

# R&D-Report

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## The impact of Covid-19 crisis on the white fish industry in Norway

Results of the study among cod  
exporters

Valeria Nyu  
Frode Nilssen

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Nord University  
R&D-Report no. 77  
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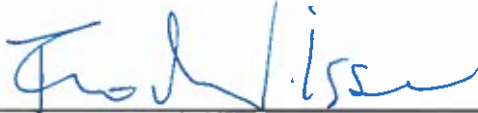

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<b>Sammendrag</b> Norsk fiskerinæring har møtt både markedsutfordringer og tilgang til arbeidskraft i foredlingsindustrien under Covid 19 - pandemien. Lange av de store markedslandene for hvitfisk endret forbrukernes etterspørsel seg fra restaurant til pakkede - både ferske og frysede produkter, for tilberedning hjemme. I undersøkelsen kommer det frem at Bedriftene har vist stor evne til tilpasning til nye rammevilkår i markedet.	<b>Emneord</b> Covid 19, markedsendringer, strategisk tilpasning, markedsstrategi							
<b>Summary</b> COVID-19 crisis has had a dramatic impact on the global seafood chains. The seafood actors faced various challenges, such as labor constraints, food safety concerns, lockdowns, limited mobility, delays and disruptions within transport and logistics services, transport restrictions and quarantine measures. The Norwegian seafood exporters has proved strong ability to adapt to external market disruptions.	<b>Keywords</b> Covid 19, market disruptions, strategic adaptations and coping, marketing strategy							
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An aerial, high-angle photograph of a port at night. A large container ship is docked at a pier, its deck illuminated by warm lights. The ship's deck is covered with stacks of colorful shipping containers in shades of blue, red, yellow, and white. Several cranes are visible on the ship. In the bottom left corner, the bow of another ship is visible, also illuminated. The background shows the dark blue water of the port.

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white fish industry in Norway**

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**FRODE NILSSEN  
VALERIA NYU**

## Sammendrag

Norsk fiskerinæring har møtt både markedsutfordringer og tilgang til arbeidskraft i foredlingsindustrien under Covid 19 - pandemien. Det er mye som tyder på at markedene vil normalisere seg i etterkant av pandemien.

På vegne av torskenettverket Cod Cluster har Handelshøgskolen Nord Universitet gjennomført en undersøkelse av effekten som pandemien har hatt på torskeeksportørene. I rene tall viser dette at 56% av eksportørene opplevde store problemer med produksjonskapasiteten på grunn av vansker med å få ansatt produksjonsarbeidere. 38% opplevde betydelige problemer med å kunne levere fisk til markedet – på grunn av kapasitetsproblemene som bemanningene medførte. En del (13%) opplevde logistikkproblemer – det å få fraktet fisken til markedet - som en betydelig utfordring.

Den umiddelbare utfordringen som traff torskenæringen i mars 2020, var markedssvikten. I Europa ble det aller meste av offentlig tilgjengelige spisesteder stengt med en gang. Restauranter, hoteller og kafeer, kalt HoReCa på «stammespråket», som tradisjonelt har stått for en veldig stor del av forbruket av ferskfisk i Europa forsvant så og si over natten. Andre store og viktige markeder i land som kjøper foredlet torskefisk som klipp- og tørrfisk forsvant også. Litt mindre momentant, men temmelig raskt. Hovedgrunnen til det er svikt i forbrukernes kjøpekraft og at importørene fikk likviditetsproblemer.

Markedssvikt og betalingsproblemer blant tradisjonelle kunder ble altså en stor utfordring allerede tidlig under pandemien. Som om ikke dette var nok oppsto det også en dramatisk svikt i tilgangen til produksjonsarbeidere i den norske fiskerinæringen. Torskenæringen er avhengig av sesongarbeidere om vinteren, på samme måte som landbruket er om sommeren. Det er en stor utfordring for torskenæringen at de i løpet av januar til april skal ta imot og handtere mer enn 200 millioner kilo eller nesten halvparten (40 – 45%) av de totale årlige landingene av torsk. Det krever stor manuell arbeidsinnsats. Før pandemien ble leveransene av fersk torsk pakket og sendt ut som fersk kjølt vare til hotell og restaurantmarkedet i Europa eller produsert til tørr – og klippfisk.

Med nedstengningen av de klassiske HoReCa-markedene flyttet forbrukernes etterspørsel etter sjømat fra HoReCA til supermarkedene, litt forenklet sagt. I Europa har dette bildet avtegnet seg tydelig. Poenget er at norske fiskeeksportører har tilpasset seg markedsendringene på en god og effektiv måte.

Resultatene viser eksportbedriftene mestret en ny tilpasning uten statlig støtte når de viktigste markedet forsvant og bedriftene samtidig fikk store produksjonsmessige utfordringer. Veldig forenklet handler dette rett og slett om at produsenter og eksportører er i stand til å møte en ny etterspørsel i markedet i helt andre segment og samtidig tilpasse produksjonen til mulighetene og begrensningene. Bedriftene viste stor evne til å tilpasse seg den nye hverdagen gjennom strategisk tilpasning der de på best mulig måte tilpasset sine sterke sider til eksisterende og nye muligheter.

Endringen for å betjene nye markeder, segmenter og kundekrav drevet frem av pandemien fordret en annen type produkt og foredlingsgrad. I undersøkelsen viser det seg at nær 2/3-deler av dem hadde endret fokus mot nye markeder – fortrinnsvis med salg til detaljistsektoren. Men i stedet for å binde kapital og foreta store investeringer i utstyr ble valget for de fleste å gå via større foredlingsanlegg i EU og andre aktuelle regioner. Noen rettet innsatsen direkte mot supermarkedkjeder og andre store aktører. Mange hadde også rettet seg inn mot helt nye markeder og markedssegmenter og foretatt betydelig utviklingsarbeid.

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# Covid-19 and global seafood chains

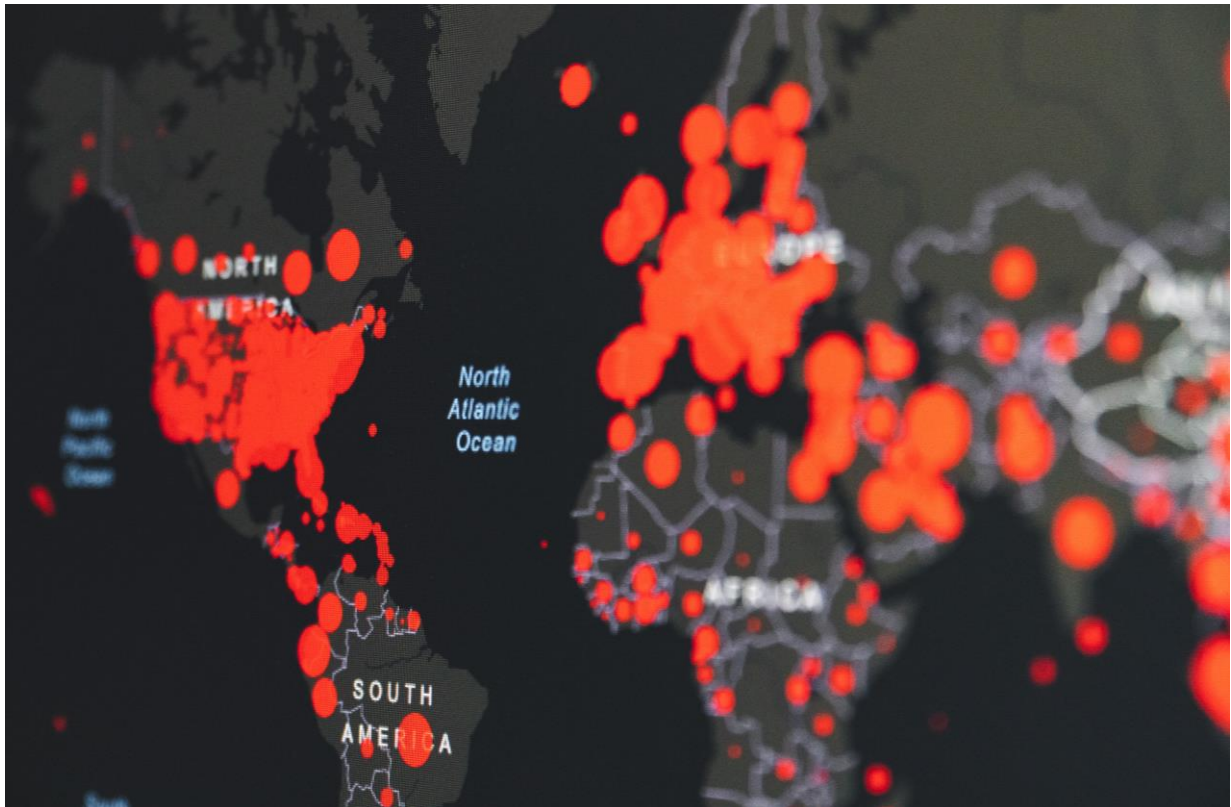
## Background of the study

COVID-19 crisis has had a dramatic impact on the global seafood chains. The seafood actors faced various challenges, such as labor constraints, food safety concerns, lockdowns, limited mobility, delays and disruptions within transport and logistics services, transport restrictions and quarantine measures. In addition, the level and the composition of consumer demand seem to have changed due to the introduction of confinement measures. While it is possible that markets will eventually “normalize” in the wake of the pandemic, the new routines developed over the past year may have laid the foundation for a major change in consumers' shopping patterns.

In many large whitefish market countries, consumer demand for packaged fresh and frozen products for home cooking may remain strong long after the recovery of the COVID-19 crisis. Further, supply chain disruptions have led to changes in previously established distribution patterns. Alternative market channels such as online delivery solutions are among the currently preferred market channels for seafood.

Based on the in-depth interviews with export managers in the seafood industry, we developed a questionnaire. The questionnaire was used to conduct a survey among cod exporters within the Cod Cluster. The survey incorporated questions that shed light on the changes that companies have made to adapt to new trading patterns, purchasing criteria and the balance between new and existing market channels to consumers in key market countries.





A total of 18 companies were asked to participate in the survey. These companies represent a predominant proportion of Norwegian whitefish exporters in the fresh fish segment. We received 16 responses, which corresponds to 89% response rate.

The next sections of the report address the challenges that impacted exporters within the Cod Cluster as well, as their strategic responses. Based on the analysis of the data we identify two response strategies, proactive and reactive, and draw on the implications of the chosen strategic response for the adaptation to the Covid-19 crisis.

## Challenges faced by cod exporters

### Environmental uncertainty

The sudden outbreak of the pandemic has led to multiple challenges for exporters in the seafood industry. These challenges were caused by the volatile conditions the external environment and firm-related issues that resulted from the pandemic. According to the data, the exporters within the Cod Cluster have been mostly affected by changes in market prices (81.3%), the loss of previous customers in the established markets (68.8%) and reduced demand (50%). Other environmental changes were experienced by a smaller number of respondents including changes in the supply of raw materials (12.5%) and increased trade barriers (6.3%). Thus, the most impactful changes emerged from the uncertain market conditions. Moreover, 68.8% of the respondents indicated that over the last year they had experienced significant changes in the demand conditions. This involved such issues as changes in the composition of customers, reduced demand from the HoReCa segment and increased demand from the retail customers, changes in product demand (frozen fish, consumer products), and generally lower demand due to the environmental uncertainty. Further, our data suggests that these changes mostly affected exporters that were focused largely on customers within the HoReCa segment.

### Firm-level challenges

Apart from changes in the market conditions, exporters were faced with a number of firm-related challenges resulting from the outbreak of COVID-19. Figure 1 illustrates the results provided by the survey. First, exporters experienced reduced production capacity, which was caused by the difficulties in terms of hiring production personnel (56%). Second, lockdowns have compromised exporters' ability to deliver products to the customers (38%). It was also reflected in logistical issues that were caused by the reduced availability of flights and challenges in transportation of products and raw materials (13%). Although exporters experienced various challenges related to production capacity and logistical frictions, our results indicate that the pandemic did not have significant negative consequences in terms of human resources. Only 6% of respondents mentioned that the outbreak had limited their administrative capacity. Moreover, none of the exporters indicated the consequent lay-offs of their employees.

Based on the overview of the results, we suggest that the main negative outcomes of the pandemic on the whitefish export stem from the uncertainty of global market conditions. In the first quarter of 2020, a number of confinement measures have been introduced all over the world in order to contain the quick spread of the COVID-19. These measures had an immense impact on companies within the HoReCa sector and, consequently, on the exporters dealing with

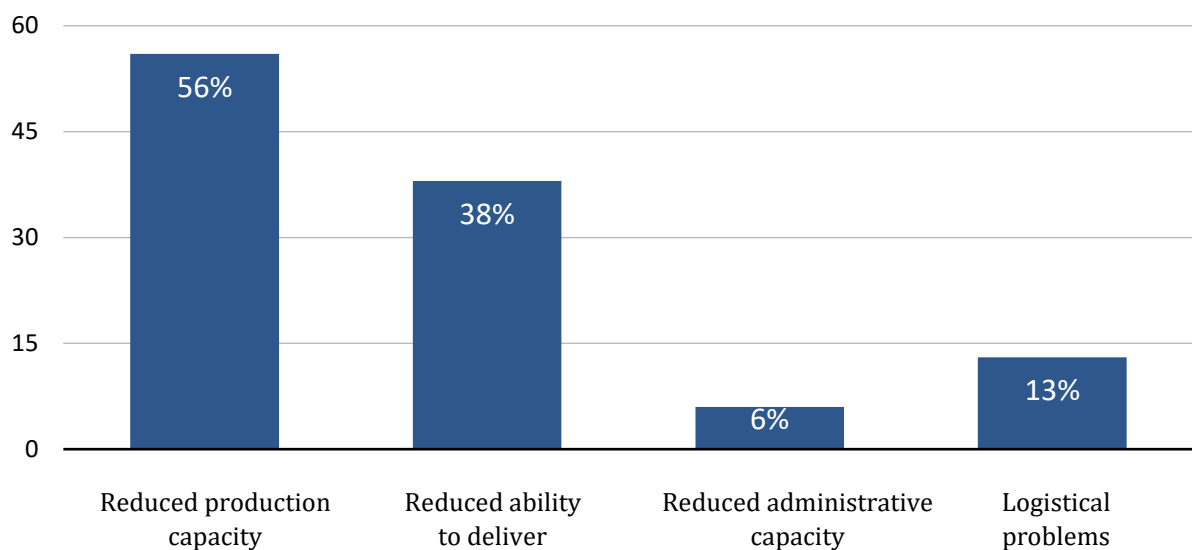


Figure 1 – Challenges caused by the pandemic

foodservice providers. However, the loss of customers within the HoReCa segment has been somewhat compensated by an increased demand from the retail customers.

The sudden change in the level and the composition of demand along with various supply chain disruptions exposed the need to implement changes in the exporters' strategies. Firms were forced to reconsider their existing patterns in order to survive and successfully adapt to the new realities. The following question remains: how did exporters respond to the challenges of the COVID-19 crisis?

## Strategic reset

### Changes in the customer portfolio

The adaptation to the COVID-19 crisis involved an increased focus on the retail segment, which was supported by data from 63% of the respondents. As exporters were exposed to increasing uncertainty, 44% of companies mention that they prefer to sell to larger customers. Based on the interview data, the focus on larger customers can be viewed as a risk-aversion response that allows to reduce uncertainty and strengthen the stability of payment. Due to challenges experienced with the loss of traditional customers some exporters had to seek expansion towards new market countries, as indicated by 31% of respondents in the survey.

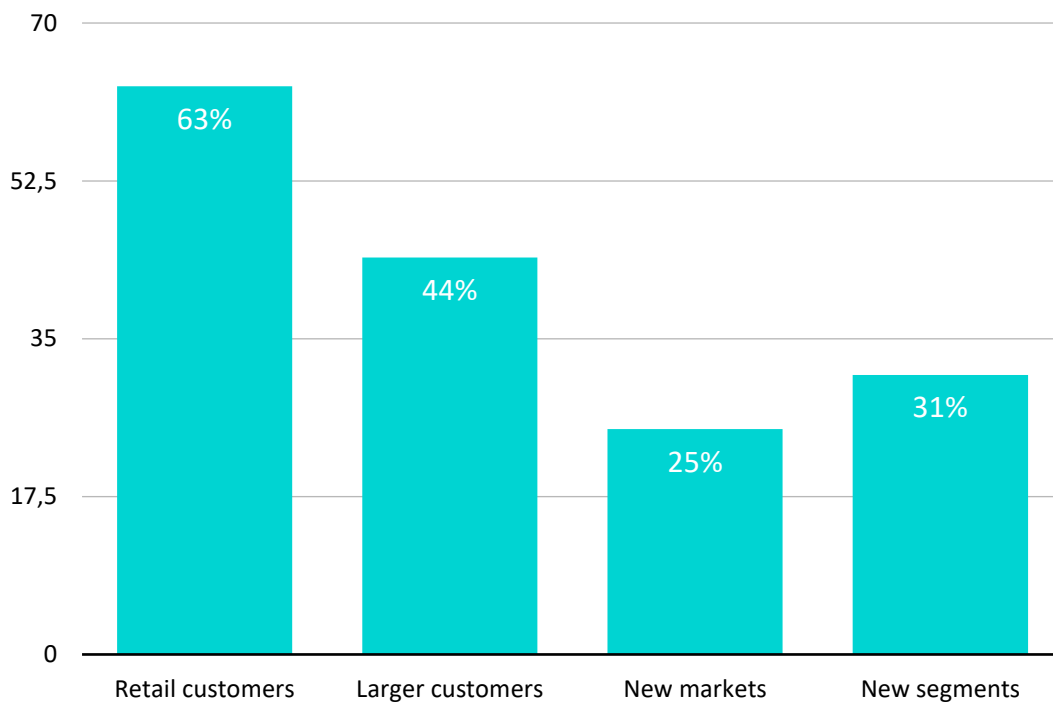


Figure 2 - Strategic change in customer portfolio

The results of the study indicate that the COVID-19 challenges have led to changes in the customer portfolio among the exporters. As illustrated in Figure 3, the most important types of customers before the pandemic outbreak were HoReCa customers (10) and processing plants abroad (10), followed by traders/importers (8), wholesalers (8) and retail sector (7). However, the order of priority within customer portfolio seem to have changed a year after the outbreak.

Since the HoReCa segment was severely affected by the pandemic, it is clear that exporters had to focus on other customer types. Interestingly, there seems to be a larger focus on selling to processing plants abroad (12) and wholesales (9) following the outbreak of COVID-19. The increased focus on the processing plants may be related to the exporters’ willingness to establish direct contacts with the actors located “lower” in the marketing channel. The other important customers indicated by respondents were traders/importers (7), retail customers (7) and HoReCa customers (7).

The figures do not demonstrate a significant change in terms of the retail sector before and after the pandemic, even though, the respondents indicated an increased focus on retail customers. It could potentially be explained by the choice of a distribution channel. In other words, the lack of variation in the percentage of the retail customers could be related to the choice of direct or indirect export mode. The establishment of a direct distribution channel between an exporter and a retailer requires significant time and resource investments. Since exporters had to respond to the sudden change in demand within a limited time frame, it may not have been possible or preferable to establish direct sales to the retail sector. Hence, the shift towards the retail customers could be reflected in the composition of traders/importers that supply the product to the retailers.

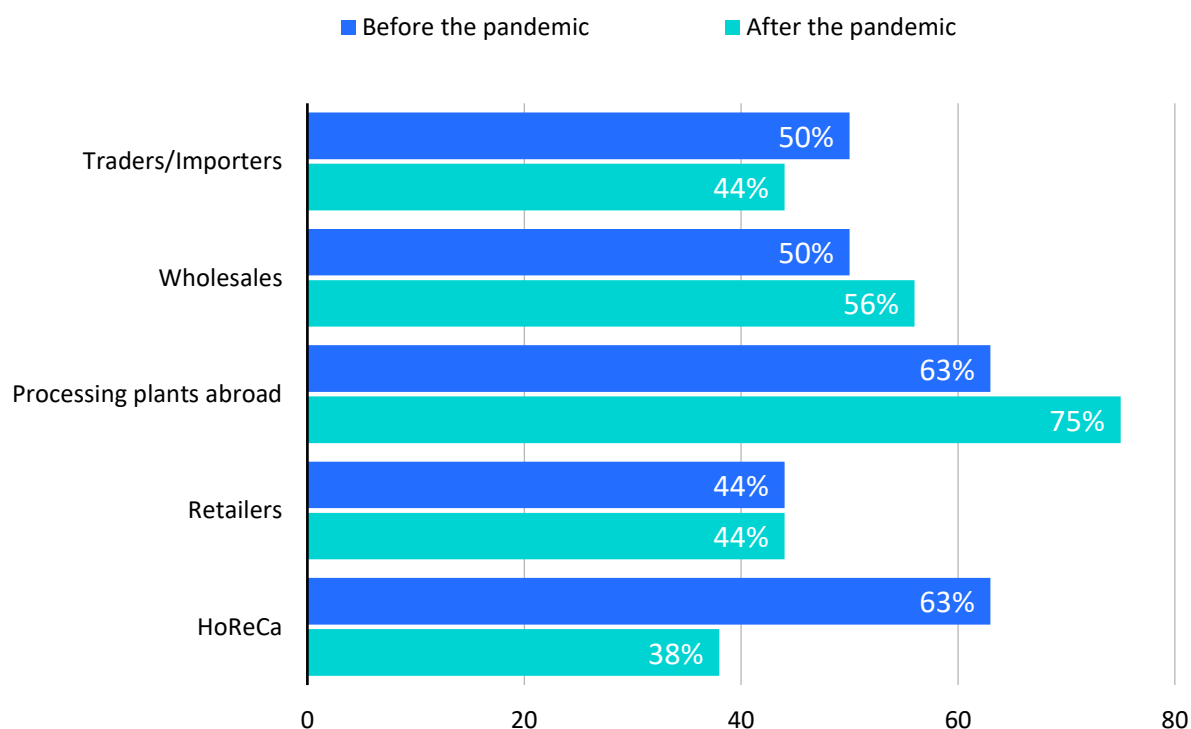


Figure 3 - The most important types of customers

### Changes in the product offer

The sudden outbreak of COVID-19 followed by changes in customer and distribution patterns exposed the need to rethink the existing product strategy. Due to the changes in the composition of demand, a number of exporters seem to have refined their approach to product offering. Figure 4 provides an overview of the changes implemented by exporters participating in the survey. The responses in terms of product strategy vary in degree of proactiveness ranging from a proactive strategy involving higher risks and potential future gains to a more passive or reactive response that is aimed at maintaining the "status quo". One example drawn from the survey results is the increased focus on innovation and product development, which was found among 50% of respondents. Innovation and product development can be viewed as a more proactive response to rising challenges due to the COVID-19 crisis. A high degree of proactiveness is associated with greater risks, as firms need to commit resources for the sake of potential benefit in the future. Another response to the pandemic involved an increased product diversification. More than half of the sample (56.3%) indicated that the pandemic resulted in the efforts to diversify the existing product offering. Product diversification is a less proactive response associated with fewer risks and commitments. Nevertheless, it allows firms to reduce their vulnerability and possibly extend their customer portfolio, which can increase their chances to withstand exogenous shocks.

The reactive responses involve smaller changes in the existing product offering. Such changes are implemented in order to adjust to external changes in a less invasive and resource-demanding way. Notably, some respondents experienced a shift in the balance between fresh and frozen products (38%). This change could be associated with the shift in customer demand patterns and increased focus on retail segment. At the same time, as frozen seafood is associated with a lower product perishability, it may be perceived as a safer alternative under demand uncertainty and, hence, reduce the risks of not selling the product. A smaller amount of responses were associated with changes in product packaging (19%). Interestingly, despite our preliminary assumptions regarding challenges with stricter food safety regulations, only 6% of respondents perceived the increase in such restrictions.

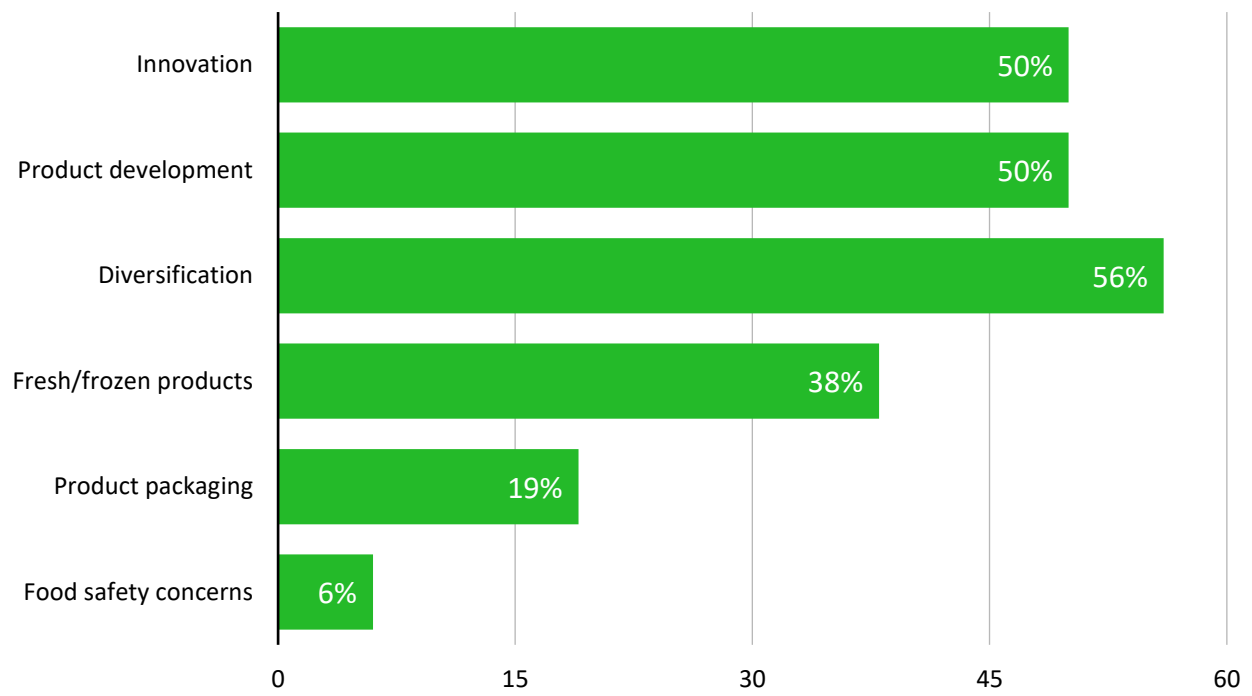


Figure 4 - Changes in product strategy

### Changes in the distribution patterns

Apart from the reduced sales to the HoReCa segment experienced by the majority of the firms in the sample (69%), the data indicates that more than half of the respondents (56%) experience increased sales to businesses closer to the end customer. In other words, it seems that exporters deal more with businesses in the lower end of the marketing channel (Figure 5). This could be explained by the changes in product offering and the shifting demand patterns favoring sales to retail segment. The data indicates that 67% of firms focusing on product development increased their sales to the lower part of the marketing channel. This tendency also emerges among 70% of firms that indicated the sales growth to the retail segment.

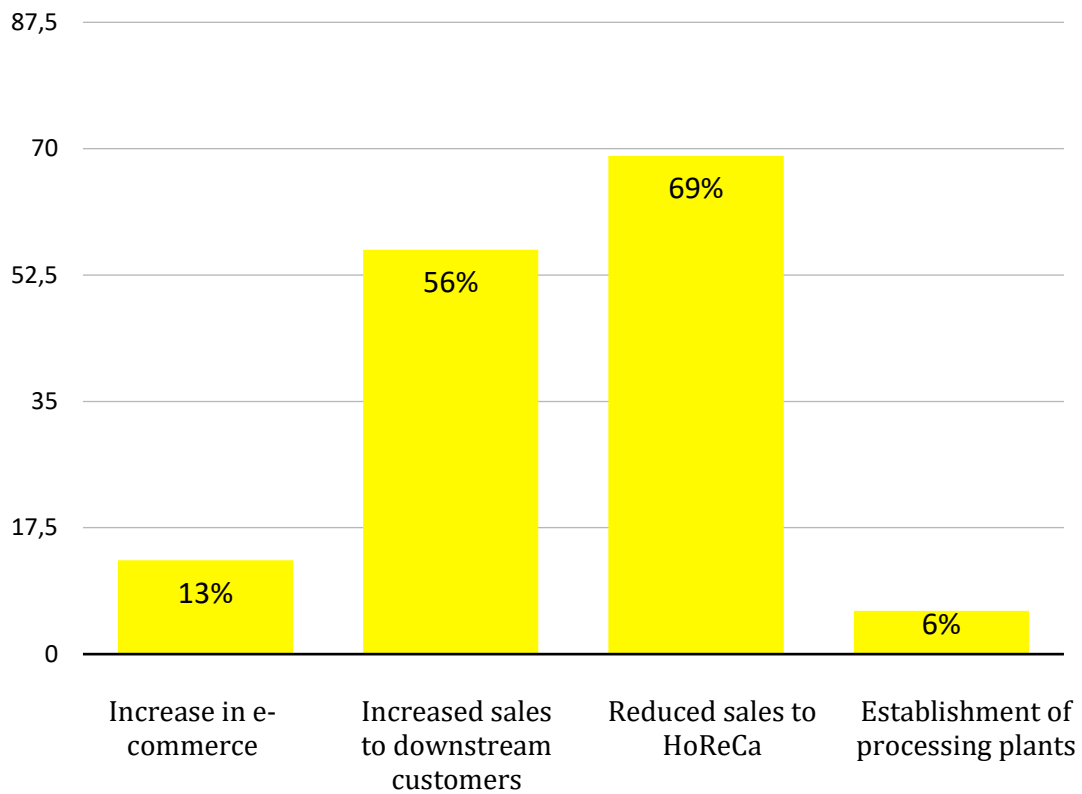


Figure 5 - Changes in distribution strategy



Despite the growing trend in e-commerce sales of fresh produce in Europe and the US (EUMOFA 2021<sup>1</sup>), our findings do not reveal a spike of online sales in the white fish industry. Interestingly, only one respondent indicated a substantial increase in e-commerce sales after the pandemic (from 0 to 25%). Two respondents mentioned that their sales via e-commerce increased from 2 to 5% and from 4 to 8%. The rest of the sample did not indicate increase in e-commerce. With regards to the expectation of increased e-commerce sales, the results indicate that only 25% of respondents expect some level of increase (Figure 6).

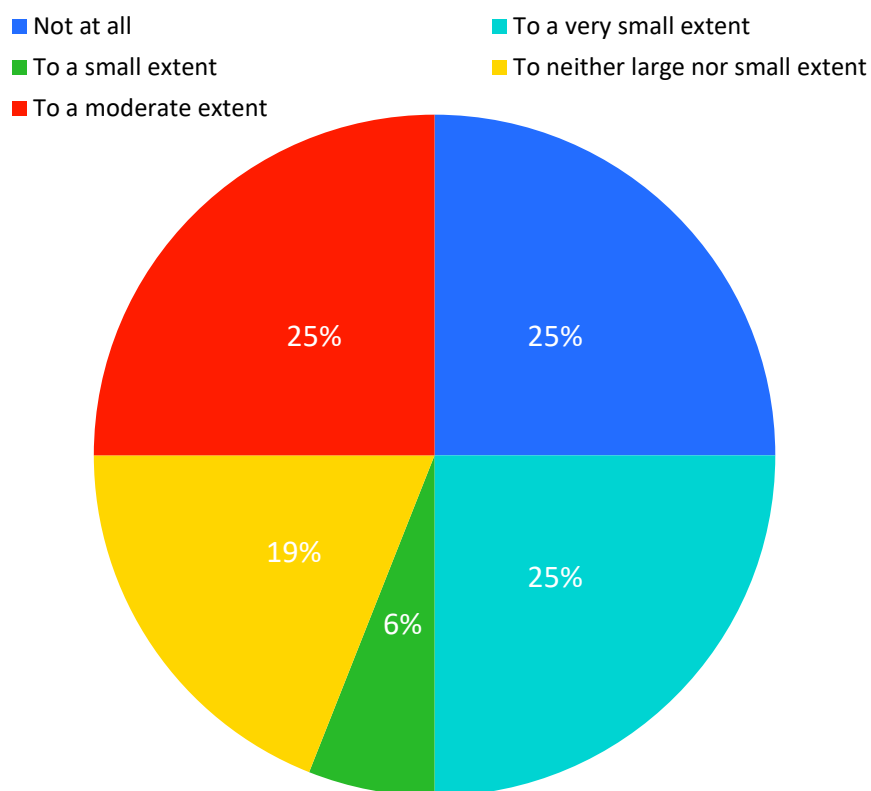


Figure 6 - Expectation of an increased share of future e-commerce distribution

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<sup>1</sup> "Online sales of fishery and aquaculture products", EUMOFA (European Market Observatory for Fisheries and Aquaculture Products)

The reluctance to increase online sales could be explained by obligations and risks associated with e-commerce. According to the recent study of EUMOFA (2021), efficient digital sales require the development and maintenance of online tools, compliance with existing legislation for fisheries and aquaculture products, greater staff and fishery capacity, additional costs related to packaging, storage and transport, and so forth. Due to supply uncertainty and the dependence of fisheries on weather and seasonal conditions, it may be challenging for suppliers to ensure requested products on short notice. Moreover, the establishment of e-commerce requires a high level of skills in social media, IT, and online trade knowledge, which may appear time-consuming and costly. However, the advantages of online marketing and sales may appear quite lucrative for both suppliers and customers. Suppliers may benefit from more flexible pricing models. Furthermore, online channels allow a supplier to gain a higher level of control over every stage of the marketing process and increase direct sales to consumers. E-commerce may also allow suppliers to accelerate the selling process, set a higher product price and develop customer loyalty.

### Proactive vs Reactive strategic response

Strategic responses to the COVID-19 crisis fall into two broad categories, namely, proactive and reactive strategies. A proactive strategic response was associated with willingness to commit resources and take risks for the sake of possible future benefits. In particular, our data indicates that firms adopting a proactive approach to their strategy placed larger emphasis on innovation and product development. Moreover, they appear to be more inclined towards approaching downstream customers (at the lower end of the marketing channel).

The results indicate that respondents choosing a more proactive approach to their strategic response perceive the effectiveness of their adaptation to be greater than those taking a more reactive position. According to the data, 38% of the respondents implementing a proactive strategic response evaluated their strategy to be effective “to some extent” or “to a large extent” (Figure 7). At the same time, the adherents of the reactive strategy did not indicate that their strategy was effective. In other words, those, who take a more proactive approach seem to think that their adaptation to the COVID-19 crisis was effective to a large extent.

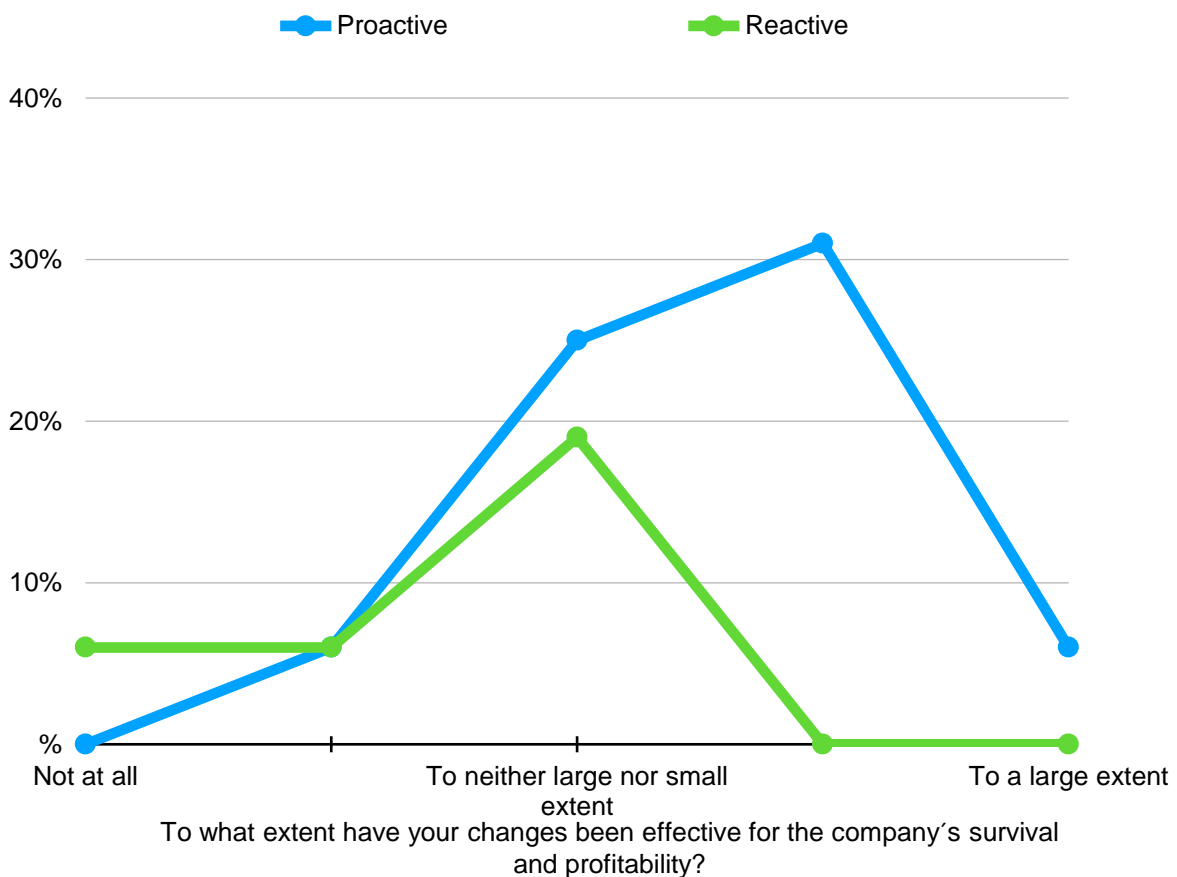


Figure 7 - Strategic response and the effectiveness of change

Furthermore, the adherents of proactive strategic response seem to have achieved a higher degree of adaptation to the COVID-19 crisis (Figure 8).

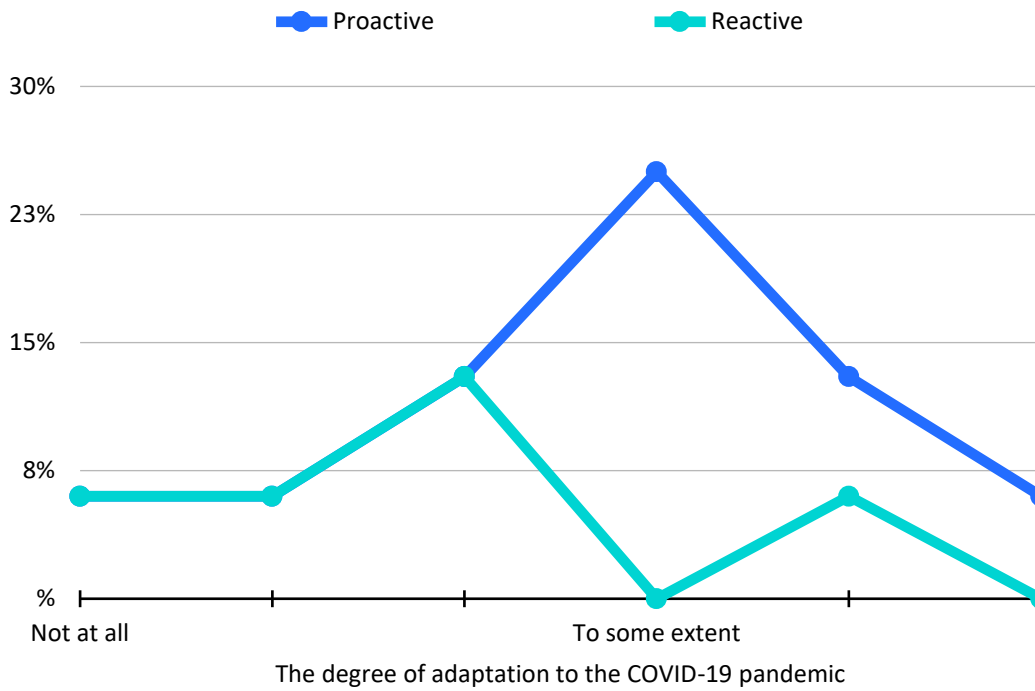


Figure 8 - Strategic response and the level of adaptation to the Covid-19 crisis