

Q9. 割高であっても、持続可能な方法で調達されたシーフードをより多く購入しますか。

*サステナブル・シーフードとは、次世代のニーズおよび長期的な海洋環境保護を考慮した漁業によって調達される水産物です。

- はい
- いいえ

Q10A. 認証サステナブル・シーフードが一般の水産物よりも割高である場合、割増率がどの程度であれば購入すると思いますか。

- 5%未満
- 5〜9.9%
- 10〜14.9%
- 15〜19.9%
- 20〜25%
- 25%以上

Q10B. サステナブル・シーフードの割増額を支払いたくない理由は何ですか。（当てはまるもの全てを選んでください）

- 予算が限られているから
- お買い得品を購入するから
- 水産物のサステナブル認証を信頼していないから
- サステナブル・シーフードであるかどうかを気にしないから
- その他（具体的に）

Q11. 新種のシーフードを試してみようと思いますか。

*新種とは今までに食べたことがないという意味です。

- 試さない
- 試す可能性は低い
- どちらとも言えない
- 試す可能性はある
- 試す可能性は高い

Q12A. 新種のシーフードを試さない理由は何ですか。（当てはまるもの全てを選んでください）

- 食の好みがはっきりしている/決まっているから
- 毒/アレルギーのリスクが心配だから
- その他（具体的に）

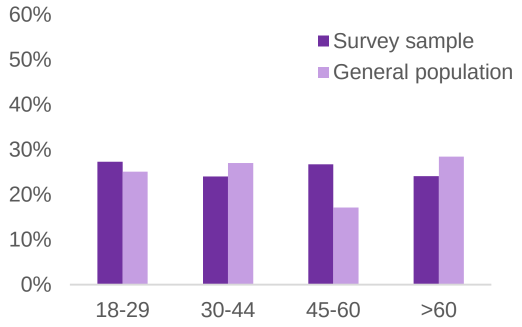
Q12B. どうすれば新種のシーフードを試し易くなると思いますか。（当てはまるもの全てを選んでください）

- 小売店やレストランの従業員から十分な説明を受けられる
- レシピ/調理方法のヒントが得られる
- 店舗で豊富な商品を取り扱っている場合
- 店舗で新種のシーフードを販促している場合
- 詳しい商品説明がある場合（アレルギーの可能性やサステナブル漁業など）
- その他（具体的に）

Appendix 3

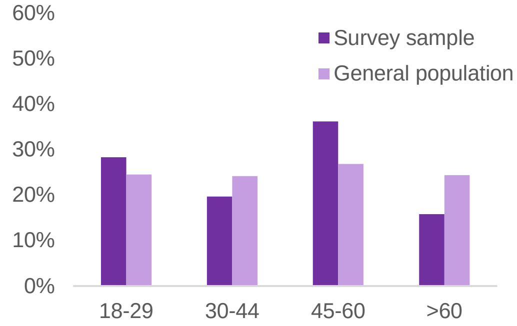
Survey Sample Demographics

New Zealand survey sample compared with general population



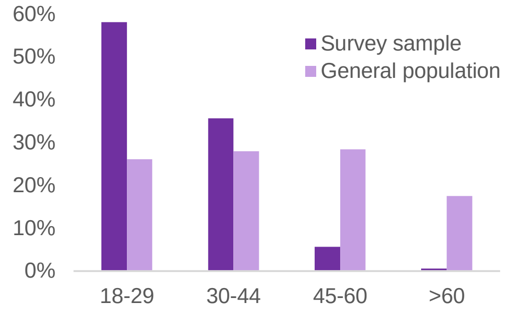
The New Zealand survey's age distribution broadly reflects the general population.

US survey sample compared with general population



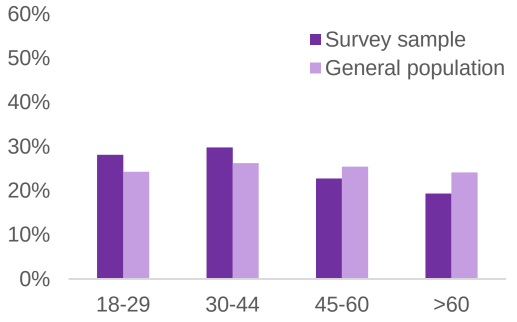
The United State survey's age distribution broadly reflects the general population.

Chinese survey sample compared with general population



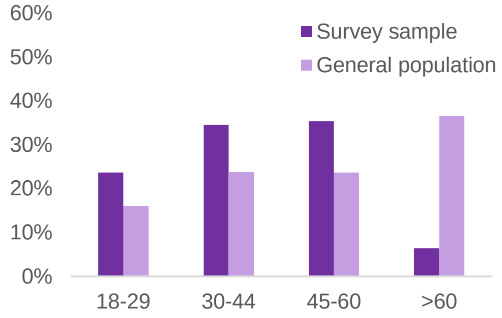
The Chinese survey's age distribution is skewed towards a younger population with reduced coverage of 45- 60 and over 60 age groups. Results should be interpreted with caution.

Australian survey sample compared with general population



The Australian survey's age distribution broadly reflects the general population.

Japanese survey sample compared with general population



The age distribution of the Japanese survey is skewed towards a younger population with reduced coverage of over 60 age group. Results should be interpreted with caution.

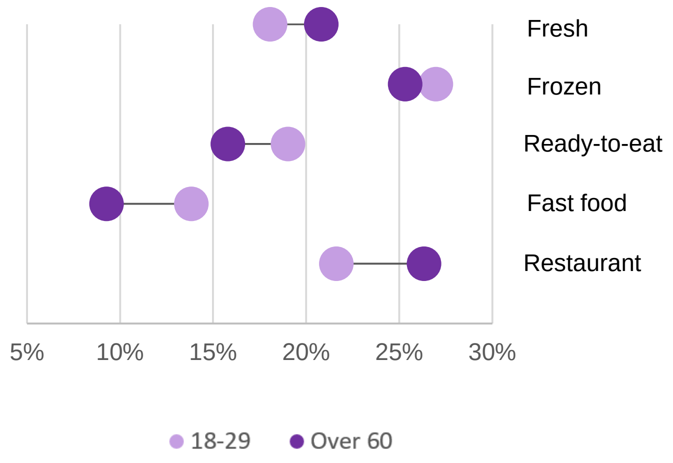
The gender distribution

The gender distribution of the survey samples mostly reflects that in the population except Japan. The Japanese survey sample skewed towards a larger male population (52% compared with 46% of the general population).

Source: MPI and United Nations, 2019

Appendix 4

In the United States market, the old generation prefer fresh/chilled seafood



Appendix 5

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