



# Top Seafood Consumer Trends 2022



## Introduction

# Top Seafood Consumer Trends: 2022



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Welcome to this year's edition of 'Top Seafood Consumer Trends' – where we look at what is moving in the world of seafood. This year we start by briefly looking into some of the things the Norwegian seafood industry is doing that can be linked directly to the trends highlighted in the 2021 edition of the report. Then we will dive even deeper into sales channels and sustainability. These two themes have been chosen based on insights we have gained over the past year, as well as feedback from our readers. The trends we covered in the previous report were: New sales channels, sustainability, convenience, transparency and health & wellness.

Covid-19 has greatly influenced our everyday life this past year, and it has impacted the way we behave. Worth mentioning is how the retail landscape is shifting from store-based to e-commerce, shifting consumer priorities when choosing what to buy and where to shop. This also drives development in online shopping, where we are no longer talking only about e-commerce but about numerous variations on the term – such as quick commerce and social commerce.

Then we have sustainability. The importance of the growing number of issues that fall under the sustainability umbrella is increasing in

the mind of the consumers – and companies are following. We know that consumers have different views on what sustainability is, but how do you measure it? And how are we doing in terms of delivering according to the measures in place? Really understanding the UN's 17 Sustainable Development Goals is a place to start if, like us, you want to know more about how the seafood industry is doing, and what needs to be done in the future for it to be more sustainable.

Enjoy reading. Should you have any questions or comments, or simply want to discuss the topics addressed. Please let us know!



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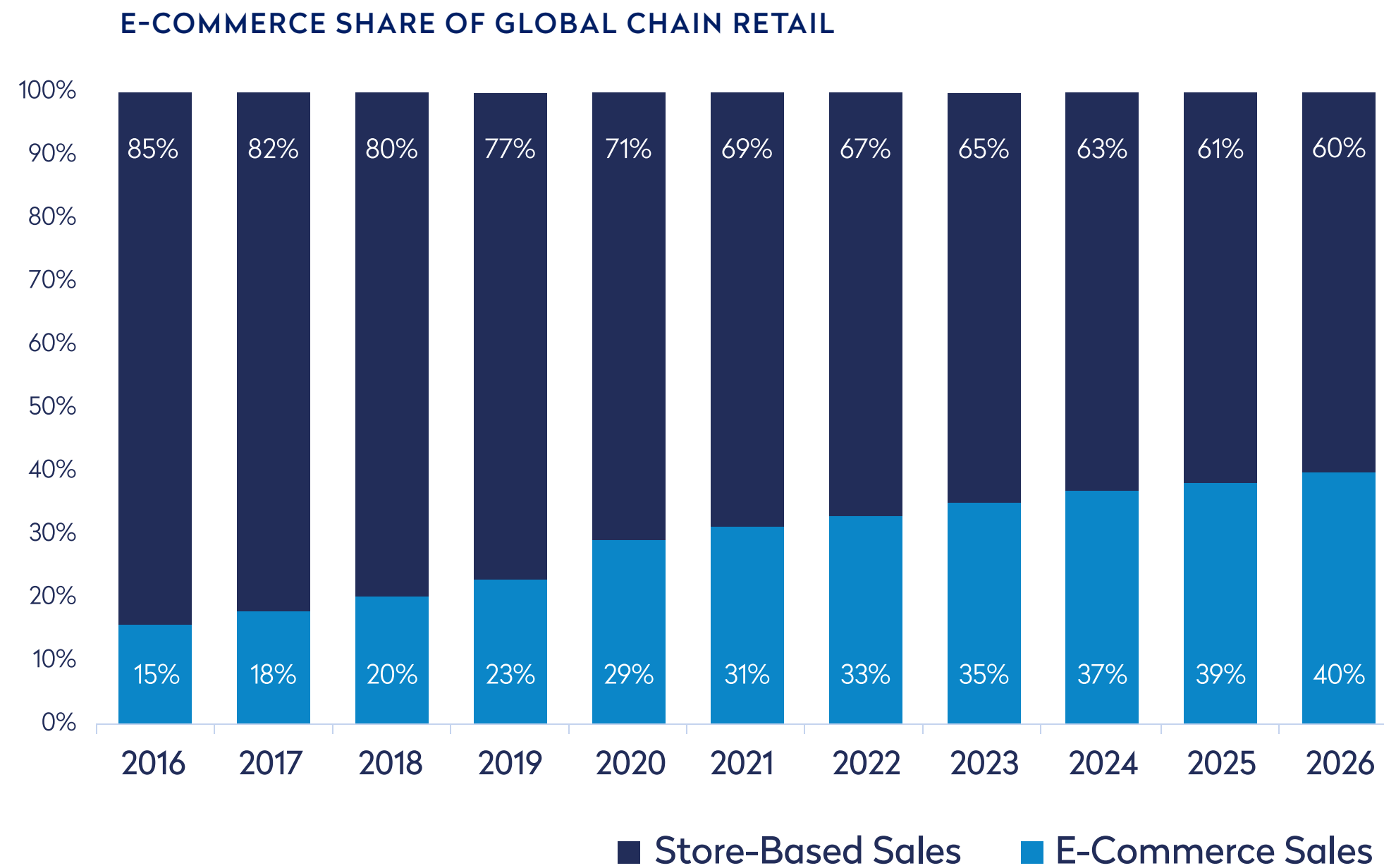
Chapter 1

# Recap & Update

If we were to sum up the trends covered across this report, the focus would very much be on younger consumers. These are the seafood consumers of the future – and they are also largely the ones driving new types of commerce. These are the consumers looking for convenience. These are the ones that like to try new products such as minced salmon, and they're also often the consumers pushing for clarity around sustainability – which gets its own chapter later on. Often, we are also seeing convergence of these trends: a young person ordering their groceries online to be delivered in 15 minutes by bicycle, for example.

Of course, there are many factors affecting the way people shop and consume today – not least the Covid-19 pandemic. And many factors other than age play a role in how and what people consume. Here, we will take you through some of the key trends we are seeing and how businesses are responding and carving out new sales channels or using new tools to meet the growing demands around sustainability and transparency.

# New Sales Channels



E-commerce is here to stay. That was one of the key findings from last year’s report, and the online sales channel has only continued to grow through 2021. E-commerce now stands for a little over 30% of all global chain retail sales (Edge by Ascential, 2021a).

Restaurants have begun to take note of the possibilities offered by e-commerce, no doubt further fuelled by the pandemic and the fact that dining out became more difficult – if not impossible – at certain times. Over the last year we have seen restaurants begin to offer home kits in addition to the traditional take-away service. The concept is to offer consumers all of the ingredients and the recipes needed to make the restaurant’s signature dishes at home.

One company that has excelled in understanding the value of e-commerce is Vulkanfisk with its ‘home kit’ delivery system. Choosing from a range of delicate fish dishes, it specialises in delivering food that is convenient, tasty and rich in protein.

VULKANFISK'S CEO, ØYVIND GLØRSTAD, HAD THIS TO SAY ABOUT THE COMPANY'S NEW DELIVERY SYSTEM:



Photo: Vulkanfisk

“When the pandemic hit, we saw a big spike in orders for home delivery of our products. This was mainly because both we and the consumers were forced to find new ways to deliver and acquire fresh and frozen fish products.

We divide our services into two categories: Fresh or frozen seafood delivered to the door of consumers, and home kits for preparing dishes we make at the restaurant. **For now, the delivery of fresh or frozen seafood is the most popular, but we have seen an uptick in**

**orders for home kits, especially when the weekend comes.** In the future we see this new sales channel as a possibility to increase our revenue, especially with the younger generation, where the popularity of buying seafood online is increasing.”



# Convenience

Imagine yourself on your way home from work: you will have to make dinner for the family while your partner picks up the children from kindergarten. What would you make? What would be the easiest option for dinner? And what would be the easiest *healthy and nutritious* option?

You would probably go for something you already know how to prepare, and that you know the children will like. In other words, something convenient that requires the least time and energy.

In last year's report we talked about convenience mainly in terms of product format. However, convenience is more than that. Brown and McEnally (1992) define convenience as “a reduction in the amount of consumer time and/or energy required to acquire, use, and dispose of a product or service relative to the time and energy required by other offerings in the product/service class”.

Godfisk, the Norwegian Seafood Councils' brand in Norway, is working on making seafood the more convenient option. It is doing this by spreading knowledge about seafood, and inspiring consumers to choose seafood more often by showing how easy it is to prepare.

TRYM EIDEM GUNDERSEN, DIRECTOR NORDIC COUNTRIES, NORWEGIAN SEAFOOD COUNCIL, HAD THIS TO SAY:

“The main goal of Godfisk is to increase seafood consumption in Norway and at the same time push the official statement of the Norwegian government: eating fish two to three times a week is good for your health.

Through inspiration and well-thought-out recipes, Godfisk will provide Norwegian families with better knowledge of seafood and seasonality, allowing them to better enjoy seafood dishes.

Our aim is that Godfisk will help consumers feel that preparing seafood is an easy option. **Using a wide variety of different recipes, we want to show that making seafood is fast, tasty, and easy – both on weekdays and at the weekend.** Our communication concept is showing how easy and simple seafood can be. Testing of the concept shows that it is an easy-to-understand message, that it provides inspiration and that the message is a clear encouragement to consumers to eat more seafood, while also lowering the threshold for success in the kitchen.”



Photo: Godfisk

# Health and Wellness

We know that seafood is seen by many as the healthier option, but consumers in several markets continue to eat less fish.

One company trying to make it easier for consumers to choose healthier options and eat more seafood is Lofotprodukt. In September 2021 it launched a new product 'Lofoten kjøttdeig av laks,' or minced salmon – an easy alternative to red meat in popular dishes such as tacos, lasagne and burgers.



AGNETE BELL, LOFOTPRODUKT'S MARKETING MANAGER, SAID THIS ABOUT 'LOFOTEN KJØTTDEIG AV LAKS':

“One of the many things Lofotprodukt is trying to achieve is to get people to choose fish more often. **Many people want to eat less meat and seven out of ten say they would like to eat more fish, yet most consumers tend to replace red meat with vegetarian options.** One of the Lofotprodukt co-workers realised that many of the dishes favoured by Norwegians are based on minced meat but also have flavours that go well with fish – so why not make it easier to replace the red meat in these dishes with minced fish?”

The result is something that is certainly convenient: consumers can stick to the same recipes and dishes they know and love, while the low-fat part of the fish that is used in the product gives it a delicate taste that works well with spices and other flavours. Therefore, the only thing shoppers have to do differently is to pick up ‘Lofoten kjøttdeig av laks’ from the store rather than ‘regular’ minced meat. In some stores the products are even placed next to each other. Lofotprodukt has also noticed that ‘Lofoten Kjøttdeig av laks’ is particularly attractive to a younger segment than their other fish products – which is positive as this is the consumer group that eats the least fish.



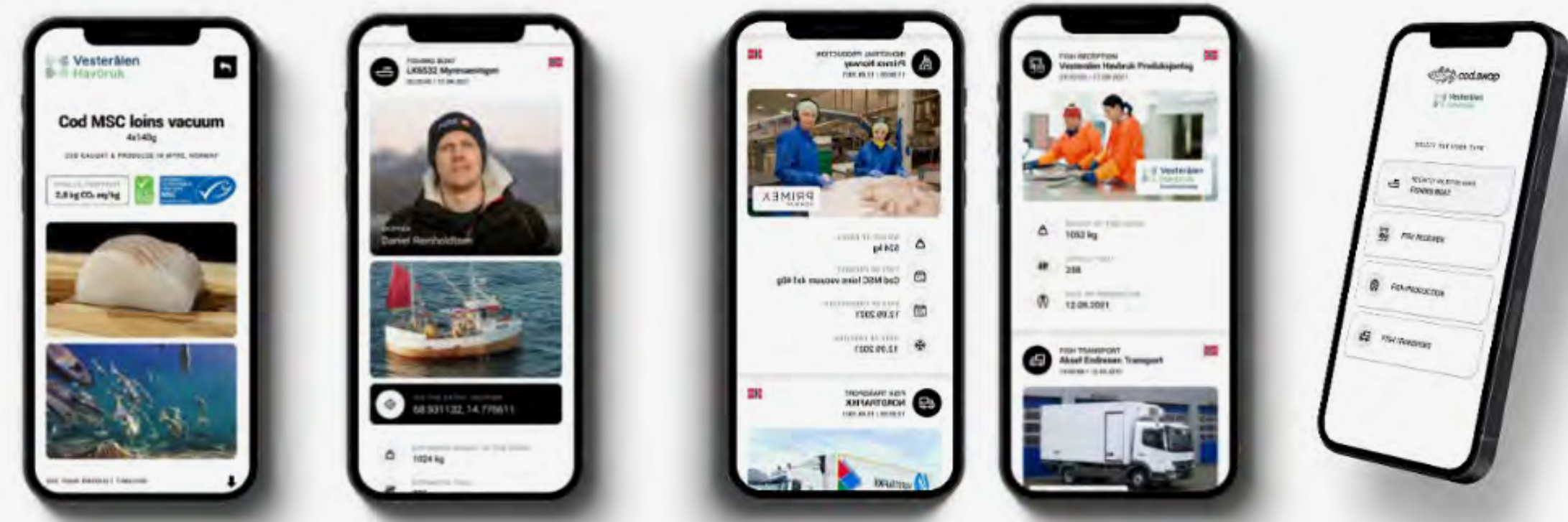
# Transparency

A number of new technologies are helping to boost transparency in seafood. In last year's report we focused on artificial intelligence, the internet of things and blockchain. **This year we are taking a closer look at blockchain and its uses around transparency.**

What is blockchain? The technology is most famous for its use by Bitcoin and other cryptocurrencies but as a highly secure, shared, immutable ledger, its uses are huge. We looked for local companies that are using blockchain as part of their business plan and one company that stood out was Vesterålen Havbruk and its ‘CodSwap’ app.

‘CodSwap’ allows users to trace their cod from catch or harvest, through processing and transport before ending at the destination of a fish handler.

## VESTERÅLEN HAVBRUK'S ‘CODSWAP’ APP, SHOWING A VISUAL OF THE WHOLE VALUE CHAIN



VESTERÅLEN HAVBRUK'S CEO BRYNJAR KVÆRNSTUEN SAID THIS ABOUT THE APP:

**“In order to meet the standards of a growing, younger generation of health, climate, and animal welfare conscious consumers, seafood producers will need to make trust and transparency an embedded part of the whole value chain. Blockchain technology means that for the first time in history, this is now possible to do at scale. At Vesterålen Havbruk Technology we are currently testing our blockchain solution in our own white fish value chain, for both traditional fishery and aquaculture. We hope to make it available to the rest of the industry very soon.”**

# Sustainability

Later on we will dive deeper into sustainability and look at how Norway is doing in terms of the UN's Sustainable Development Goals (UN SDGs). For now, let us have a brief look at one area where the industry is working to become more sustainable.

Most of the ingredients that make up the feed used in the salmon industry are imported. And the raw materials used in fish feed represent 80% of the greenhouse gas emissions produced by the industry (Bellona, 2021; Winther et al, 2020). To meet the goals of the UN SDGs, the Norwegian industry must develop new and more local sources of protein for fish feed, that in turn can reduce the impact on the environment. One consortium working to find innovative ways to feed not only fish, but also other farm animals,

is the 'Foods of Norway' research centre, hosted by the Norwegian University of Life Sciences. Together with industrial partners, the consortium's main objective is to generate knowledge related to production and the use of novel raw materials based on local bio-resources that are otherwise not suitable for direct human consumption.

Foods of Norway has, together with its industry partners, recently managed to produce single cell proteins from Norwegian spruce tree by-products at medium industrial scale. One of the consortium partners, Biomar, is currently in the process of testing this novel source of protein in feed for salmon.



VEGARD DENSTADLI, TECHNICAL DIRECTOR AT BIOMAR NORWAY, SAID THIS ABOUT THE PROJECT:

“The motivation behind Biomar’s contribution to the Foods of Norway project is related to the company’s internal sustainability goals. **If the project succeeds, it will first of all help us to reduce our, and the industry’s, carbon footprint. Secondly it would contribute to the development of a new Norwegian bio-industry.** Until now the feed has been tested in lab environments, but as of September 2021, Biomar is testing it in sea cages where the rearing conditions and size of the fish is more comparable to a commercial setting. Initial reports from the Biomar researchers are positive. Our experience is that farmers, as well as consumers, are curious and positive about the project.”

Photo: Biomar



Chapter 2

# New Sales Channels

# The pandemic impact

The way people shop, the way they consume, the way they choose to eat and who they eat with have all been impacted by Covid-19. Some trends – such as online shopping – have been rapidly accelerated by the pandemic, though the growth seen over 2020 and 2021 is likely to slow going forward. However, this online shopping boom has in turn fed a growing economy of its own as superfast home grocery delivery expands in cities across the globe.

Other areas, such as eating out, have of course been negatively impacted by restrictions on socialising or simply by people choosing to stay home more as they

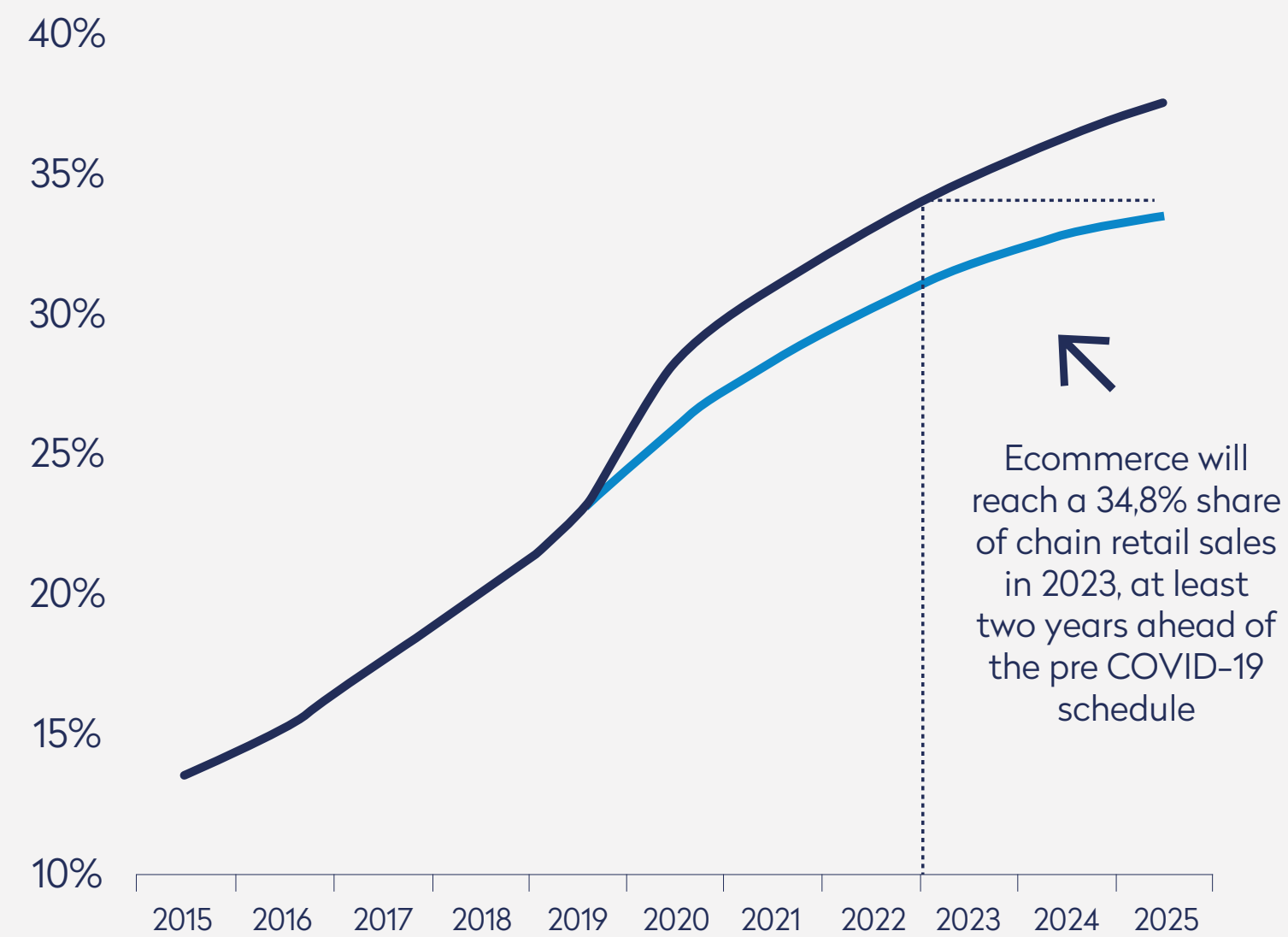
adapt to a more cautious life. But even here, the changes brought about over the past two years have resulted in innovation with restaurants offering home food kits for example, allowing consumers to recreate their favourite restaurant dishes from the comfort of home.

And what about future consumer habits? As well as offering a deep dive into the trends we have been watching over 2021, this chapter will look at what we are likely to see in the future: everything from livestreaming shopping – already a big source of revenue in China – to voice ordering and the expansion of in-app social media shopping.

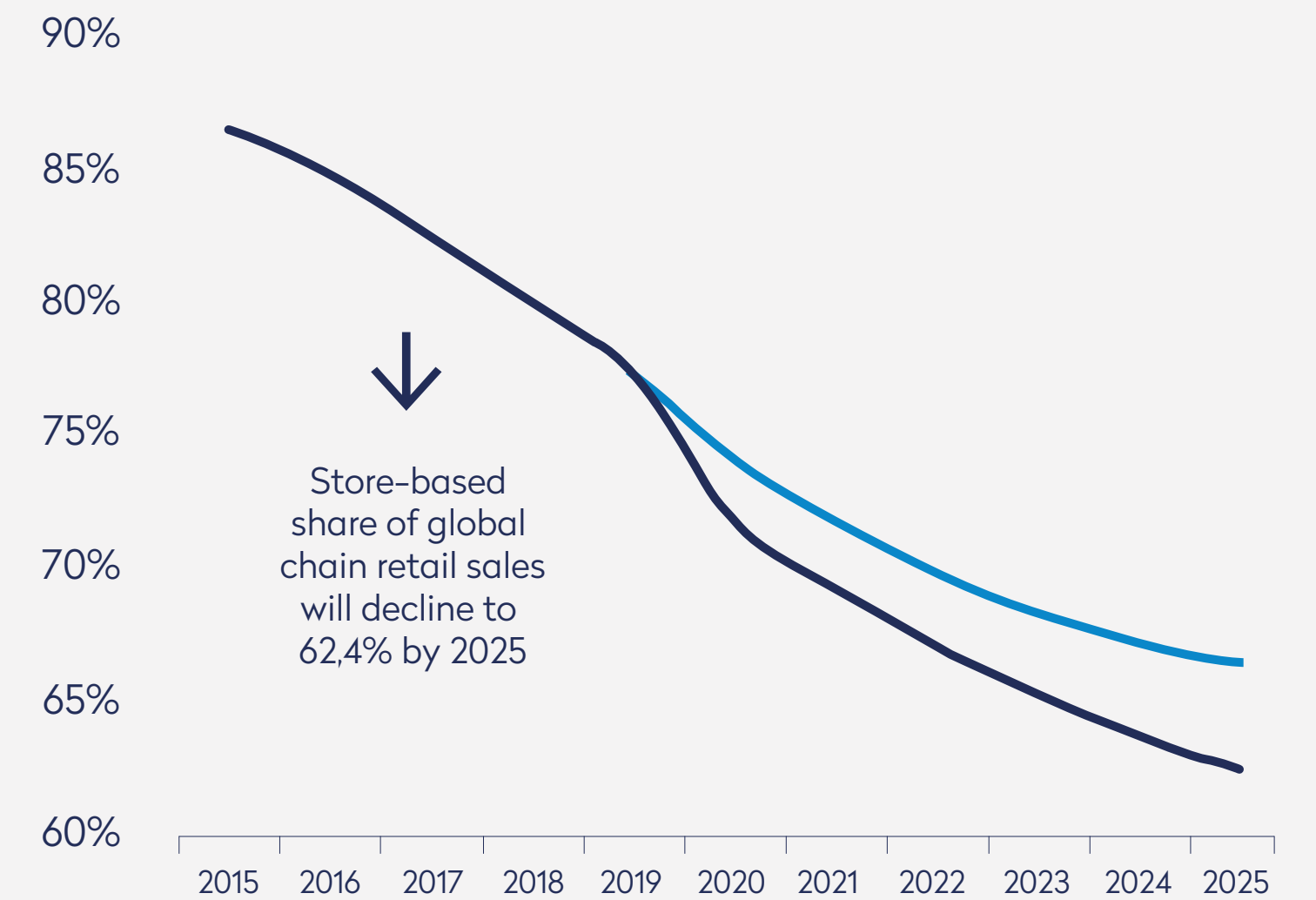
## The global view

The worldwide chain of retail sales has been shifting in recent years and e-commerce is set to account for 34.8% by 2023, according to Edge by Ascential. It predicts that store-based sales will account for 62.4% of global retail sales by 2025.

Ecommerce share (%) of global chain retail sales



Store-based share (%) of global chain retail sales



55%

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note *free delivery* has the biggest influence when buying a product online

With e-commerce gaining traction, together with shifting customer expectations and competitive pressure, the need for change in the retail market must be brought forward – though the retail landscape has already shifted at a faster rate than initially forecasted as a result of the pandemic (Edge by Ascential, 2021).

It is interesting to look at what online shoppers cite as their priorities when buying through e-commerce channels: a survey conducted by Global Web Index (2019)

notes free delivery (55%), coupons/discounts (43%) and reviews from other customers (36%) as the features deemed to have the biggest influence on whether someone buys a product online or not.

Even though e-commerce sales increased overall in 2020, some industries performed better than others. According to Visual Capitalist (2021), global spending on food and personal care, for example, grew by 44.8%, while travel spending (unsurprisingly) decreased by more than 50%.

Unsurprisingly, given the way the Covid-19 pandemic has impacted consumer habits, it is also e-commerce that is expected to see the fastest growth when it comes to edible grocery sales going forward (Edge by Ascential, 2021b). According to its researchers, edible grocery e-commerce is expected to account for almost 7% of the chain retail market by 2026, up from 5.1% in 2021. And in fact, this is not being wholly driven by the pandemic but is part of a trend we have been watching over the past 10 years: back in 2010 e-commerce accounted for just 0.8% of total global edible grocery sales.

Today though, it is still supermarkets and neighbourhood stores that hold the largest proportion of global edible grocery sales – at 40%, according to Edge by Ascential (2021b) – making them the most popular grocery channel and accounting for nearly twice the sales seen at hyper stores, the closest rival. As other channels such as e-commerce and discount gain traction though, the supermarkets and neighbourhood stores hold is predicted to drop – though marginally – to 39.2% by 2026.

A large, bold, light blue graphic of the number '40%' is centered on the page. Below it is a thin horizontal line.

supermarkets and  
neighbourhood stores hold the largest  
proportion of global edible grocery sales

# 52%

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of consumers in Italy say they  
'research and purchase only in store'

Research by Chaltas et al. (2021) shows that a preference for online-only over physical shopping is still some way off. Asked whether they would choose between in-store and online in a pandemic-free world, just 22% said online, compared with 39% who voiced a preference for in-store shopping. However, 38% said the two were equal.

According to McKinsey & Company, omnichannel purchasing and research, which includes both online and in-store shopping, is a practice for more than half of European consumers. The most common

responses are 'omnichannel' or 'research and purchase only online' for products in the categories of sports, clothes, and home-related goods. When it comes to groceries/food for home though, 44% of European respondents say they 'research and purchase only in-store,' 52% say omnichannel, and 4% say they 'research and purchase only online'. In Italy, 52% of consumers say they 'research and purchase only in store,' compared to 45% in France and 27% in the UK. Just 2% of Italians say they 'research and purchase only online,' rising to 4% in France and 9% in the UK (McKinsey & Company, 2021a).



# The regional outlook

Still, from 2019 to 2020, the percentage of people buying groceries online increased dramatically. In the US for example, online grocery shopping was expected to account for 12,4% of the country's total e-commerce sales for 2021 according to eMarketer, which writes that tens of millions of US consumers became online grocery buyers for the first time in the midst of the pandemic. Furthermore, it adds that this is something that is expected to go from being a trial to a habit across 2021 (eMarketer, 2021a).

Photo: Pexels: Rodnae Productions

According to eMarketer, the pandemic prompted consumers to seek out a safe and convenient way to get their groceries – and many retailers responded to the shifting consumer demand. After the pandemic-driven boom though, the share of digital grocery shoppers is likely to expand at a slower pace in the coming years and will mean future increases are dependent not only on new customers coming to online but also on existing customers increasing their online shopping frequency (eMarketer, 2021a).

As a result of the pandemic, sales of grocery delivery and pickup increased in the US in 2020. Sales were \$1.2 billion in August 2019 and rose to \$4 billion in March 2020, a 233% increase. From March to June 2020, sales increased by an additional 80% before dropping to \$5.7 billion in August 2020. Online grocery deliveries and in-store pickups reached \$5.3 billion in May 2021 (Statista, 2021).

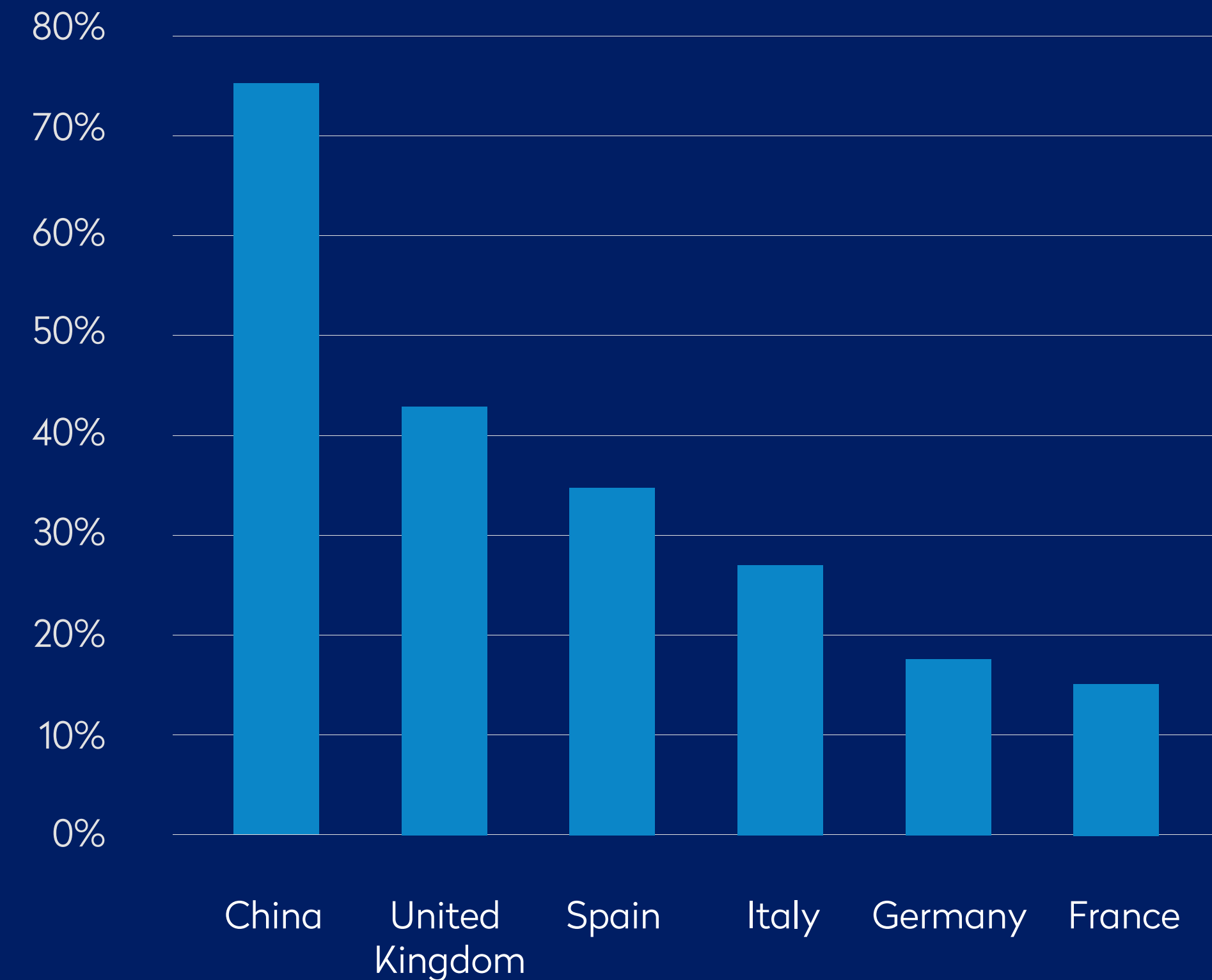


Over in the UK, a McKinsey survey from October 2021 (2021a) showed that 43% of UK respondents had used a 'grocery delivery' service in the previous three months, with 56% saying they had been using this service more often than before. Of the countries surveyed however, China has a far higher penetration of grocery delivery use: 74% said they had used such a service in the last three months.

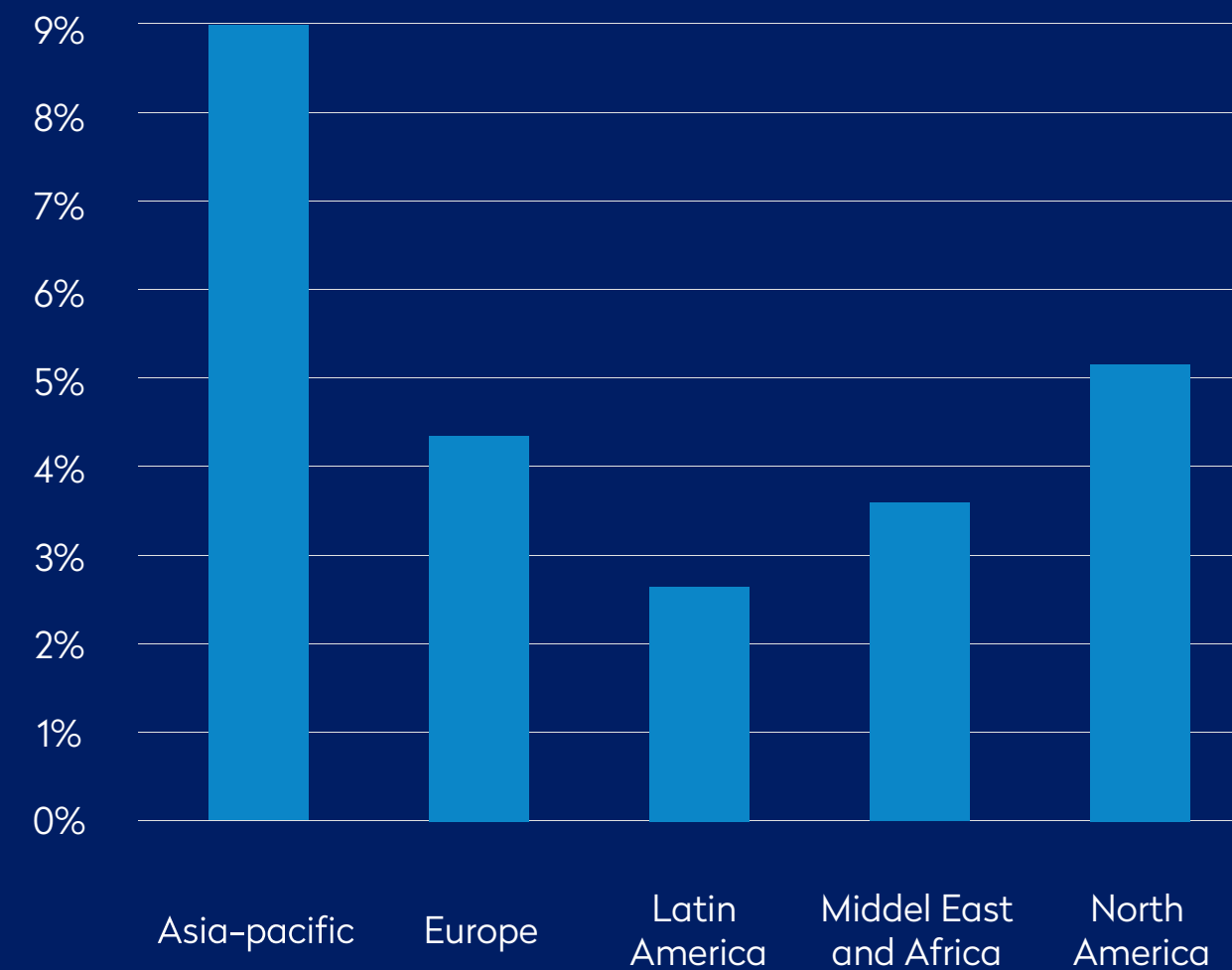
In the UK, Italy, and Germany, more than half of those who had used grocery delivery services in the previous three months said they had done so more often than before.

## GROCERY DELIVERY

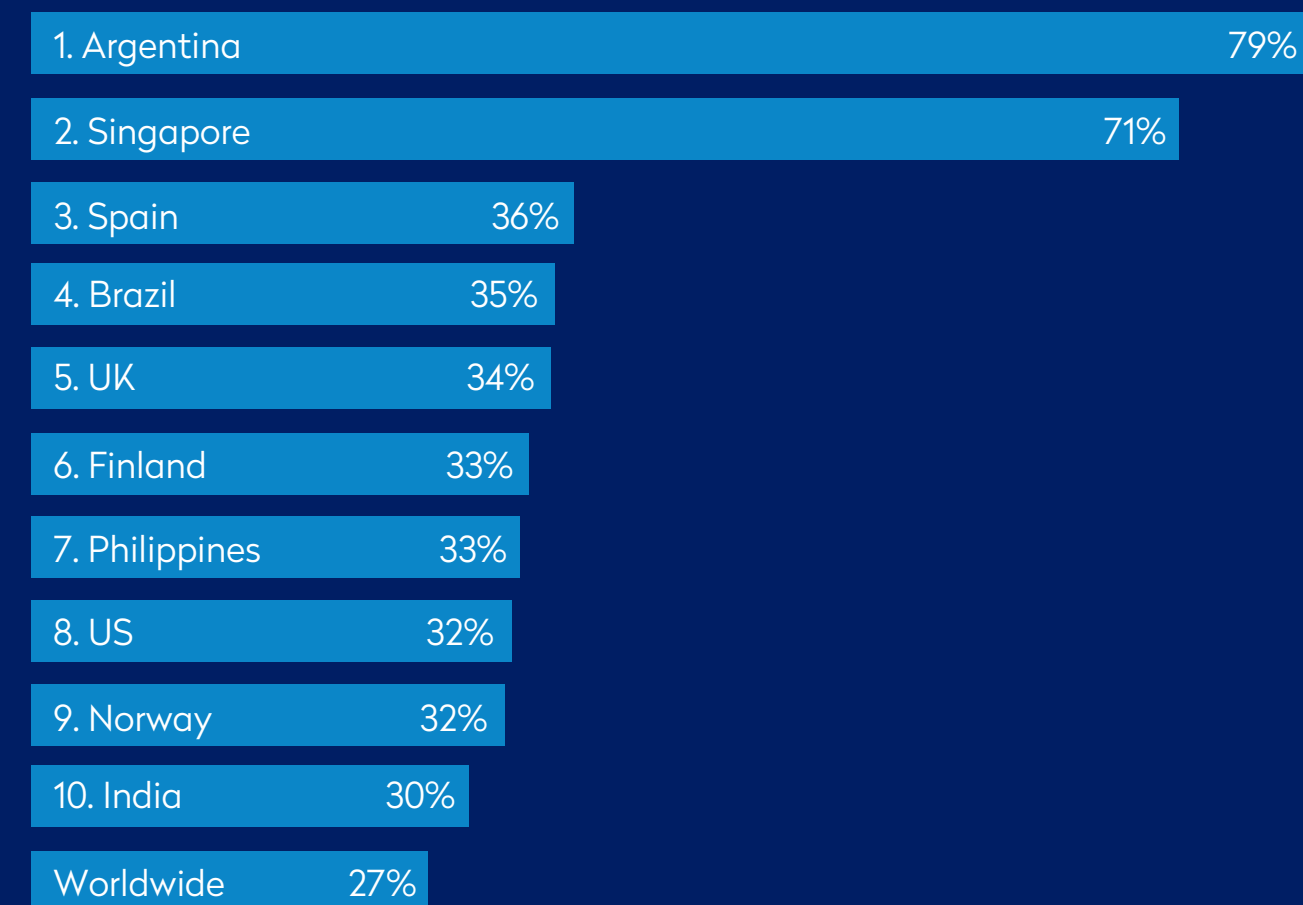
USED GROCERY DELIVERY IN THE LAST THREE MONTHS (OCTOBER 2021)



### E-COMMERCE SHARE OF TOTAL GLOBAL SALES OF EDIBLE GROCERY – 2020



### TOP 10 COUNTRIES, RANKED BY RETAIL ECOMMERCE SALES GROWTH, 2020 – % CHANGE



According to Edge by Ascential data – and hardly surprising given the high numbers just noted in China for online grocery shopping – Asia-Pacific had the biggest e-commerce proportion of edible grocery sales in 2020. At 9%, the region is notably ahead of other parts of the world, with North America showing the next highest level at 5.1% while Latin America had the lowest, with e-commerce accounting for 2.7% of edible grocery sales in that region.

Interestingly though, Latin America, led by Argentina, is the fastest growing region for e-commerce, with a 36.7% growth rate in 2020, according to eMarketer (2020). eMarketer also reports that this is the first

time since it began tracking the region in 2009 that Latin America has taken the lead, as well as the first time since 2010 that e-commerce sales growth has not been led by Asia-Pacific (eMarketer, 2020).

eMarketer attributes the growth in Latin America's e-commerce is due, at least in part, to the Covid-19 restrictions in two of the region's main cities, Buenos Aires in Argentina and São Paulo in Brazil.

Within Latin America, the fastest growing e-commerce market in 2020 was Argentina, with a 79% increase in online sales compared with 2019.

# The impact on brick-and-mortar shopping

The 'decline' of physical brick-and-mortar shopping is nothing new – the rise of e-commerce and online businesses has seen many people question the future of traditional stores such as supermarkets and the local grocery store. But these concepts are not giving up without a fight and there remains much that is appealing to consumers about actually seeing a product before they buy it.

## BRICK-AND-MORTAR:

Traditional street-side businesses offering items and services directly to clients, where customers can look at the products, speak with employees, and inquire about products or services before making a purchase. The local grocery store or supermarket are examples of brick-and-mortar stores.

## CLICK-AND-MORTAR (OMNICHANNEL BUSINESS MODEL):

Businesses that have both an online and offline presence are referred to as click-and-mortar.

To adapt to the changes taking place and to capture the benefits of each business model, it is becoming increasingly common for brick-and-mortar stores to have an online presence too. This has led to new terminologies seeking to describe the hybrid models that are emerging, such as 'click-and-mortar' or 'bricks and clicks' (Investopedia, 2021a).

It is not only the case that traditional ‘real world’ stores are adding online, the reverse is true too: the brick-and-mortar approach is having an influence on stores that were previously online only.

One significant reason for this is that shoppers like to see, touch, and try things before buying them (Corporate Finance Institute, 2021). Amazon is a perfect example. The online shopping behemoth opened its first physical location, Amazon Books, in University Village, Seattle, in 2015. Today it

has physical stores in locations around the world, including its ‘Amazon 4-star’ shops, which carry a variety of popular online products, all of which have received at least a four-star rating on its website.

Businesses that offer this increasingly common omnichannel model allow customers to benefit from quick internet purchases while still getting traditional face-to-face service. Customers can physically inspect, touch, sample, and evaluate products (a critical factor in many categories), while

internet channels provide inspiration, information, and, of course, convenient remote shopping.

This also offers a solution to the problems of online-only, which, although convenient and often cheaper, can result in lower levels of customer service or product satisfaction. The omnichannel approach also means that click-and-mortar stores have the potential to reach a larger audience than their traditional brick-and-mortar peers (Investopedia, 2021b).

# Bringing in new retail



Photo: Adobe Stock

This ‘click-and-mortar’ omnichannel offering has the potential to be much more than simply a physical store and an accompanying website – something that Alibaba showed us when it brought digital technology to its retail concepts, such

as Freshippo. Freshippo first opened in Shanghai in 2016 and is a great example of a ‘new retail’ omnichannel strategy because it seamlessly blends the online and offline experience. Everything in these stores is mobile-driven: you scan items for further

information and to purchase before checking out with Alipay. For customers living within a three-kilometre radius, Freshippo also offers home deliveries within 30 minutes (Wood, 2020).

Carrefour France opened its first 'new retail' store Carrefour Flash 10/10 in Paris in November 2021. Customers can shop and pay without scanning products or even taking them out of their bag. They do not have to register beforehand or download an app. Carrefour describes Flash 10/10 as '10 seconds to shop, 10 seconds to pay'.



# The last mile

As people have increasingly gone online for their grocery shopping, a new economy in fast delivery has grown up too. Some of the firms bringing your groceries that last mile are like Deliveroo or Uber, expanding from take away delivery or even taxi services as they see new opportunities opening up.

Last-mile providers (LMPs) are delivery intermediaries who typically do not own the products they are delivering and instead collect from the shop and deliver to your home. To enhance capacity and delivery speed, some intermediary platforms have invested in so-called dark stores – shops that are not open to the public but only supply these delivery services.

Food service intermediaries increasingly deliver on-demand and immediately – in some cities as quickly as in 10-15 minutes, though it could also be same day or on another, scheduled day (Edge by Ascential, 2020).

Ultra-rapid grocery delivery start-ups are quickly expanding their presence across Europe. The UK delivery service Deliveroo launched 'hop' in 2021, which is a grocery delivery service operating in central London. The new service offers delivery in as little as 10 minutes (Edge by Ascential, 2021c).



Photo: Norges sjømatråd/Thomas Engström

# Fish specifically – and food more broadly

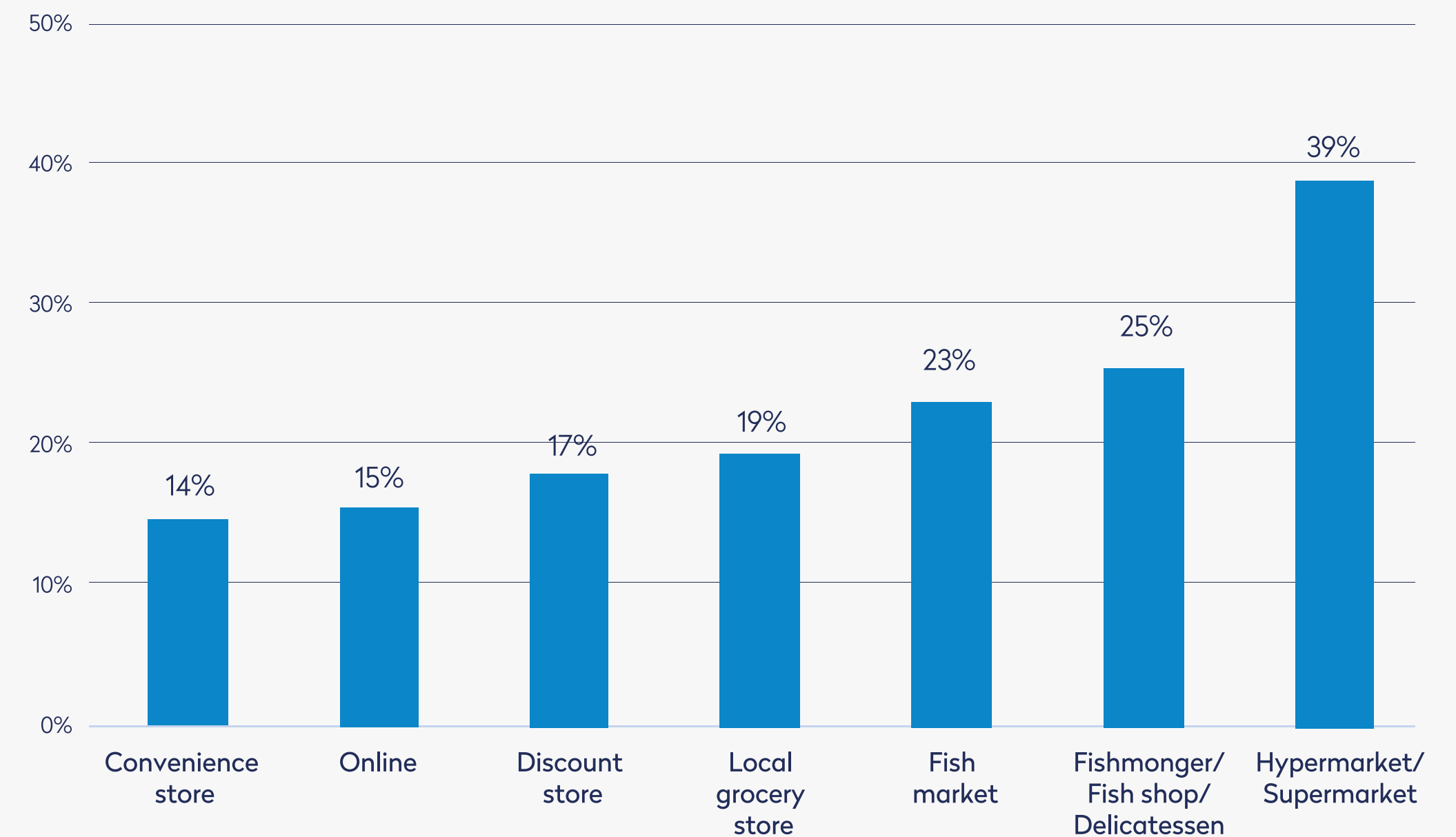
What does all this mean for the seafood industry?  
What has the impact of the pandemic been and  
how do we see trends shifting in a new normal  
that also brings with it innovative and fast-  
changing consumer options?



In the Norwegian Seafood Council’s annual consumer survey for 2021, 6,000 salmon consumers in a number of markets were asked how often they shop for salmon across different types of channels.

Although numbers for online purchases of salmon were notable in 2021 – at an average of 15% saying “quite often” or “very often” for the markets surveyed – tradition still has a hold on the market: hypermarkets and supermarkets take the biggest share. Consumers also show a strong preference for the fish monger and fish market.

### PROPORTION BUYING SALMON "QUITE OFTEN/VERY OFTEN" IN DIFFERENT RETAIL CHANNELS

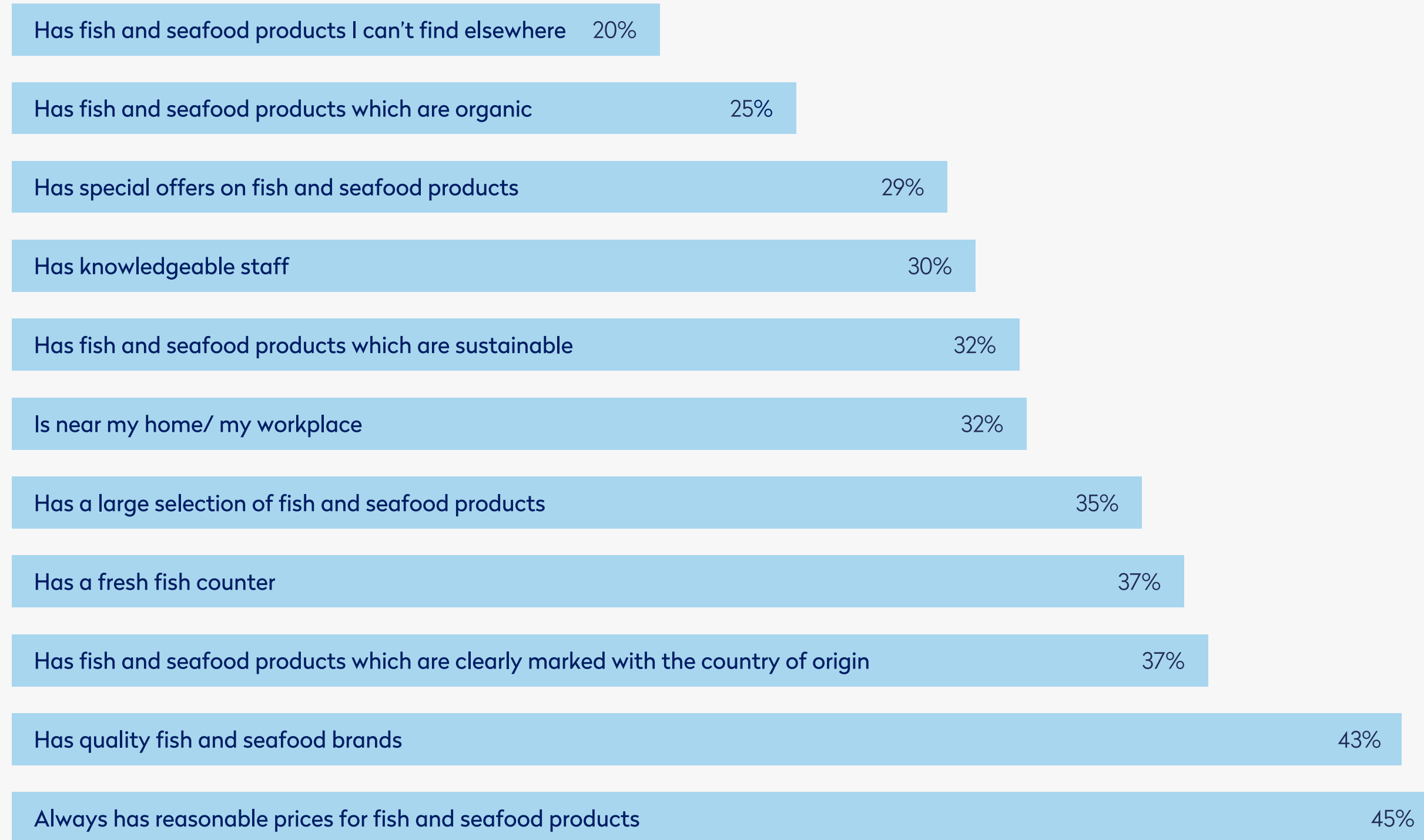


### THE MOST IMPORTANT DRIVER FOR STORE CHOICE

SHARE ANSWERING "VERY IMPORTANT"

### DRIVERS FOR STORE CHOICE

SHARE ANSWERING "VERY IMPORTANT"



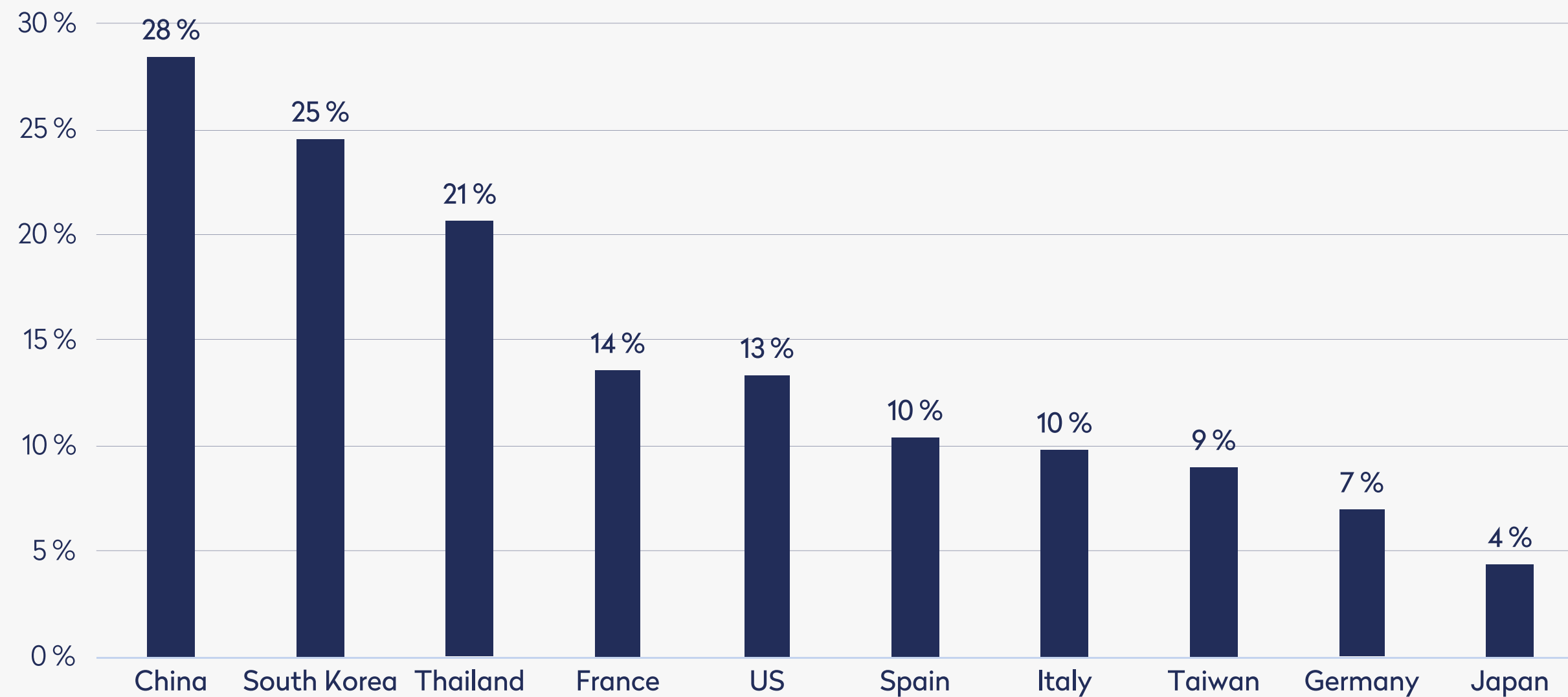
CHINA	has quality fish and seafood brands	56 %
FRANCE	has a fresh fish counter	46 %
GERMANY	always has reasonable prices for fish and seafood products	43 %
ITALY	has a fresh fish counter	39 %
JAPAN	always has reasonable prices for fish and seafood products	30 %
SOUTH KOREA	always has reasonable prices for fish and seafood products	41 %
SPAIN	has a fresh fish counter	57 %
TAIWAN	always has reasonable prices for fish and seafood products	46 %
THAILAND	has quality fish and seafood brands	59 %
US	has quality fish and seafood brands	59 %

The respondents were then asked to think about the shop or market where they most often buy salmon and indicate how important a set of reasons are.

The drivers that most respondents rated as "very important" in the 10 markets surveyed, were "quality fish and seafood brands", "fresh fish counter," or "always reasonable prices for fish and seafood products".

## FREQUENCY OF PURCHASING SALMON ONLINE

E-COMMERCE WEBSITES OR MOBILE APPS - SHARE ANSWERING QUITE OFTEN/VERY OFTEN



When looking at the data for buying salmon online (e-commerce websites or mobile apps), we can see that the top three markets for buying salmon online in 2021 were all markets in Asia. Twenty eight percent of the respondents in China and 25% of the respondents in South Korea answered that they buy salmon “quite often” or “very often” online. In most of the markets surveyed, a larger proportion of respondents aged 20-34 answered that they “quite often/very often” buy salmon online, compared to respondents aged 35-49 or 50-65.

# Where people purchase seafood

## BUYING SEAFOOD ONLINE

So what matters to consumers when buying seafood online? Looking at data for China, which represents a big online seafood market, we see that freshness comes in as the most important factor – both in offline and online retail, according to the Norwegian Seafood Council’s 2021 country study. Country of origin, on the other hand, becomes slightly *less* important to consumers when they buy seafood online – both in terms of the number of people rating it as important and how many other factors rank above country of origin. When shopping in person, country of origin is the fifth-most important consideration, moving down the rankings to seventh place when shopping online.

## The 'disappearance' of out-of-home consumption

For several periods during the Covid-19 pandemic, restaurants around the world have had to close their dine-in services – with many adapting their offerings to continue business. A survey conducted by Pew Research Center in April 2020 among US adults showed that 32% of Americans said they had ordered from a restaurant online or through an app due to

Covid-19. The share was particularly high among younger Americans (18- to 29-year-olds), where 53% said they had ordered from a restaurant online or through an app due to Covid-19. When asked if they had ordered groceries online or through an app from a local store, 21% of Americans said they had (Pew Research Center, 2020).

Over in Europe, research from McKinsey in October 2021 shows that 36% of respondents in the UK and Germany have ‘used restaurant food delivery’ at some point in the previous three months. In China that figure rises to more than half (56%).

As mentioned in chapter one, several restaurants have started to offer home kits in addition to the traditional take away. According to McKinsey’s October 2021 research, (2021a) 10% of UK respondents had ‘used meal kit delivery’ in the past three months. In China, the figure is 16%.

<b>RESTAURANT FOOD DELIVERY</b> USED <b>RESTAURANT FOOD DELIVERY</b> IN THE LAST THREE MONTHS	
CHINA	56 %
UNITED KINGDOM	36 %
GERMANY	36 %
SPAIN	35 %
ITALY	32 %
FRANCE	20 %

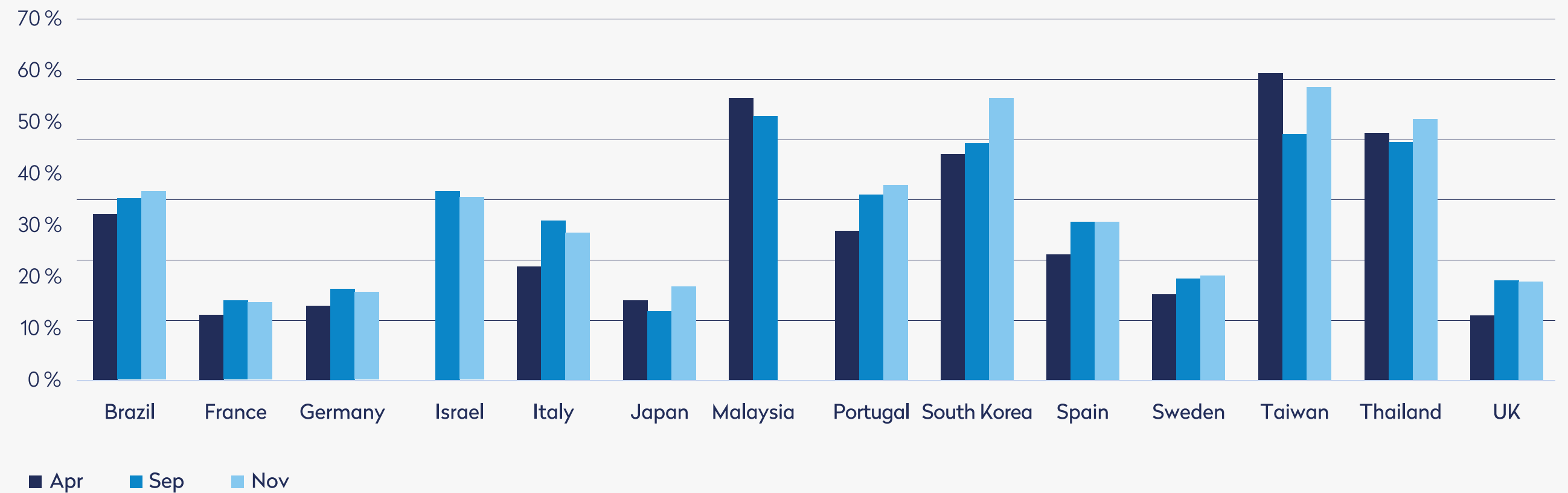
<b>MEAL KIT DELIVERY</b> USED <b>MEAL KIT DELIVERY</b> IN THE LAST THREE MONTHS	
CHINA	16 %
UNITED KINGDOM	10 %
GERMANY	6 %
SPAIN	6 %
ITALY	4 %
FRANCE	3 %

That does not mean that people have abandoned restaurants by any means and the Norwegian Seafood Council has been tracking how often consumers eat out across various markets. Malaysia, Taiwan, and Thailand are the markets with the largest proportion of respondents saying they have dinner in a restaurant or someplace similar at least once a week, according to the Norwegian Seafood Council's tracker for 2021.

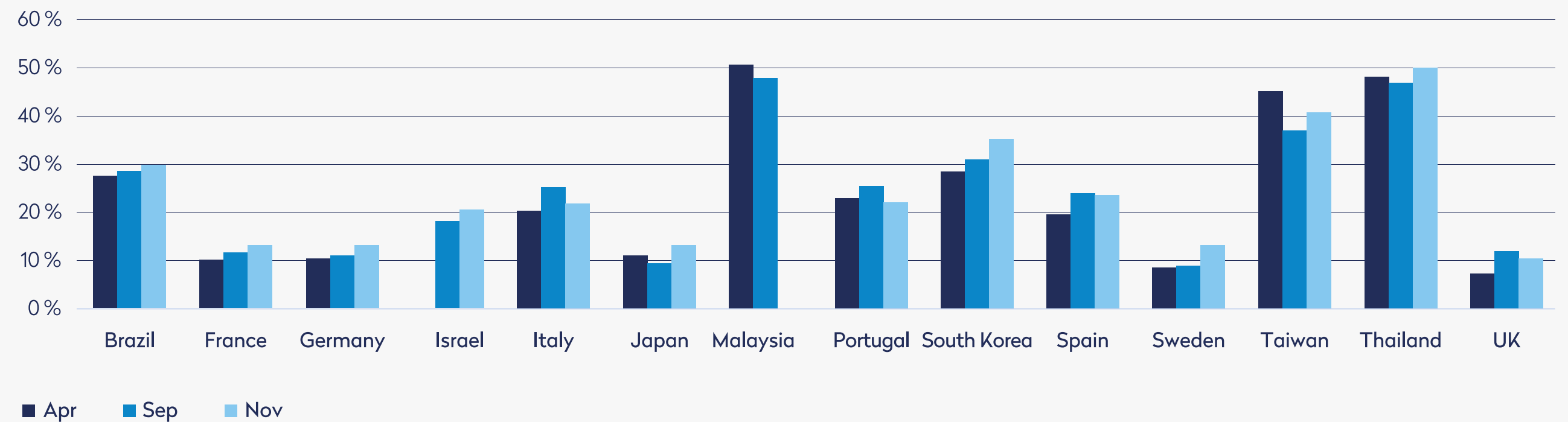
Respondents in these three markets are also the ones most likely to eat fish or seafood in a restaurant at least once a week.

## PROPORTION WHO STATE THAT:

THEY EAT DINNER IN A RESTAURANT OR SOMEPLACE SIMILAR AT LEAST ONCE A WEEK

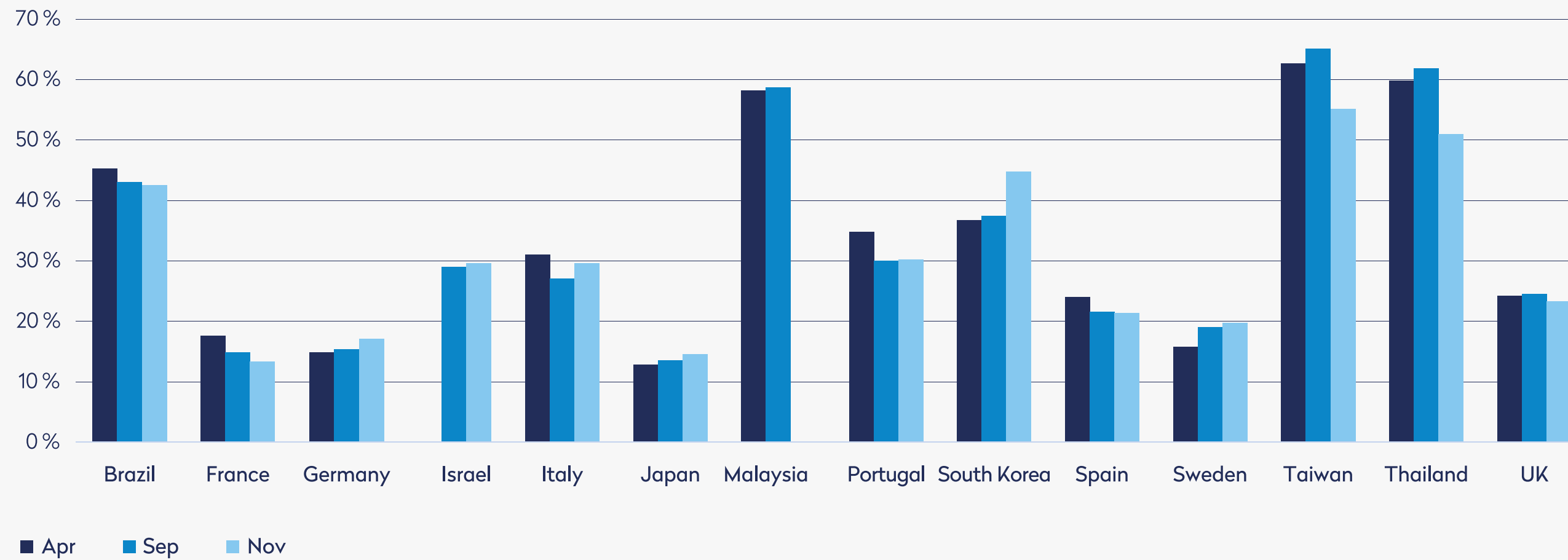


THEY EAT FISH/SEAFOOD IN A RESTAURANT OR SOMEPLACE SIMILAR AT LEAST ONCE A WEEK

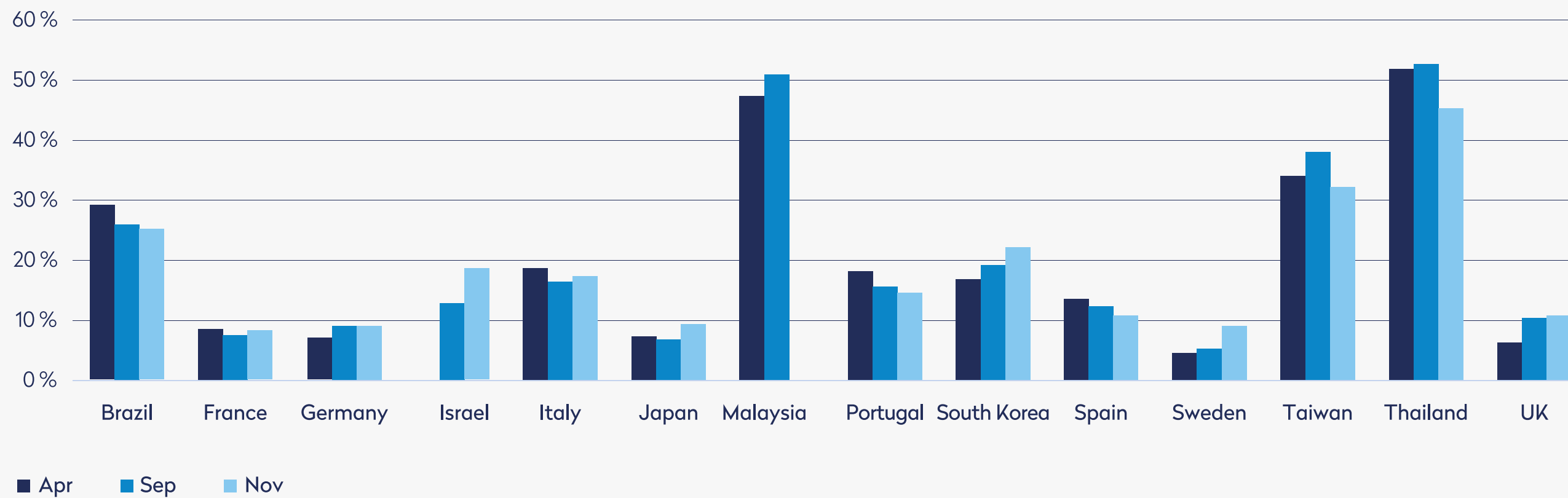


## PROPORTION WHO STATE THAT:

THEY EAT DINNER FROM **TAKEAWAY** AT LEAST ONCE A WEEK



THEY EAT FISH/SEAFOOD FROM **TAKEAWAY/DELIVERY** AT LEAST ONCE A WEEK



Interestingly, Taiwan, Thailand, and Malaysia are also the markets with the largest percentage of respondents who say they eat *takeaway* dinner at least once a week.

By age group, 20-34-year-olds (the youngest of the three age groups in the research) are the ones most likely to say they eat dinner from a takeaway or restaurant at least once a month across most markets surveyed.

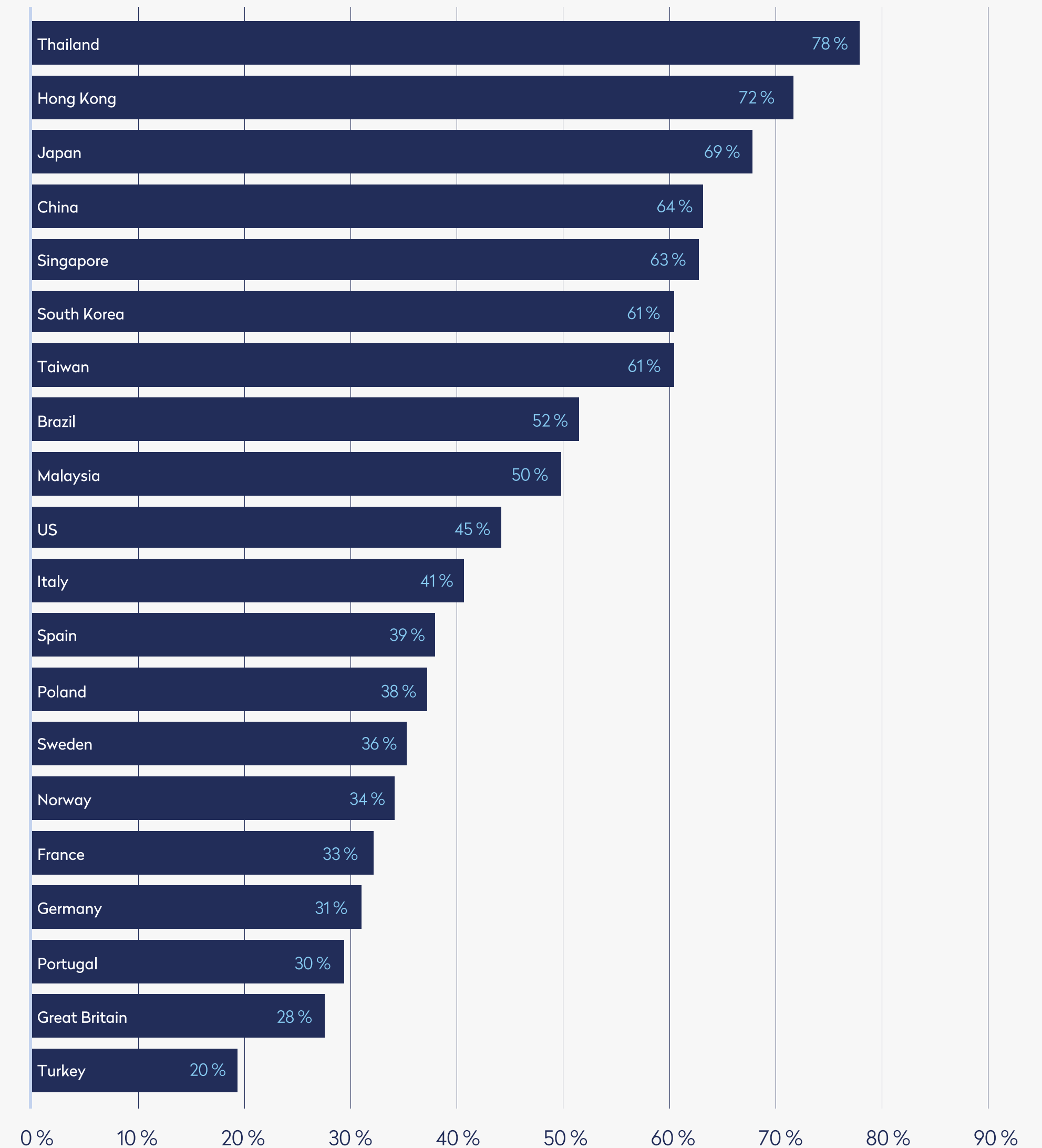
Thai consumers boosted the number of take-out meals they ordered throughout the pandemic. As a result, from 2020 to early 2021, an estimated 15% of the fresh salmon consumed through HoReCa was via take out (Norwegian Seafood Council, 2021).



## Sushi – an almost universally popular choice

In the Norwegian Seafood Council's annual consumer survey (SCI) for 2020, more than 22,000 seafood consumers across a number of markets were asked how often they eat sushi/sashimi. The seven markets where sushi/sashimi is most often eaten at least once a month are all found in Asia but even at the lowest levels (Turkey) a fifth of respondents still eat sushi/sashimi at least once a month.

### EAT SUSHI/SASHIMI AT LEAST ONCE A MONTH





In almost every market in the survey, a preference for sushi/sashimi tends to be found among younger generations, with a larger proportion of respondents aged 20-34 saying they eat sushi/sashimi at least once a month, compared with respondents in the 35-49 and 50-65 age ranges.

The exceptions are Hong Kong, where we find similar numbers across the 20-34 and 35-49 age groups, Japan, (where numbers are fairly even among each group, but slightly higher among 50-65-year-olds) and Taiwan (where the highest numbers are in the 35-49 age group).

Thailand is the market where more respondents say they consume sushi/sashimi at least once a month. The popularity of sushi among Thai consumers was examined in depth in the Norwegian Seafood Council's seafood study for Thailand in 2021.

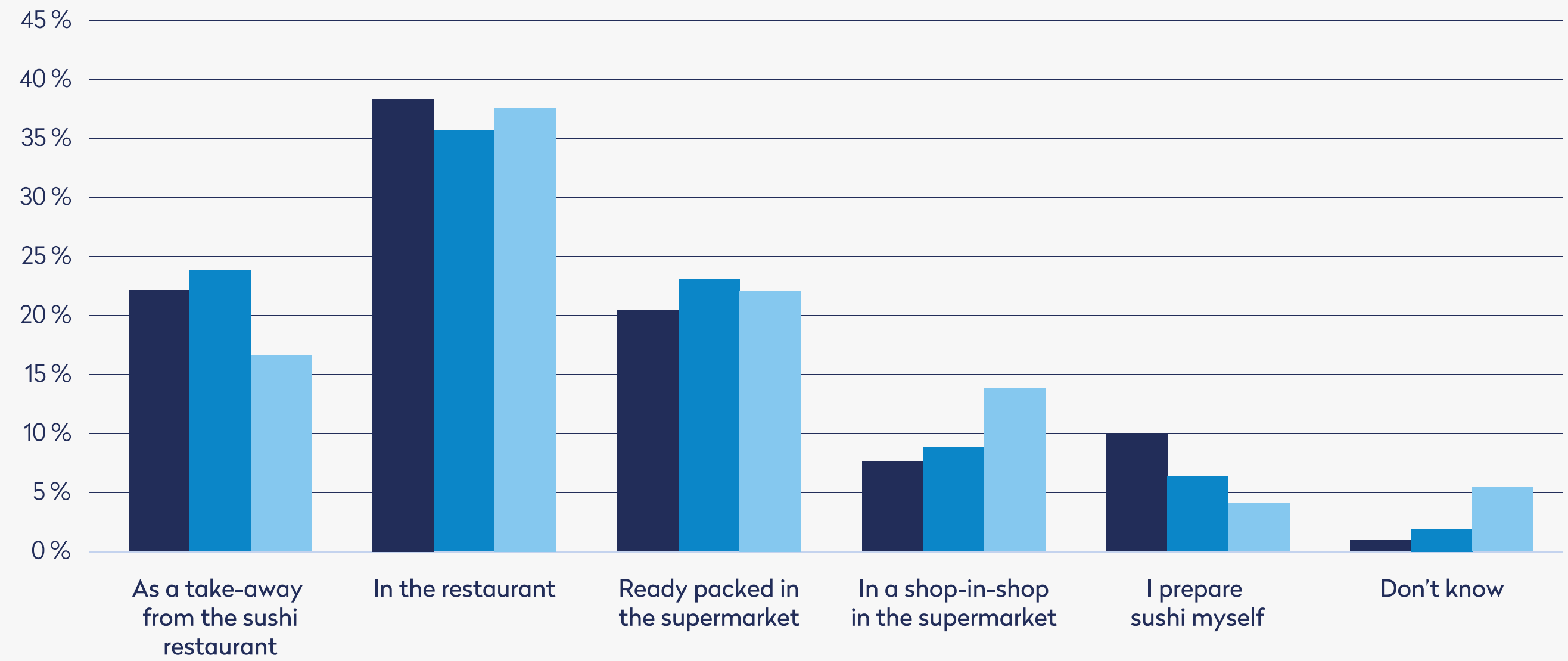
When it comes to salmon, Thai consumers prefer raw salmon prepared in the Japanese way, as sashimi or sushi. The Norwegian Seafood Council's seafood study for Thailand in 2021 found that sashimi (followed by sushi) is by far the most popular method to eat salmon, whether in restaurants, ordering for home delivery, or buying to 'cook' at home. Thai consumers love salmon prepared in the Japanese style, and they prefer to eat it in restaurants – most often in shopping malls or food courts.



Photo: Norwegian Seafood Council

PLACE OF PURCHASE FOR SUSHI

- 20-34
- 35-44
- 45-65



In the 2019 seafood survey for Germany, the frequency of sushi consumption was cross tabulated with the question of whether respondents consume more or less salmon now than they did a year ago. It was discovered that people who eat sushi frequently also eat salmon more frequently. For all ages, salmon is the fish of choice for sushi in Germany, though the 45-65-year-olds are more likely to show a preference for tuna than their younger counterparts.

The majority of those who responded to the 2019 seafood survey for Germany said they would buy and eat sushi at restaurants. The distinctions can be seen in the preference for sushi to be purchased as a takeaway, in a shop-in-shop, or prepared

at home and behaviour differences can be traced back to age groups. The oldest group, who appeared less inclined to order sushi for take away and prefer to buy sushi pre-packaged in supermarkets or in a shop-in-shop, is perhaps the most interesting.

# The future of retail

We have taken an in-depth look at how people have been shopping and consuming – and how certain trends such as online and last-mile delivery have been accelerated by the Covid-19 pandemic. We have also looked at what the seafood market looks like today, both globally and in some specific markets that display a certain preference for sushi for example. But what about the future?



## Convergent commerce



Photo: Norwegian Seafood Council

In recent years a growing number of alternative types of commerce have emerged. This has resulted in concepts such as:

- Social commerce
- Livestream commerce
- Q-commerce/Quick commerce
- M-commerce/Mobile commerce
- V-commerce/Voice commerce

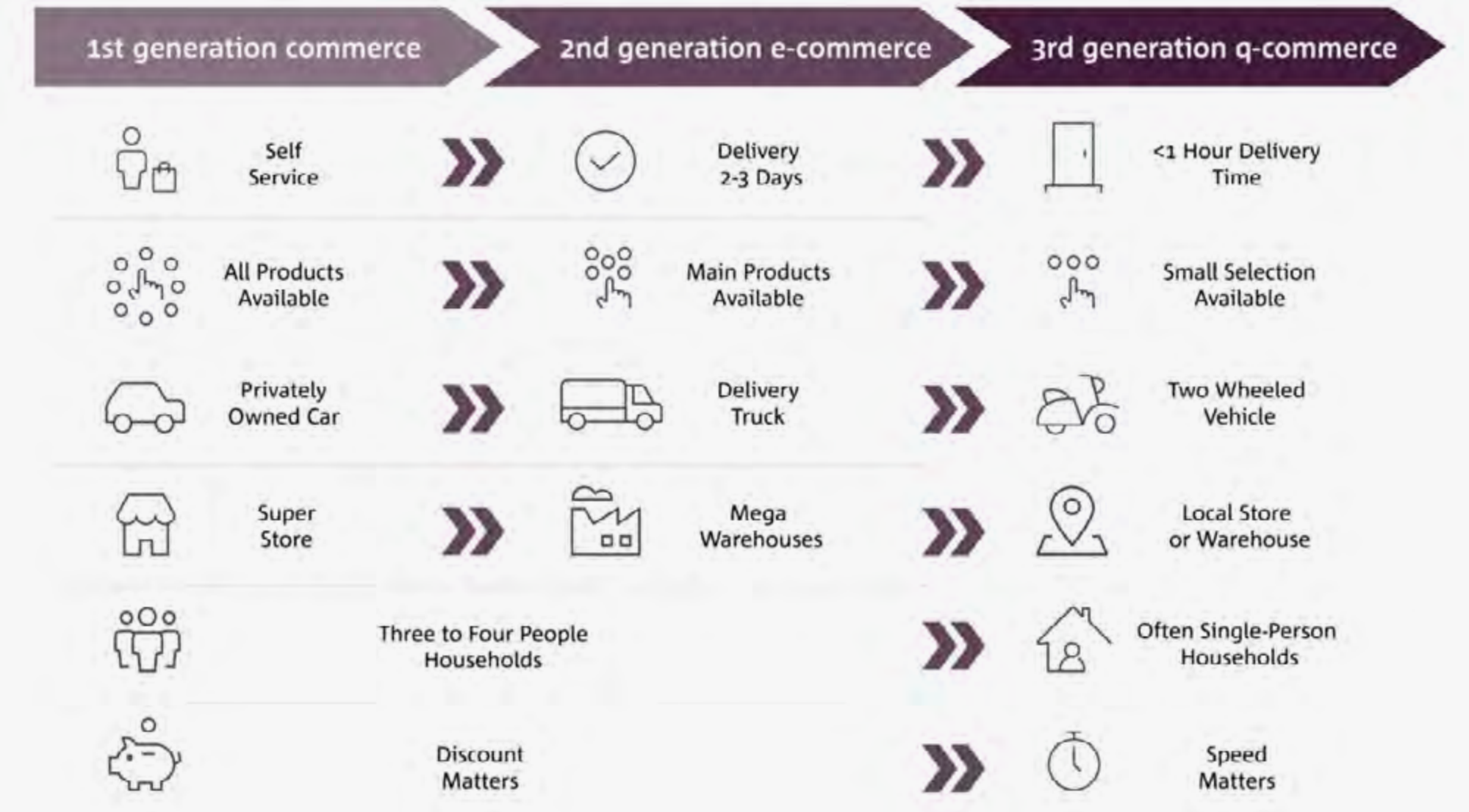
Essentially, the old way of thinking about shopping channels, such as simply online vs. offline, have changed – and emerging markets are at the forefront of these changes.

China, India, Mexico, and Brazil topped the list of countries adopting newer commerce types (such as social commerce, voice commerce, livestreaming, and quick

commerce), according to an October 2021 report from Ipsos (Chaltas, Goldring & Lattimore, 2021). In the last six months, the percentage of people who use various sorts of digital commerce on a regular basis has ranged from 25% to 45% in these markets. The UK, Canada, Russia, and Japan were the countries in the research that rated bottom in terms of frequent or regular use, at less than 10%.

## Quick-commerce

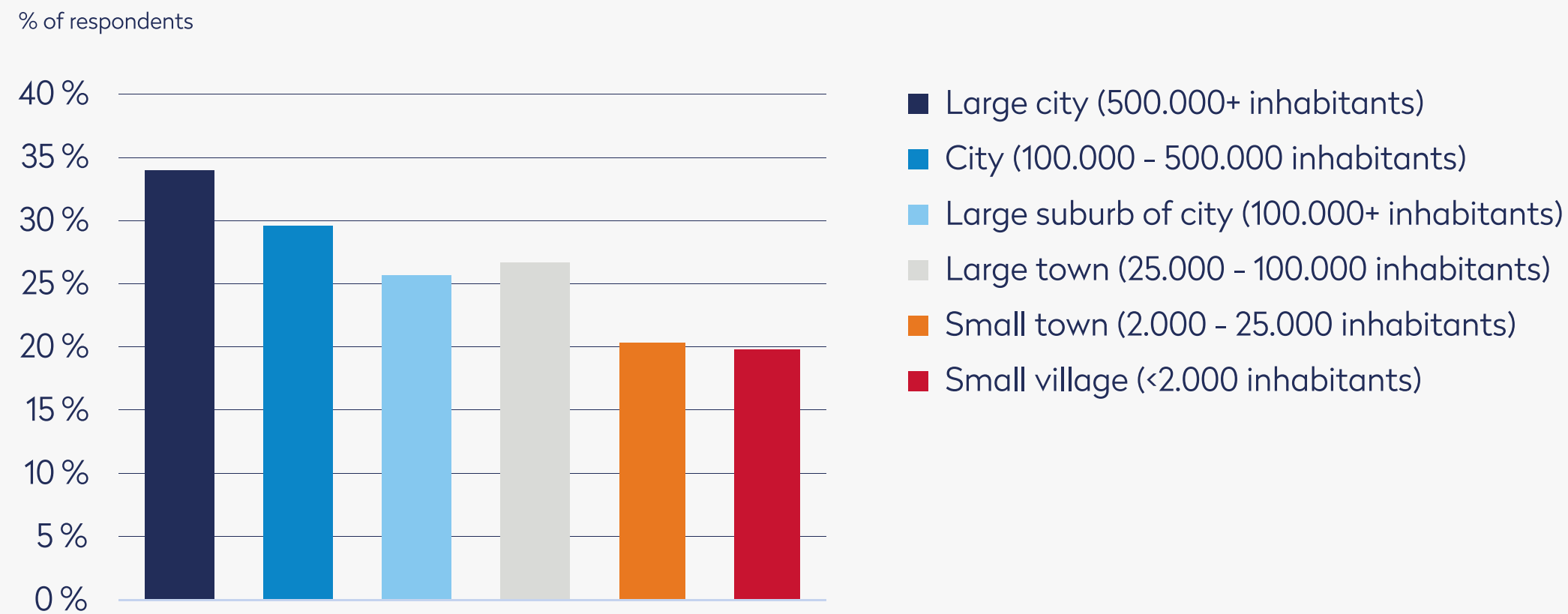
Quick-commerce (also referred to as q-commerce or on-demand delivery) refers to delivery in under an hour – often less than 30 minutes – and usually involves the delivery of small quantities of goods. Q-commerce falls into what is known as the ‘third generation’ of commerce and is an area of growth for online grocery delivery through intermediaries known as last-mile providers (LMPs).



Source: Deliveryhero.com

## PREFERENCE OF DELIVERY

SAME-DAY DELIVERY BY SIZE OF CITY



## REPORTED SHOPPING BEHAVIOUR

WESTERN EUROPE, 2015-2021



As consumers have become increasingly used to the immediateness of shopping online, they have come to see delivery time as a top priority – something that now affects their purchase decisions and encourages them to shop through online platforms that can deliver their goods quickly. This trend is more prominent among people who live in big cities and younger consumers (Mascaraque, 2021).

Q-commerce is already well-established in countries like South Korea and India, but Western Europe has suddenly emerged as one of the most appealing investment destinations in the world. In an article from September 2021 it is stated that there are now 30 companies within the q-commerce category in the Western Europe market, with most having been established in the past 10 months. Grocery deliveries are the main focus of most of these companies (Bogdanova, 2021).



# 87%

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of Gen Z shoppers will get holiday shopping inspiration from social media.

## Social commerce

When a consumer shops directly through a social media platform, it is referred to as social commerce and can include clicking links on a social media platform that take you to a retailer's product page with an instant purchase option (Insider Intelligence, 2021). Through social media sites like Facebook, Instagram, TikTok and Twitter, social commerce contributes to the promotion of goods and services – and to sales. Online shoppers are engaged through product recommendations and support from influencers – experts or key opinion leaders (Investopedia, 2021c).

Data from Insider Intelligence (2021) shows that nearly half of all Chinese internet users (46%) will make at least one social commerce purchase in 2021. Of the 13 countries where Insider Intelligence forecast the number of social buyers, China is the country with the highest penetration, followed by the US at 36%.

McKinsey's (McKinsey & Company, 2021b) holiday shopping survey shows that in the US alone, 87% of Gen Z shoppers will get holiday shopping inspiration from social media. YouTube, Instagram and TikTok are the platforms they turn to for guidance, finds the firm.



Photo: Pexels

#### DIFFERENT TRENDS WITHIN SOCIAL COMMERCE:

- **Livestreaming:** As social media platforms have increasingly offered 'live' options, so brands have got in on the opportunity to showcase – and sell – their products through live video shopping
- **In-app purchasing:** In-app shopping is now commonplace on a number of social media platforms. Instagram for example, offers a number of different ways in which a user can find and buy products through the app, from their own channels, through 'tagged' posts by other users or by searching on the 'shop' feed
- **Shopper trends driven by social platforms:** Retailers and brands are now curating product ranges according to trends on social platforms
- **Key opinion leaders:** Retailers are seeking partnerships with key opinion leaders and influencers who are trusted by their large social media followings.

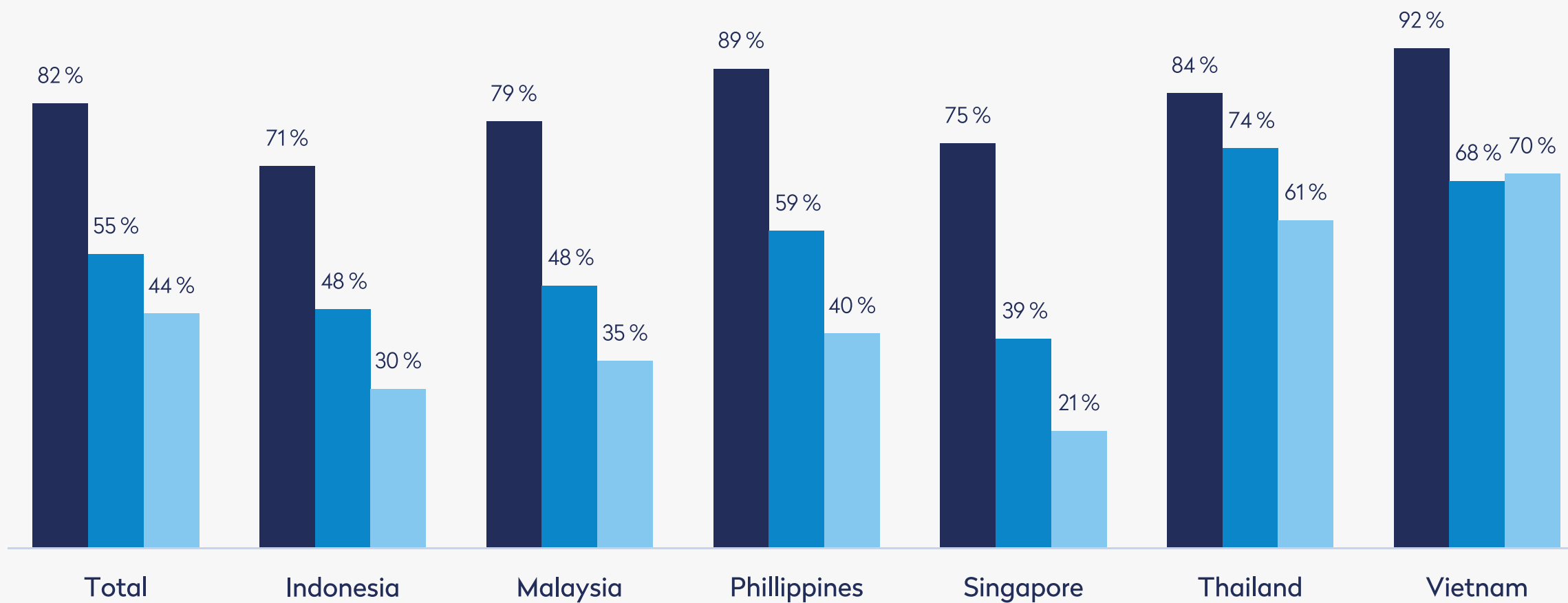
## Livestream commerce

Livestream commerce, also known as shopstreaming or live video shopping, is a hybrid of e-commerce and video streaming and can involve linking a livestream broadcast with an e-commerce store. This allows viewers to watch and shop at the same time. The concept began in China, with social media content provider MOGU doing this first in March 2016, followed by Taobao Live in May 2016 and JD.com in September 2016, among others (Cheng & Luk, 2021). And the format has exploded since: according to McKinsey (McKinsey digital, 2021), China's live commerce reached an estimated \$171 billion in sales in 2020. By 2022 it expects sales through livestreaming in the country to hit \$423 billion.



LIVESTREAM COMMERCE ACROSS SOUTHEAST ASIA

■ Aware ■ Accessed ■ Bought



Source: Ipsos SEA COVID Tracker, August 2021. Base: n=3000

## And awareness is growing elsewhere

An Ipsos study in mid-2021, covering six South East Asian markets, found that between 71% and 92% of customers were aware of livestreaming shopping and between 21% and 70% had purchased something from a livestreaming feed (Chaltas, Goldring & Lattimore, 2021).

eMarketer cites an April 2021 survey by The Harris Poll as showing how, for US consumers, buying products promoted via livestreams is still in the early days. In the survey, 38% of US adults said they had watched a livestream of someone talking about a product that they might want to buy – but just 7% said they ultimately bought the product based on the presenter’s recommendation.

That does not mean the interest is not there however.

Describing livestreaming as ‘poised to be a major driver of growth for social commerce,’ eMarketer talks about a Q4 2020 survey by Global Web Index, which found that 22% of US and UK social livestreamers said a ‘buy’ button that was available during a livestream session would be a top purchase driver, compared with 13% of social network users who said the same for social media content overall (eMarketer, 2021b).

So what is most often showcased in live streams? McKinsey’s analysis shows that by far the biggest area – with a 35,6% share – is apparel and fashion. That category is well ahead of nearest contenders beauty (7.6%) and fresh food (7.4%) (McKinsey digital, 2021).

35.6%

Apparel and fashion

---

7.6%

Beauty

---

7.4%

Fresh food

## Voice commerce

Amazon's Alexa service – installed in millions of homes through Echo and other devices – is perhaps the most well-known example of voice commerce, even if it is currently mostly used to play music or ask about the weather. The firm even offers Alexa-only discounts on certain products that are bought via its voice commerce service. However, Amazon and Google – which operates the other big contender in voice-activated home devices – do not release data on how much customers spend direct through these devices. A Forbes article from 2018 said that leaked Amazon data shows people are not buying goods from Alexa – and of those that do, 90% do not do it again.

The situation has likely changed somewhat since but the same issues remain: are people likely to buy items that require research – a camera for example – through voice commerce? Perhaps not, but consumers are on much safer ground with regular, known purchases such as household items and food they already order through Amazon.

In China, Tmall Genie (Alibaba's equivalent of Amazon's Echo) has collaborated with Starbucks in a successful example of voice-activated sales that ties into other consumer trends such as the superfast delivery of small goods. The collaboration allows Starbucks customers to 'voice order' their coffee and favourite food for delivery within 30 minutes.

Chapter 3

# Sustainability

We know from several sources that sustainability is becoming ever more important in the minds of consumers. Recent reports show that consumers have evolved to become more eco-friendly (PwC 2021) during the pandemic. This is also the case for companies who, according to ING's corporate sustainability report (ING, 2021), are increasingly incorporating sustainability across their operations.

Here we look at consumer and company opinions around sustainability – as well as the much broader view of sustainability that we all need to take. We look at where the UN's Sustainability Development Goals (UN SDGs) are most relevant to the seafood industry and what needs to be done to meet the targets set out before us.



Photo: Pexels



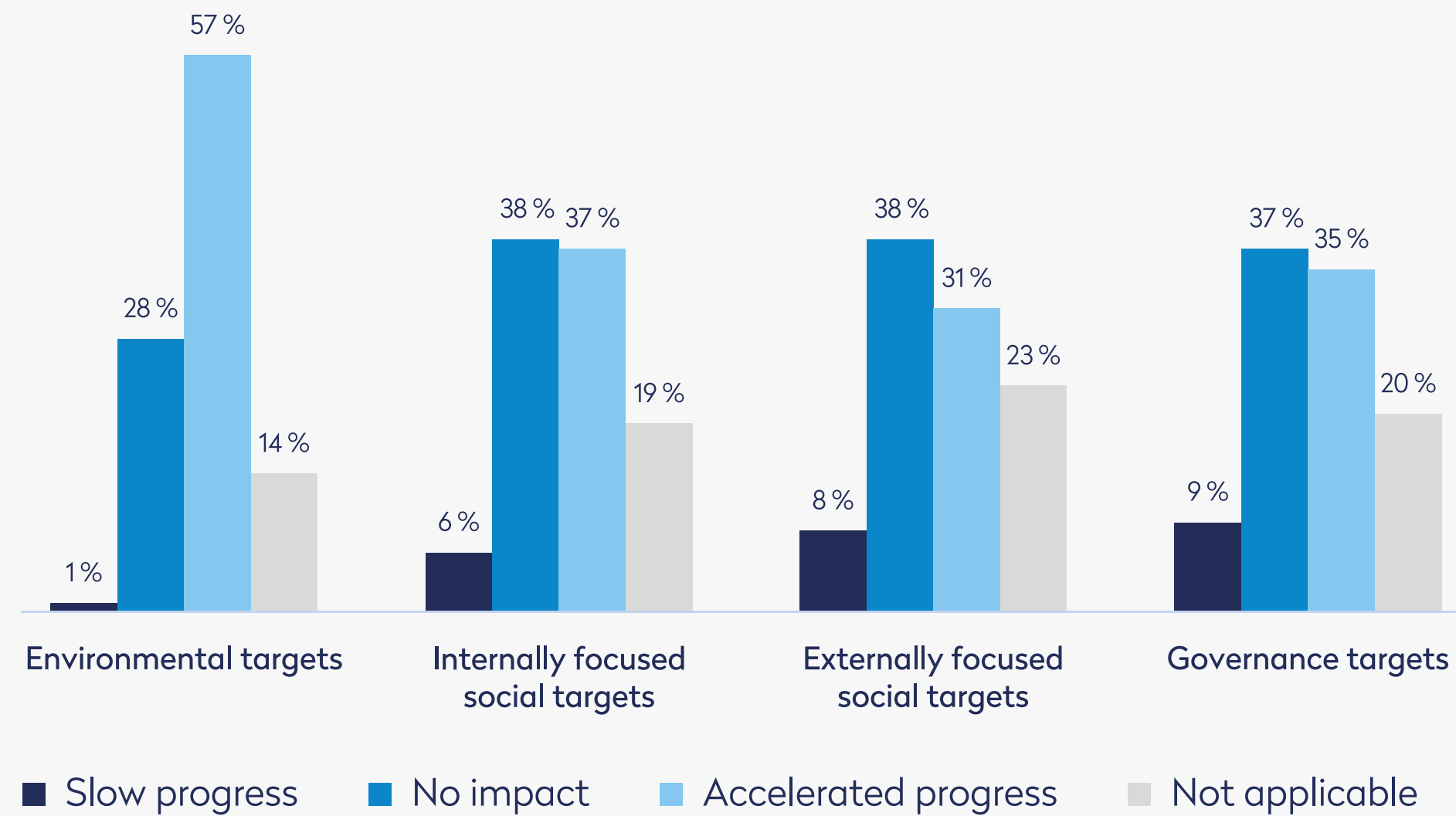


# The company focus on sustainability

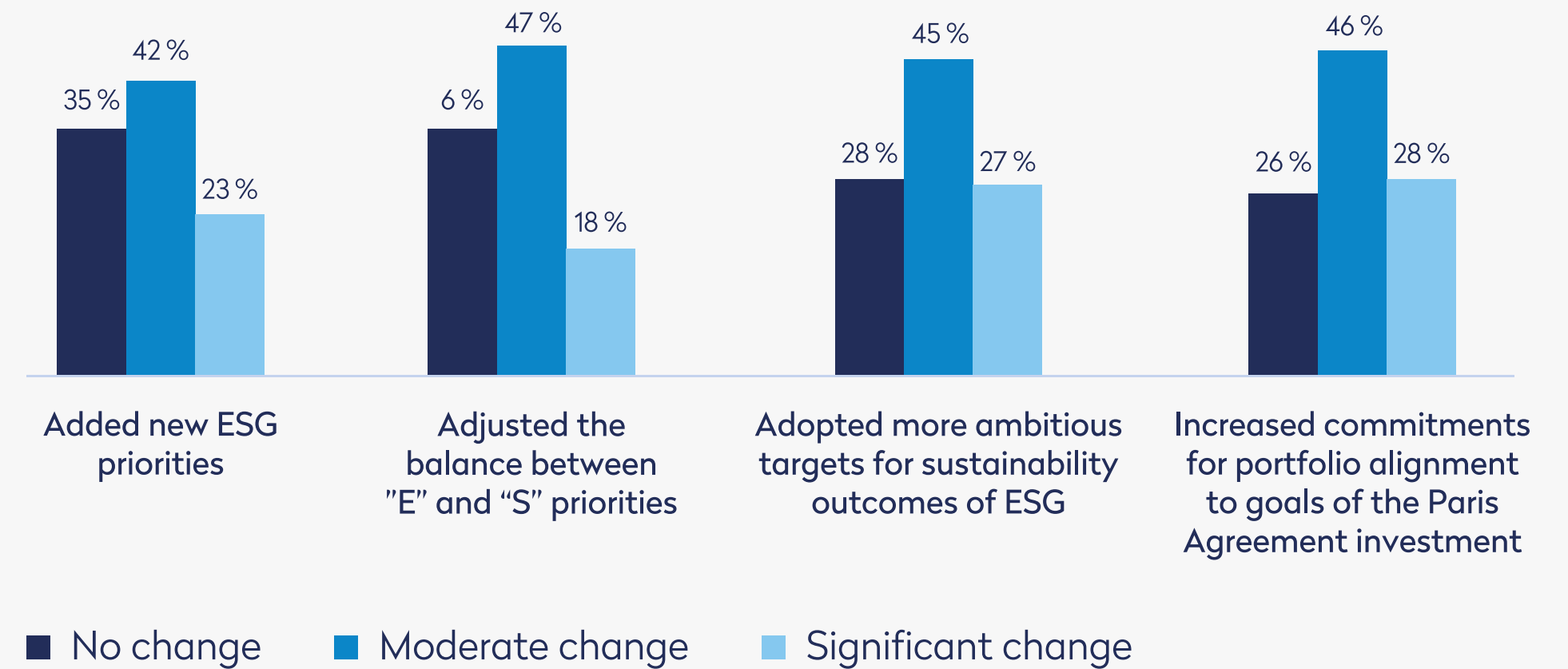
When ING surveyed US companies in 2017, 83% said they included sustainability in their corporate strategies. However, only 34% had implemented these themes into operations. Just five years later and that simply does not cut it any more.

## HOW THE EVENTS OF 2020 HAVE AFFECTED

COMPANIES' PROGRESS ON SUSTAINABILITY TARGETS



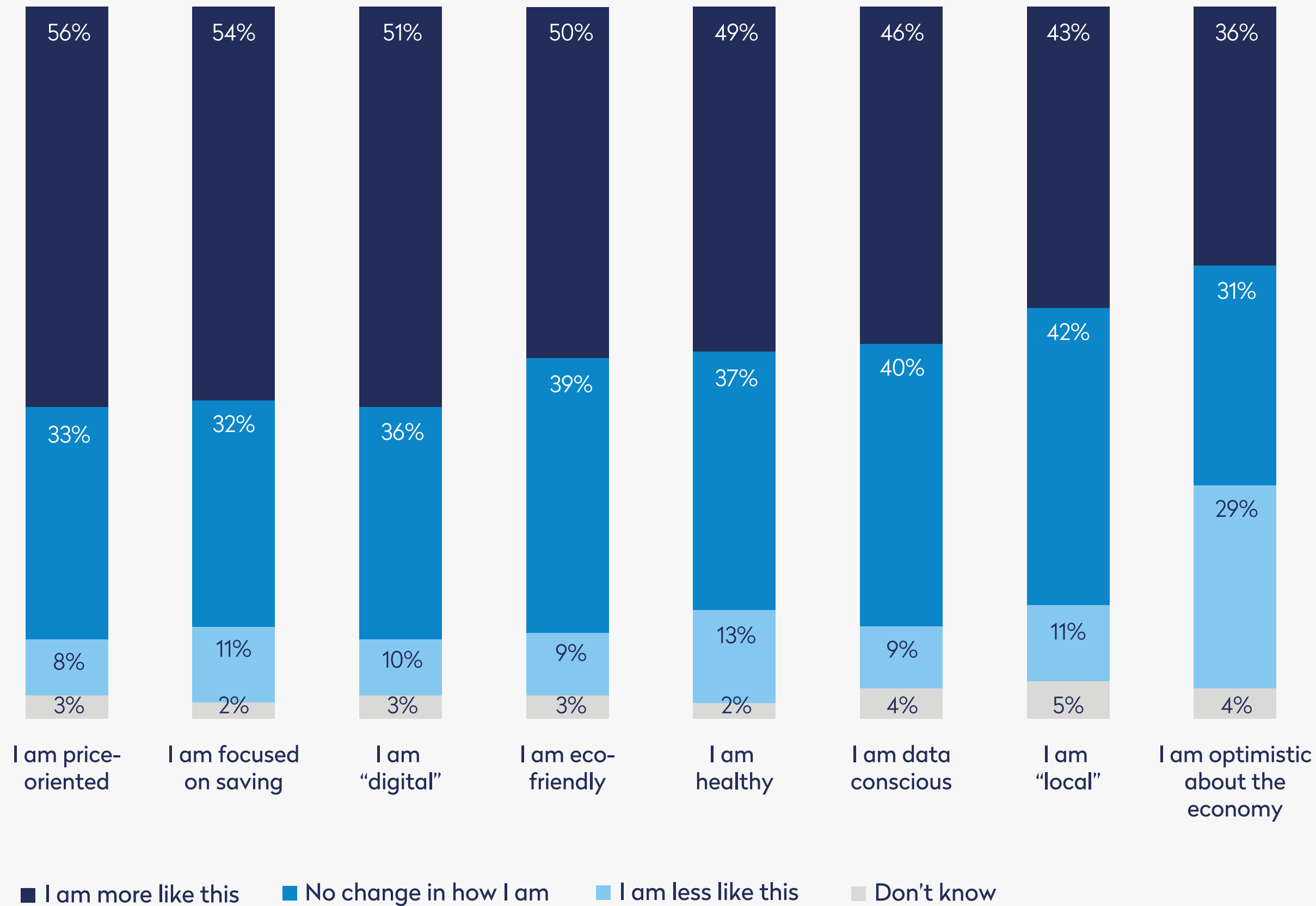
INVESTORS' ESG INVESTMENT PRACTICES



According to ING's latest report (2021), company leaders have recognised that sustainability needs to be embedded across the entire value chain – and cover more than just environmental issues. As we can see

from the chart to the right, companies are stepping up their game and increasing their efforts across broader sustainability targets such as workforce diversity and external social issues.

CONSUMERS SEE THEMSELVES CHANGING ACROSS MANY DIFFERENT DIMENSIONS



On the one hand, there is increasing pressure from investors, governments and other stakeholders for companies to think about, report on and tackle sustainability issues – but this is coming from consumers too. Research from PwC from October 2020 to March 2021 shows that 50% of respondents see themselves as ‘more eco-friendly’. At the same time, 43% see themselves as ‘more local’ – an idea strongly tied to sustainability themes.

# The pandemic effect

Almost two years of lockdowns, with the resulting restrictions on travel – by air, sea, and land – hinted towards the possibility of reducing emissions, and therefore slowing the negative effects of climate change if we all pulled together. But it seems that notion was somewhat premature.

A report from the World Meteorological Organization found that ‘concentrations of the major greenhouse gases – carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O) – continued to increase across 2020 and the first half of 2021,’ and that ‘overall emissions

reductions in 2020 likely reduced the annual increase of the atmospheric concentrations of long-lived greenhouse gases, but this effect was too small to be distinguished from natural variability’ (WMO 2021). In short, despite the restrictions on travel and trade we saw during the pandemic, in the greater scheme of things, it barely registered on the climate change scale.

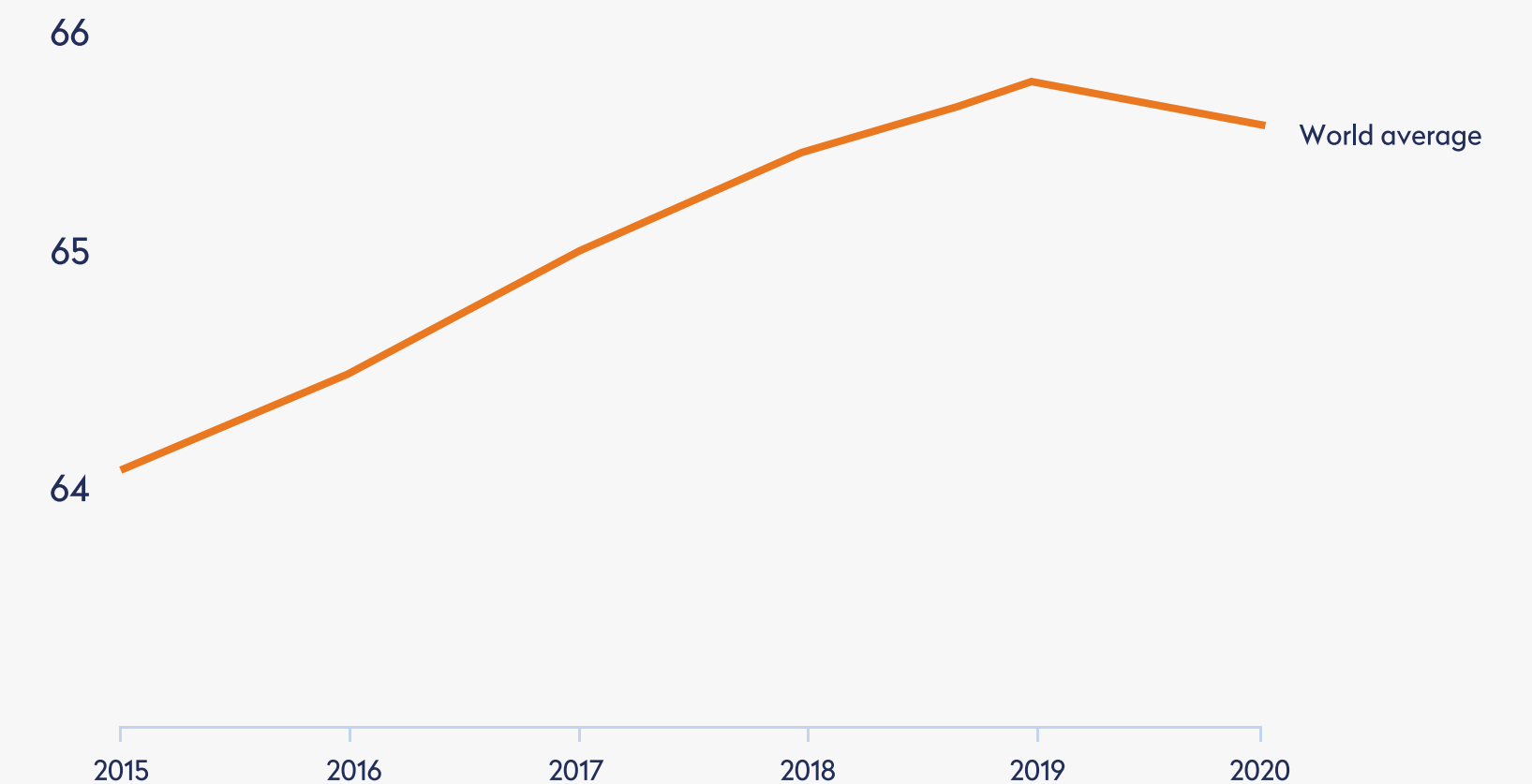
Furthermore, the 2021 Sustainable Development Goals report (Sachs et.al. 2021) found that the pandemic has in fact ‘severely affected’ our ability to reach the 2030 Agenda for Sustainable Development.

The decline in SDG performance globally (SDG Index, see fact box) is in large part due to increased poverty rates and unemployment, according to the Sustainable Development Solutions Network. To put that in context, 2020 was the first year the global extreme poverty rate *increased* in more than 20 years (pushing 119-124 million more people into extreme poverty). Action is urgent and at the October-November 2021 COP26 climate summit in Scotland, UK, British prime minister Boris Johnson said: “Humanity has long since run down the clock on climate change. It is one minute to midnight on that doomsday clock and we need to act now” (Meridith, 2021). Despite such statements, many have questioned just how successful the summit was.

The SDG Index and Dashboard Report provides a report card for country performance on the 2030 Agenda and the UN’s Sustainable Development Goals (SDGs). It describes countries’ progress towards achieving the SDGs and indicates areas requiring faster progress. [The global SDG Index score](#) and scores by goal can be interpreted as the percentage of achievement.

## SDG INDEX SCORE

WORLD PROGRESS ON THE SDG INDEX



**Note:** Population-weighted averages

# So, what do we need to do?

As we have learned from last year's report, and perhaps also recognise from our own experience, when we are talking about sustainability we tend to think about the environment.

This is not surprising given the urgency of climate change and how it is inserting itself into our daily lives. We recycle, conserve plastic, reduce our food waste and increasingly drive electric cars. But sustainability is so much more.



Photo: Adobe Stock



Photo: Adobe Stock

Broadly, we can speak of sustainability as consisting of three integrated and balanced dimensions: environmental, economic and social. If one is missing, or even if these dimensions are unbalanced, the net result is not sustainable. The foundation for this understanding was laid down with the report ‘Our common future’ – also known as the Brundtland report (UN, 1987).

Fast forward to 2015 and the UN adopted the SDGs as “a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity,” (undp.org, 2021).

Many of us have heard of these by now, but are perhaps not familiar with the goals themselves, or even the specific targets listed under each goal. This is not surprising. The 17 SDGs consist of 169 targets (progress towards which are tracked by 232 unique indicators), 5,487 actions and 1,307 publications to date (progress can be tracked at [sdg.tracker.org](https://sdg.tracker.org)).

So, it is perhaps not an easy task to identify which goals and targets specifically pertain to us in the seafood sector – apart from one obvious one. **SDG 14: Life below water.** The UN has defined 10 targets and 10 indicators for SDG 14 (the data is available at [sdg.tracker.org/oceans](https://sdg.tracker.org/oceans)), with the aim to “conserve and sustainably use the oceans, seas and marine resources”. Some of the targets of SDG 14 are set for 2020 and 2025, but most are set for 2030.

It is important to keep in mind that the SDGs are relevant for companies and organisations in different ways, such as the sustainability of the company’s value chain, and the sustainability of the company itself and its employees. For instance, there is a difference in how you implement the relevant SDGs in, say, improving feed production, or in how you are changing your organisation’s tendency to only hire men.





We also must take spillover effects into account. Spillover basically means that each country's actions can have negative effects on other countries' abilities to reach certain SDGs. Those are the environmental and social impacts embodied into trade, economy and finance, and security. In this regard rich countries typically contribute the most spillover:

"[...] rich countries can generate negative socioeconomic and environmental spillovers, including through unsustainable trade and supply chains. Tax havens and profit shifting in many rich countries undermine other countries' ability to mobilise needed financial resources to achieve the SDGs" (Sachs et.al. 2021).

Given the times we are living in, it is also worth highlighting how wide an impact spillover can have:

"Growing evidence suggests that unsustainable supply chains that drive increased deforestation or other biodiversity threats may also increase the likelihood of future pandemics and the emergence of new pathogens and zoonoses (Brancalion et al., 2020)"

So where does Norway stand on spillover? We are ranked 155 out of 165 on the SDG Index for spillovers, with a score of 58.71. The score is calculated as ranging from 0-100 and a higher score means that a country causes more positive, and fewer negative effects. Any marks against Norway are mainly due to issues regarding imports.

In the following sections we will highlight and explore the SDGs and targets we find to be particularly relevant for the seafood sector and which can help organisations focus their efforts to reach a more sustainable future.

## Which goals are relevant for the seafood sector?

The short answer to which SDGs are relevant for the seafood sector is: All of them. Remember that the 17 goals are integrated, and action on one goal may influence the outcomes in others. The thing to keep in mind here is balance.

Another thing to be mindful of is that even if the arrows are green, it does not mean that we can check that box and move on: it means we are doing something right and must continue the work we are doing.



We are aware that the seafood sector is continuously striving to improve through technology, best practices, research and innovation – all things that collectively move us towards a more sustainable future. So, in highlighting some of the challenges still remaining in terms of reaching the 2030 Agenda, we hope to provide an actionable framework on which to structure future efforts in the seafood sector. That being said, several frameworks, defined methods and processes, specifically tailored for

the corporate sector, already exist. These standards are the Greenhouse Gas (GHG) Protocol, the Science Based Targets (SBT) Initiative and EU corporate sustainability reporting requirements. The latter being required by EU law. There are also numerous environment, social and governance (ESG) reporting standards and frameworks. The EU recently hammered out its Green Deal and included in that plans for the blue economy.

#### WHAT IS THE GHG PROTOCOL?

The GHG Protocol establishes comprehensive global, standardised frameworks to measure and manage GHG emissions from private and public sector operations, value chains and mitigation actions.

#### WHAT IS THE SCIENCE-BASED TARGETS INITIATIVE?

The Science-Based Targets Initiative provides a clearly defined pathway for companies to reduce GHG emissions, helping prevent the worst impacts of climate change and future-proof business growth.

#### WHAT IS ESG REPORTING?

ESG reporting refers to the disclosure of data covering a company's operations in three areas: environmental, social and corporate governance. It provides a snapshot of the business's impact in these three areas for investors. Many ESG frameworks and standards now exist, including the Global Reporting Initiative (GRI) Standards, the Sustainability Accounting Standards Board (SASB) framework and the Task Force on Climate-related Financial Disclosures (TCFD).

#### WHAT IS THE EUROPEAN GREEN DEAL?

The European Green Deal is about improving the well-being of people. Making Europe climate-neutral (by 2050) and protecting our natural habitat will be good for people, planet and the economy. No one will be left behind.

## EU Green deal: Developing a sustainable blue economy in the European Union

On May 17, 2021, the EU proposed a new sustainable economy approach for the industries and sectors related to oceans, seas and coasts. This is essential to ensure the objectives of the EU Green Deal are reached as well as “a green and inclusive recovery from the pandemic”.

The blue economy sectors include fisheries, aquaculture, coastal tourism, maritime transport, port activities and shipbuilding.

According to the EU commissioner for the Environment, Fisheries and Maritime Affairs:

“The pandemic has hit the marine economy sectors in different, but profound ways. We have an opportunity to start afresh, and we want to make sure that the recovery shifts the focus from mere exploitation to sustainability and resilience. Thus to be truly green, we must also think blue.”

## The following points constitute the agenda for the blue economy:

**Achieve the objectives of climate neutrality and zero pollution** – notably by developing offshore renewable energy, by decarbonising maritime transport and by greening ports. A sustainable ocean energy mix including floating wind, thermal, wave and tidal energy could generate a quarter of the EU's electricity in 2050. Ports are crucial to the connectivity and the economy of Europe's regions and countries and could be used as energy hubs.

**Switch to a circular economy and reduce pollution** – including through renewed standards for fishing gear design, for ship recycling, and for the decommissioning of offshore platforms and action to reduce plastics and microplastics pollution.

**Preserve biodiversity and invest in nature** – protecting 30% of the EU's sea area will reverse biodiversity loss, increase fish stocks, contribute to climate mitigation and resilience, and generate significant financial and social benefits. The environmental impacts of fishing on marine habitats will be further minimised.

**Support climate adaptation and coastal resilience** – adaptation activities, such as developing green infrastructure in coastal areas and protecting coastlines from the risk of erosion and flooding will help preserve biodiversity and landscapes, while benefitting tourism and the coastal economy.

**Ensure sustainable food production** – sustainable production of and new marketing standards for seafood, use of algae and seagrass, stronger fisheries control as well as research and innovation in cell-based seafood will help to preserve Europe's seas. With the [EU sustainable aquaculture strategic guidelines](#) now adopted, the European Commission has also committed to growing sustainable aquaculture in the EU.

**Improve management of space at sea** – the new Blue Forum for users of the sea is to coordinate a dialogue between offshore operators, stakeholders and scientists engaged in fisheries, aquaculture, shipping, tourism, renewable energy and other activities will stimulate cooperative exchange for the sustainable use of marine environment. A report on the implementation of the EU Directive on Maritime Spatial Planning will be issued in 2022, following the adoption of national maritime spatial plans in March 2021.

The European Union has also launched a study, Sustainability indicators for the blue economy, to help establish a framework and enable a common understanding of the activities and practices that contribute to it. The Blue Economy Sustainability Framework is a step in that direction and provides a set of sustainability criteria and indicators for the sectors included in the blue economy. Readers of the study will also find a helpful analysis and discussion of the strengths and weaknesses associated with a number of existing blue economy frameworks, including the Marine Stewardship Council, Aquaculture Council and Sustainability Indicators for Aquaculture.



Photo: Pexels



# Analysis

So how is Norway performing across the UN's 17 SDGs? The SDG Dashboard (shown on the next page) paints a picture of where Norway stands but for an in-depth view of all the indicators, please see the Sachs et al. 2021 complete report.



As we can see, most arrows are pointing upwards bar a few critical ones: SDG 2 and SDG 14, where progress has stagnated. What are the reasons for this? Are we not well-fed in Norway? The problems addressed in SDG 2 pertain to more than hunger: while this might be what we think of when we think about malnutrition, this actually refers to obesity too. The ever-increasing BMI - contributing to around 2,400 deaths in Norway in 2015 alone (FHI, 2017) - and relatively high human trophic level, harvested cereal yield and sustainable nitrogen management are pulling us down and stagnating progress on SDG 2.

## Norway

OECD member

SDG Index Rank

7 / 165

SDG Index Score



Spillover Score



### SDG DASHBOARDS AND TRENDS



■ Major challenges   
 ■ Significant challenges   
 ■ Challenges remain   
 ■ SDG achieved   
 ■ Information unavailable  
↓ Decreasing   
 → Stagnating   
 ↗ Moderately improving   
 ↑ On track or maintaining SDG achievement   
 ● Information unavailable

Together we can work harder to increase the use of healthy and sustainable seafood in our diets to help combat the obesity epidemic, which is also tightening its grip on Norway: between 20-25% of Norwegians are overweight according to FHI (FHI, 2017). FHI also states that childrens' weights are also increasing, and between 15 and 20% of children are overweight or obese. Some signs point toward this trend is levelling out. This is not the case among youths - where 25% are overweight or obese and the trend seems to be increasing.

The marketing and availability of highly processed foods, easily accessible fast foods and drinks containing high amounts of

sugar is in large part to blame, according to UNICEF (2019).

When it comes to promoting and making healthy food more accessible, our industry is in a particularly strong position both here in Norway and abroad.

The seafood sector can perhaps do little about harvested cereal yield and sustainable nitrogen management in agriculture in Norway. Efforts can be made though, with sustainable nitrogen management in terms of improved feeds for farmed fish, feeding practices and fish waste disposal (GSA,2019).

Trophic levels are a measure of the energy intensity of diet composition and reflect the relative amounts of plants as level of consumption of energy opposed to animals eaten in a given country. A higher trophic level represents a greater energy-intensive animal (Bonhommeau et al., 2013).

#### WORKING ON SDG 2

One initiative worth mentioning is Fiskesprell, a programme spearheaded by the Norwegian Seafood Council together with different ministries and other official entities, which aims to increase seafood consumption among youngsters in Norway. Fiskesprell is increasing knowledge and inspiration among children through courses, school programmes and recipe ideas (Fiskesprell.no).

Another element is the trophic level of different foods, which essentially depends on what is below it in the food chain. So, a plant is at the bottom while a carnivorous animal such as the salmon is higher. Does that mean that people need to eat less salmon to have a more energy-efficient diet? No. Research tells us that aquaculture is an efficient and sustainable means of producing food compared to beef and mutton. Given the exponential needs of the world for protein in the years to come, it is also a source we cannot do without. But improvements can be made.



Photo: Pexels

Optimising feed with sustainable, plant-based alternatives, or low-trophic marine organisms (which is now done on a large scale), is one way to potentially lower the trophic level of salmon (Cottrell et al. 2021). And farming low-trophic-level seafood, such as bivalves and macroalgae

(which could also positively influence the environment around them), could soften the environmental impact of aquaculture (GSA, 2019). Farming low-trophic species for human consumption could also supply seafood-hungry consumers with healthy and sustainable alternatives (GSA, 2019).

## Life below water

SDG 14 (with its seven subgoals) is ‘our’ goal – and things are looking a bit mixed here. We are performing well in areas such as discarded bycatch and low overexploitation of stocks. We fall short on marine protected areas (MPAs) – or the mean area that is protected in marine sites important to biodiversity. Action 14.5 specified that Norway should have – by 2020 – protected 10% of sea and coastal areas in accordance with the global goal for SDG 14, and discussions are ongoing whether the global percentage should be increased to 30%. We are currently at about 5% in Norway.

We also need to talk about ongoing improvements. Waters along the coast of Norway are clean, but it appears they are not getting any cleaner. On the Ocean Health Index, we are currently at a value of 73 (out of 100), which is decent, but development has stagnated or is even declining. Internationally, that score ranks us in 60th place. As we can see from the chart to the right Norway is performing well on most metrics, apart from coastal protection and “tourism and recreation”. The latter being the effects of ocean/sea-based tourism.

The footprint of tourism might not be in our catchment area, but when it comes to ocean health, we have potentially several avenues for improvement. The seafood sector is in a unique position to halt the negative trend in coastal protection – even if the challenge is not ours to shoulder alone. Sectors involved in any ocean-based activities could benefit from joining forces in a multilateral approach to combat the decline in MPAs and strengthen coastal protection initiatives.



The overall Ocean Health Index score for Norway is 73 out of 100, which is **higher than** the global average score of 70.



This could take the form of efforts to reduce nutrient and effluent build-up, steps to limit escapees, greater controls around feed and increasingly using plant-based feed options. There is also the use of fossil fuels in production and logistics to consider. For instance, around 27,000 tons of nitrogen and 9,000 tons of phosphorus end up in the ocean in the form of sludge each year (NIBIO, 2021).

On all these points we see great strides being made in the seafood sector in Norway. For instance, Norwegian firm Bioretur is treating sludge from aquaculture and converting it to powder fertiliser, which can then be used in farming.



Photo: Pexels: Sam Lion

## Sustainability and the consumer

After the previous chapter, perhaps this title ought to have been ‘the complexities of sustainability and the complex consumer’.

Well, the complexity and multifaceted nature of sustainability makes it challenging to communicate, given that consumers’ understanding of the term is not uniform. We covered this in the previous trend report - how the simple purchase driver ‘sustainability’ is understood differently depending on market and demography.

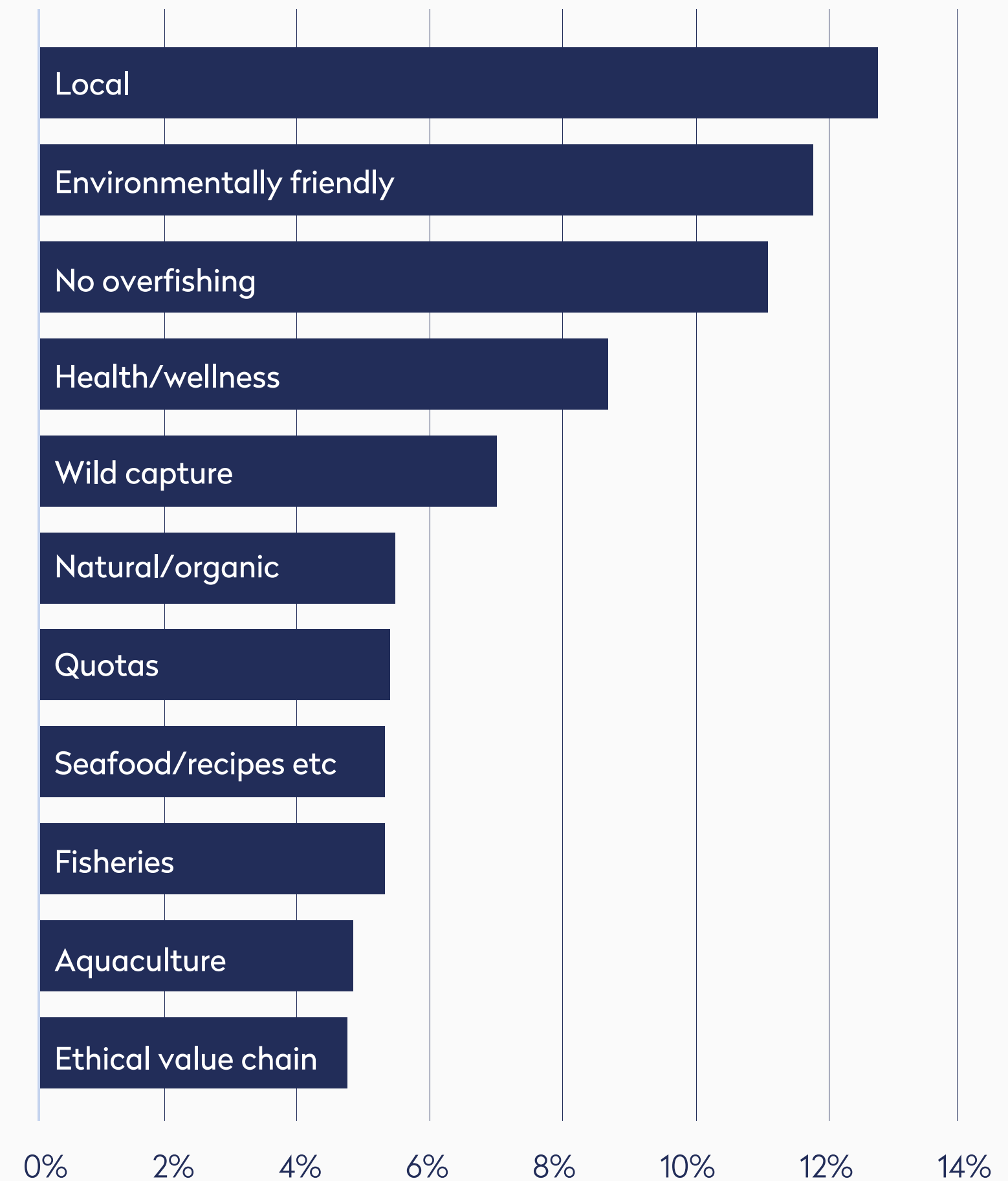
Keeping this in mind, how would people respond if we asked them what sustainability means to them in the context of fish and seafood? We did just that in a survey carried out in December 2020. The results confirmed our expectations in that people mostly have environmental associations in mind.

For Norwegians in this survey, the most important associations pertain to local food. This is perhaps not surprising given the prevalence and importance of seafood in Norway. We are, after all, a nation with a strong history in fisheries and seafood.

The proportion of people who are unsure about what sustainability means to them was a bit surprising, but it does, however, highlight a gap in knowledge that needs filling. After all, the role of seafood in fulfilling future protein needs as well as contributing to sustainable development is unquestionable.

## SUSTAINABILITY 2020

*Don't know: 48%*



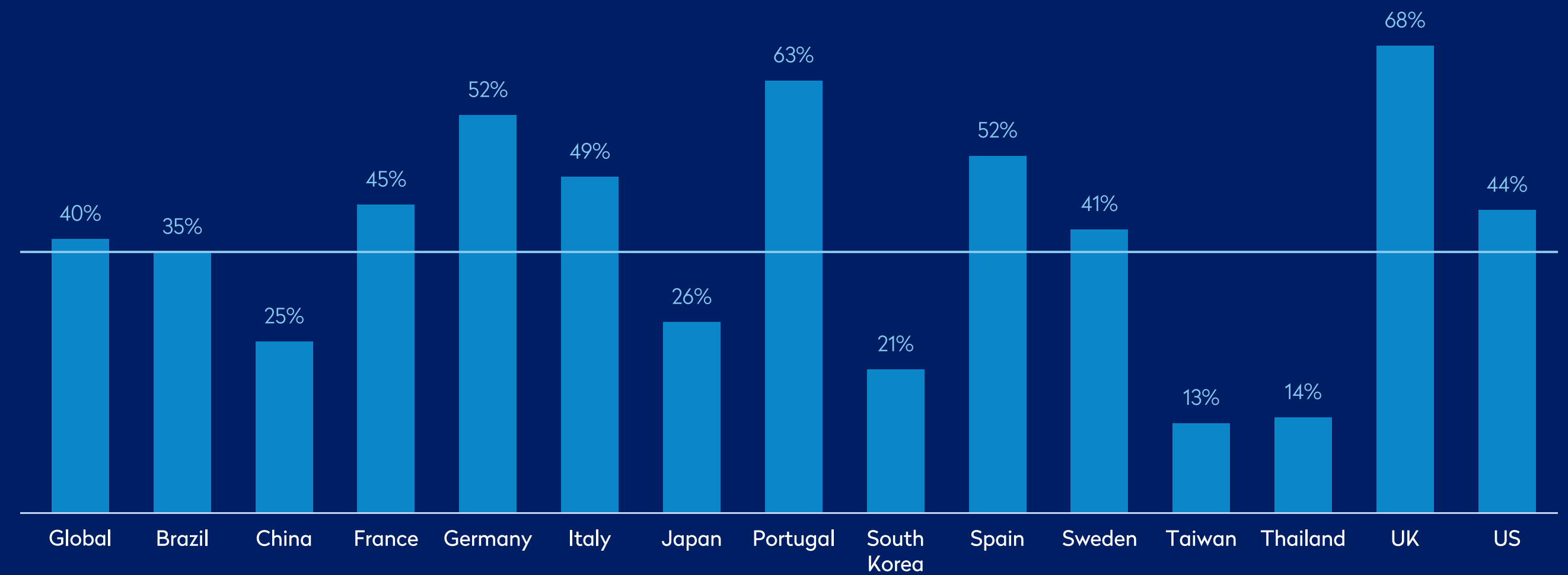


To further broaden our understanding, we asked that very same question in a large-scale survey carried out in November 2021. Fourteen thousand people in 14 markets were asked the same question and the results of which can be seen in the charts to the right and in the next page.

## IN RELATION TO FISH AND SEAFOOD:

WHAT DOES **SUSTAINABILITY** MEAN TO YOU?

*Share answering; Ethically sound value chain (Ethical Fishing/ Catching methods, processing/production, transport, quota regulation/control/laws preserving species/do not overfish, medicines/antibiotics, animal welfare, healthy fish, diversity)*

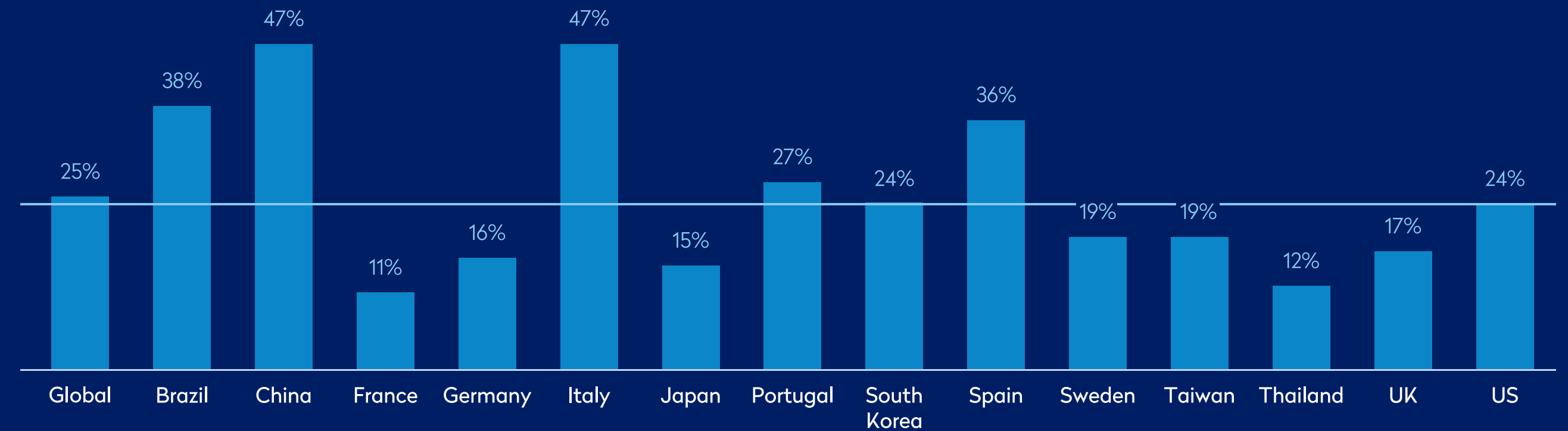


## IN RELATION TO FISH AND SEAFOOD:

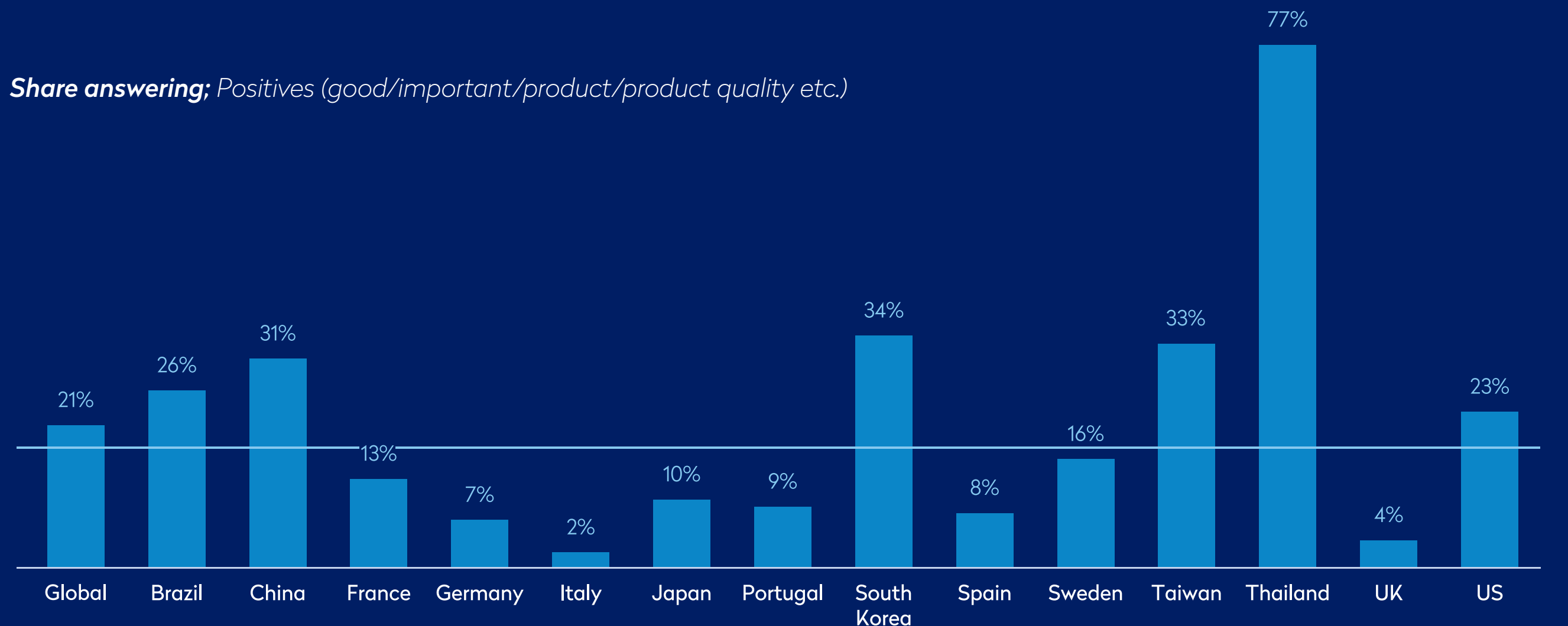
WHAT DOES SUSTAINABILITY MEAN TO YOU?

In general most people in our survey associate seafood and sustainability to the value chain being in some form ethically sound. This could involve fishing and catching practices, animal welfare, transport and logistics and quota regulations.

*Share answering; Environment (Environment/environmentally friendly/gentle on nature, no pollution/not harmful to the environment)*



*Share answering; Positives (good/important/product/product quality etc.)*





# What does it mean?

Sustainable food? Local food? Organic food?  
Is there a difference and if so, what is it?  
Sometimes the definition of terms used in the  
consumer vernacular can add to the confusion  
by overlapping – or not overlapping – where  
they should.

We have seen that what constitutes sustainable development is complex and that peoples' associations around sustainability do not necessarily match up. In last year's report we looked at how the same seafood purchase drivers differ in importance depending on the market. But, before we delve into the consumer mindset when it comes to sustainable, local or organic food – perhaps we need to unwrap the role of food production and what organic or local food actually is.

Broadly, the role of food production (agriculture and aquaculture/fisheries) serves two purposes: provide a large quantity (food security) of quality (food safety) produce to meet the demands of an ever-increasing population (e.g., Durham & Mizik 2021). We have learned from several sources (e.g., Costello et al., 2020) that an ever-increasing population will put more pressure on food production systems in the future. So, food production needs to comply with sustainability standards as well as being profitable.

For anyone browsing the grocery shelves on a shopping trip it is quite evident that organic food demands a price premium compared to that of, what we will call here, conventional food.

According to Durham and Mizik (2021), organic food is – among other things – more expensive due to the significantly lower, and also more expensive, production that is required. It is also about a much higher willingness to pay (111-138%).

In terms of agriculture, organic production may lead to a larger ecological diversity, although that is not necessarily the case for organic aquaculture, according to this study.

Another point to consider is that profitability may suffer when converting from conventional to organic production due to lower production over a certain time-period without the ability to extract a price premium. For instance, Gambelli et al (2019) reported from a study conducted in the early 2000s that profitability of organic salmon was wholly dependent

on price premiums. It should be noted though that this study was conducted at an early stage of development in organic salmon farming.

Price premiums of organic food mainly depend on “consumer preferences, availability of substitutes, consumer knowledge and the ability of consumers to distinguish between organically and non-organically farmed fish” (Gambelli et al., 2019). According to the researchers, local origin, availability, and perceived quality could very well be of greater importance.

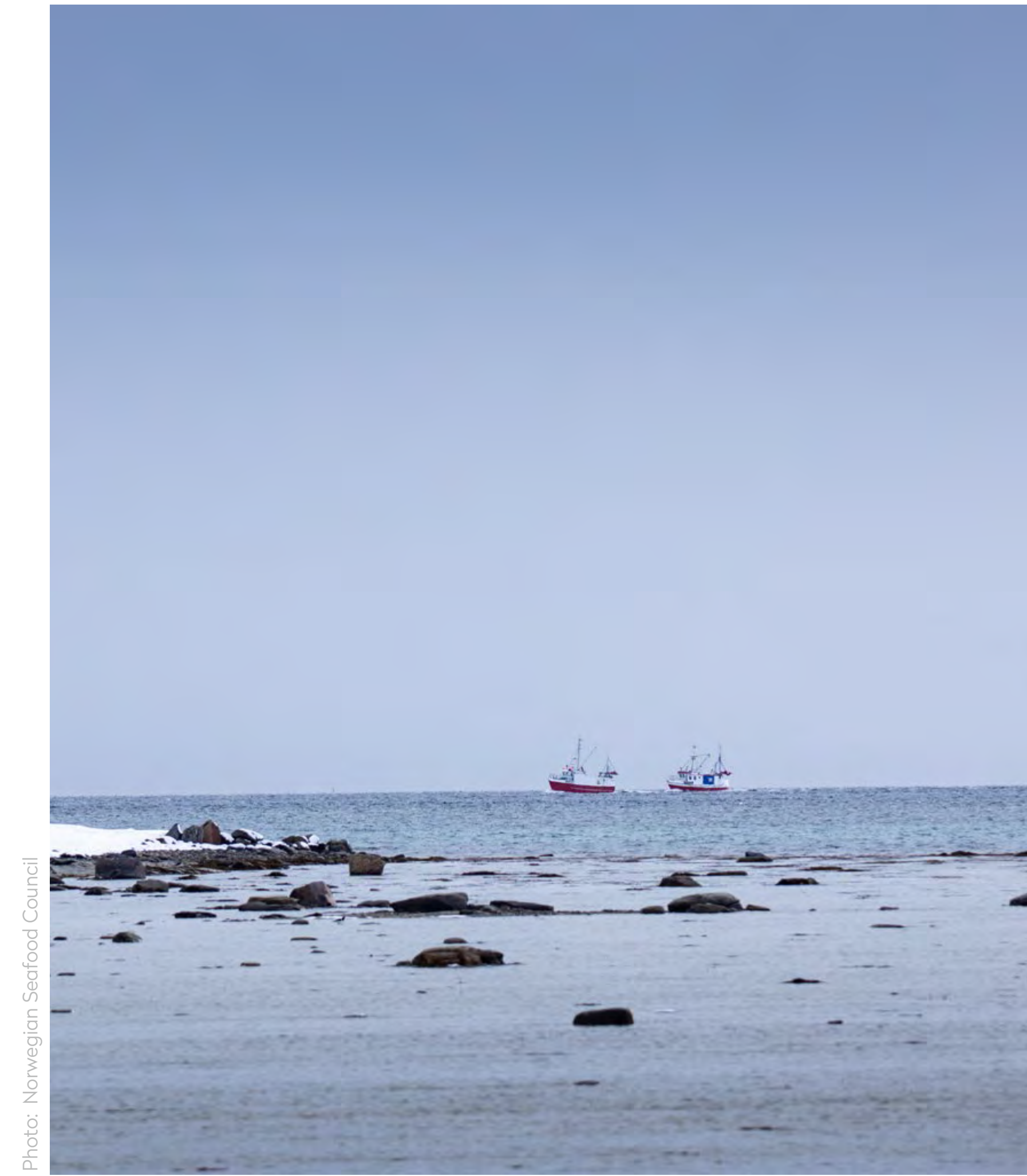


Photo: Norwegian Seafood Council

They conclude:

“The growth of organic aquaculture in the next few years appears to be conditioned by three major factors: enhanced research, particularly into the aquafeed field, to improve competitiveness of organic fish farming; improved marketing activities, to develop consumer knowledge and differentiation of organic seafood; and simplification of the regulatory framework at the global level, to reduce the obstacles for uptake of organic practices and for international trade in organic seafood”

The attentive reader probably spotted that ‘local food’ could matter more to consumers than the organic attribute. In that respect, could the importance of organic food be hindered by a preference for local food (unless the organic products are also locally produced)? How important is ‘local food’ to consumers and what even is local food exactly? According to Schmitt et al (2017) the definition of the term ‘local food’ is contested but one can think of it as a relationship that exists on a continuum between local and global food.

Local food performs better on several parameters compared to non-local or ‘global food’ (e.g., Schmitt et al., 2017). These can be increased biodiversity, societal benefits, and shorter food chains. However, in terms of price, food safety, efficient use of resources, and efficiency – global food is better. Depending on the transport method, efficiency of distribution and loading capacity of the ship or vehicle, transport over longer distances does not even necessarily correlate with increased emissions. This means that the shorter supply chain of

local food is not necessarily the strongest sustainability argument against global food.

But what does local food mean for consumers? In a study from 2019, Danish researchers reported that local food is primarily understood in geographical terms such as ‘produced nationally’ or ‘close by’ (Denver et al., 2019) – whereas ‘organic food’ has a clear definition and labelling schemes. Furthermore, the most positive aspects of buying local were the short transport distances, support for local farmers and freshness.

Unsurprisingly, direct interaction with suppliers at local markets increases trust and is experienced positively as well. That being said, consumers still tend to prefer shopping at supermarkets because they are, among other things, more convenient. The study also highlighted that for many consumers, the benefits of local food overlap with those of organic food.

What all this highlights is perhaps a need to fill an information gap and bring more clarity to consumer ideas around food – local, organic, sustainable. Despite the

complexities and challenges involved in working towards the UN's 17 SDGs, consumer awareness of sustainability is increasing dramatically. That is both a positive for the seafood industry, since it can provide lower-emission protein or highlight its work against overfishing for example, but it also brings with it greater scrutiny.



Photo: Norwegian Seafood Council



Conclusion:

# Summary

The Covid-19 pandemic has accelerated existing trends across the seafood industry – and prompted innovation. We are seeing this everywhere from restaurants that switched to home food kits when eating out became impossible, to the tracking of fish from sea to plate using blockchain technology in a bid to meet the health, climate, and animal welfare standards of a more conscious consumer. One trend that we have looked at is the expansion of e-commerce. At the very cutting edge, we are seeing everything from livestream to voice commerce. More common though is a growing blend between online and traditional retailers – resulting in so-called ‘clicks and mortar’ stores.

Convenience has also been taken to new levels. Last-mile providers in cities around the world now offer delivery – of takeaways but increasingly of groceries – in as little as 10 minutes. These services have boomed under the pandemic as people stayed home. They have also given rise to completely new types of grocery stores: ‘darkstores’ that serve only delivery services.

The rhetoric around sustainability is something else that has exploded under the pandemic. Understanding, monitoring and reporting on sustainability is a must – and something that is increasingly a consumer requirement as well.

But sustainability is not just about the consumer. This catchword covers a huge – and growing – array of issues with ‘sustainability’ having a different meaning for different people. But some issues are certainly more relevant to the seafood industry than others. This report looks in depth at the UN’s 17 Sustainable Development Goals, which take us through to 2030 – and beyond. Goals are integrated but **SDG 2: Zero-hunger** (which covers malnutrition and so obesity, a concern for many western countries) and **SDG 14: Life below water**, are of particular relevance to the seafood industry.



Photo: Norwegian Seafood Council

*Many of the trends covered in this report impact or influence many of us – but some are aimed at younger generations: these are the consumers that say they are more concerned about climate change and sustainability. Some of the innovative products and plans around fish and seafood are focused on getting younger people to eat more of these healthy,*

*low-carbon-footprint sources of protein. Younger generations perhaps best personify an increasingly complex and demanding consumer, but it is not just young people that want sustainable food sources or to shop online or enjoy the convenience of speedy grocery delivery. These are trends are not confined to clean-cut demographics. It is something that affects us all.*

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March 2022