

Chapter 10

Challenges of the Norwegian Salted Fish Industry in the Spanish Market

Jinghua Xie and Øystein Myrland

Abstract The Spanish market for salted fish products has been restructured over the last decade. A significant pattern is a steady increase in the consumption of frozen light salted fillets at the expense of traditional products. The three Nordic countries, (i.e., Norway, Iceland and the Faroe Islands) account for around 90 % of the Spanish market share. Among them, the share of Iceland is expanding, due to the substantial growth of light salted fillet export. The share of Faroe Islands slightly increases due to its success in clipfish fillet exporting in consumer packages. However, the Norwegian export suffers a major loss, which is mainly explained by its conventional commitment of export of wet salted cod. Overall, the results indicate a significant challenge for the Norwegian salt fish industry to maintain its position in the Spanish market. A market-oriented strategy of differentiating and developing new products is suggested to improve the Norwegian industry's performance in Spain.

Keywords Salted fish trade · Market structure · Norwegian market problems · Econometric modeling · Frozen light salted fillets · Spain

10.1 Introduction

The product group, salted fish, in the Spanish market consists of three main traditional products and one relatively new product called frozen light salted fillets. The traditional ones are whole wet salted cod, salted cod fillets and clipfish. Wet salted cod is a product where the gutted fresh fish is split and salted. Salted fillets are wet salted cod fillets, which are boneless and without a belly. Clipfish is a wet salted cod dried to around 70–75 % of the wet salted weight. Light salted fillets are the frozen fillets either soaked or injected with 2 % salt, which tastes similar to the desalted traditional salted fillets¹.

¹ For a more detailed description of the products, see Lindkvist and Sanchez (2008).

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In Chap. 3, Richter-Hanssen analyzed the historical background of the Norwegian-Spanish salted fish trade and generalized the following points. The history of this trade dates back to 1665, and clipfish was the only product in the early period. The Spanish market had never been a large market for Norwegian salted fish until 1970, when Spain's own production tremendously decreased. In recent decades, the share of salted whole fish and fillets has been increasing, while clipfish has been decreasing to a marginal percent. The Spanish consumers' complaints about Norwegian salted fish originated back to the 1790s. Richter-Hanssen also concluded "Norwegians, however, had been on the defensive and proud of an old, entrenched position."

The focus of our analysis in this chapter is the modern situation of Norwegian salted fish in Spain. The chapter includes four sections. Section 10.1 briefly discusses the data we have employed. Section 10.2 presents the general situation of Spanish imports of salted fish and problems for the Norwegian salted fish industry. Section 10.3 discusses the estimated results of a more rigorous demand model, which confirm the market situation depicted by the descriptive data in Sect. 10.2. Finally, Section 10.4 suggests a market-oriented strategy for the Norwegian salted fish industry to improve its performance in Spain.

10.2 Data

The data sources for our analysis are monthly trade data of Eurostat and national statistics of Norway, Iceland, and the Faroe Islands, all provided by the Norwegian Seafood Council (NSC).

The original data were specified according to product description and the associated HS number for each product. We aggregated the data according to our needs. Specifically, to keep the data consistent with that in the other chapters of the book, in Sect. 10.2, the quantity of salted fish products is measured by product weight, otherwise noted. However, in Sect. 10.3, to make the econometric modeling manageable, the aggregation of different product forms becomes necessary. It demands that the quantity be measured in REW (Round-Fish-Equivalent-Weight). The quantity on the REW basis for Norwegian export is available from the original data set given by the NSC. Those for Iceland and the Faroe Islands are converted from product weights according to the corresponding conversion factors given by the Norwegian Ministry of Fisheries. The values are measured in euros at the FOB level. Unit prices were computed by dividing the value by quantity.

We found that Eurostat is not consistent with the national data for the specific commodity, (i.e., for the commodity with the same HS number, the Norwegian export to Spain is not consistent with the Spanish import from Norway). The reason for this occurrence, as explained by the Norwegian Seafood Council, might be that Eurostat registered the commodity according to the first landing countries in EU countries, while the Norwegian data are registered according to who is the buyer in the contract. It is probably the same for the Icelandic and Faroese data. This means the EU data on Spanish imports from EU countries might also include some

commodities that are merely passing through the country for transportation reasons. Therefore, we use Eurostat for the data of total Spanish imports and use the data of these three nations as their exports to Spain, respectively.

The ambiguity of Eurostat and exporting countries' data is a problem for researchers making an empirical analysis. Fortunately, for our analysis, the problem is not serious since the three Nordic countries make up 90 % of the total Spanish imports and we use the relatively aggregated data.

Another problem with the data is that thus far there is no registered record of light salted cod fillets either in Eurostat of Spanish imports, or in the Icelandic export data until the year 2008; whereas, since the mid-1990s, the brine and injecting salt solutions have changed the content of frozen fillets. Although no one wants to talk about it, everyone knows about it and the market seems to be happy with the development (Lindkvist et al. 2008). This claim is strongly confirmed by the Icelandic data in 2008, when for the first time, Iceland had light salted fillets in its statistics. According to the Icelandic statistics of 2008, the exports of frozen fillets to Spain were 1113 t, and the exports of new recorded frozen light salted fillets were 5790 t, for a total of 6905 t. The relative shares of frozen fillets and frozen light salted fillets indicate that at least 80 % of the frozen fillets from Iceland before 2008 were actually light salted. Therefore, we use the export data of frozen fillets from Iceland as a proxy for Spanish imports of frozen light salted fillets.

Although the real data of the light salted fillets is available in 2008, however to keep the data consistent, we added the frozen fillets and frozen light salted fillets for the year 2008. There might be some light salted fillets exported by the Faroe Islands too. While, according to an interview with some importers published by Lindkvist et al. (2008), the majority of them are from Iceland. In addition, there are still no available data for the Faroe Islands to indicate how many frozen light salted fillets are exported to Spain. Thus, when we mention the Spanish imports of light salted cod hereafter, we actually use the data of the Icelandic exports of frozen fillets based on the above-discussed reasons.

The total Spanish imports from other countries (e.g., China, Canada, and Russia) comprise about 10 %. To give the addressed problem manageable dimensions, the study therefore focuses on salted fish from the three Nordic countries.

10.3 Descriptive Comparative Analysis of the Spanish Salted Fish Market and the Problem for the Norwegian Industry

10.3.1 *Spanish Market of Salted Fish*

The total Spanish imports of salted fish grew rapidly between the years 1991 and 2007 (Fig. 10.1). The import volume (in product weight)² doubled from 25,000–50,800 t. Among those, the traditional wet salted whole fish and fillets grew by 25 % and clipfish by 283 %. The main contribution was from frozen light salted fillets, which

² Hereafter in product weight, otherwise noted.

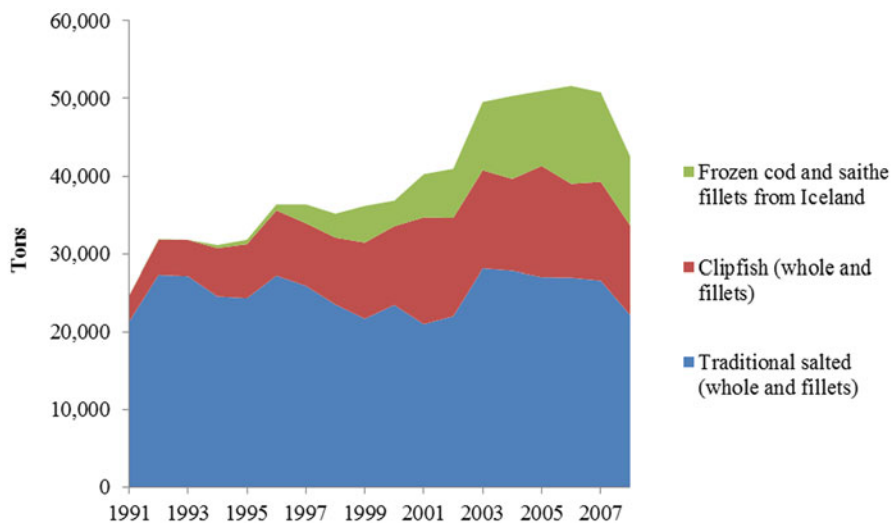


Fig. 10.1 Spanish imports of salted fish. (Source: NSC (2009))

grew from 47 to 11,532 t in this period. As a result, the market share of salted whole fish and fillets dropped from 86 to 52 %, clipfish grew from 13 to 25 %, and frozen light salted fillets grew from almost 0–23 %. This pattern held in the year 2008, although the imported amounts of all the products declined due to the world economic crisis.

For traditional salted whole fish and fillets, the export amounts of Norway, Iceland, and the Faroe Islands account for about 90 % of Spanish imports (Fig. 10.2). The main difference exists for clipfish. The three Nordic countries only account for 15–20 % of the Spanish imports, and the remainder is shared between four EU countries, namely Denmark, the Netherlands, Portugal, and France. Whether this is because of the different statistic criteria between Eurostat and the national statistics of the exporting countries or because a large amount of clipfish is processed in these EU countries or both is not clear. However, this may indicate that, compared with traditional salted whole fish and fillets, more clipfish is processed in the EU countries and re-exported to Spain.

Spanish imports of salted fish include cod, saithe, haddock, ling, blue ling, and others. Cod has the dominate share of more than 90 %; some other white fish species, however, seem to be taking up more shares and keeping the Spanish market growing (Fig. 10.3). Eurostat aggregates all the other species together. To see what the main species are that are beginning to appear in the Spanish salted fish market, we have graphed the Nordic exports of different species to Spain for the period 1991–2008 in Fig. 10.4. It shows that saithe is the main contributor: the export of saithe increased from 707 to 2303 t in the period. Ling makes a minor contribution. The exports increased from 785 to 1516 t in the period. The exports of all the other species are still comparatively tiny. The saithe exports are mainly as a product of frozen light

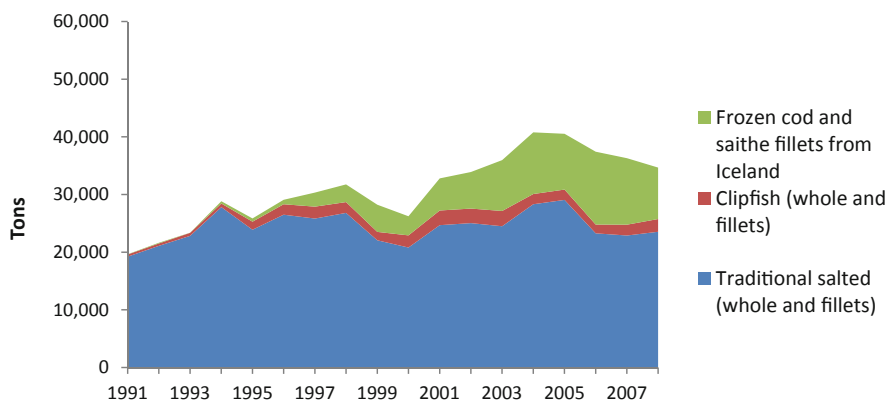


Fig. 10.2 Nordic exports of salted fish to Spain. (Source: NSC (2009))

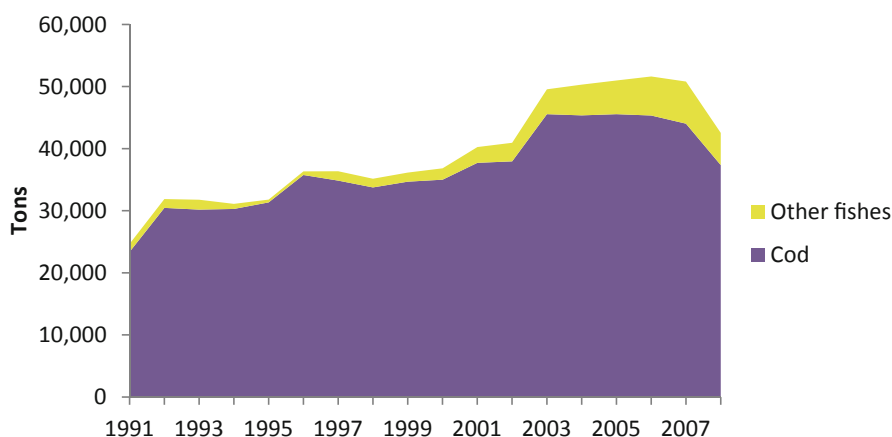


Fig. 10.3 Spanish imports of salted fish. (Source: NSC (2009))

fillets from Iceland to Spain. The ling exports are in the form of traditional salted whole fish and fillets.

Figure 10.5 shows that the growth of the Spanish market generally is not equally shared by Norway, Iceland, and the Faroe Islands. In the early time of the market (1991), Iceland had the dominant share of 65 % in the salted cod market, followed by the Faroe Islands with 21 %, and Norway with 14 %. After that, the Norwegian industry seemed to try to expand the Spanish market. In 1998, the total Norwegian exports of salted cod reached 11,500 t, accounting for 45 % of the Spanish market. After that, the exports stagnated at the amount of 5000–7000 t with a market share around 15–25 %. On the other hand, Icelandic exports steadily increased from 11,600 to 18,700 t between 1991 and 2007. The share of Iceland in recent years was around 60 %. The exports of the Faroe Islands were rather stable, 4000–8000 t between the years, with a market share from 15 to 30 %.

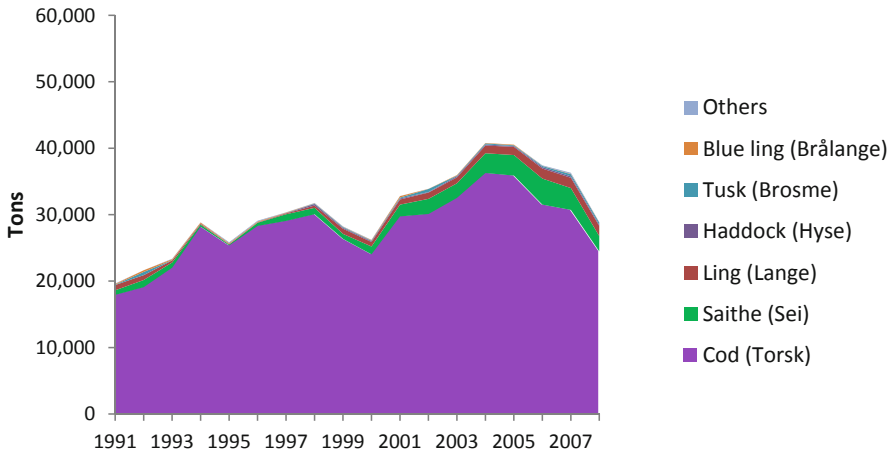


Fig. 10.4 Nordic exports of salted fish to Spain. (Source: NSC (2009))

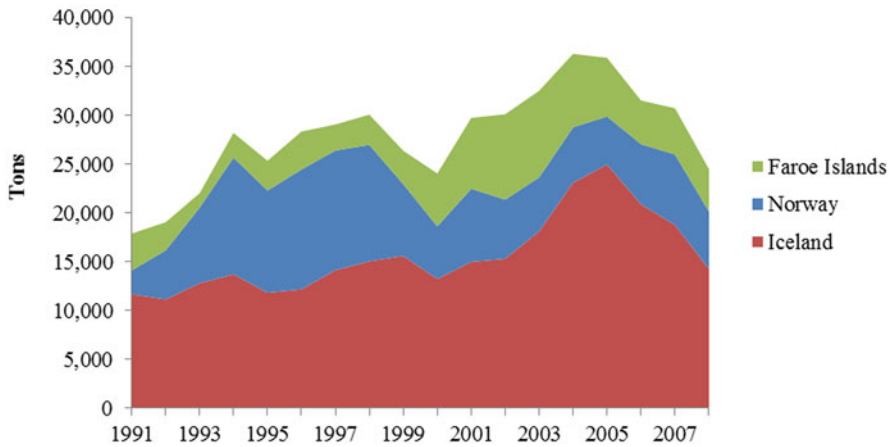


Fig. 10.5 Spanish imports of salted cod from Nordic countries. (Source: NSC (2009))

10.3.2 *Problems of the Norwegian Salted Fish Industry in the Spanish Market*

Exports of salted fish are generally decided by both the import demand for the product and the supply of raw fish. According to Trondsen (1994), all North Atlantic cod fisheries in the EU countries, Norway, Iceland, the Faroe Islands, Greenland and Canada have been through a process where the cod quotas have been reduced year by year. Thus far only regulations of the cod stock in Norway have been successful. The Norwegian cod stock has recovered, and the quota and catch again increased from 1991. Therefore, the reason for the loss of the Norwegian market share to Icelandic salted cod in Spain seems primarily to be a direct result of poorer marketing performance of the Norwegian salted fish industry.

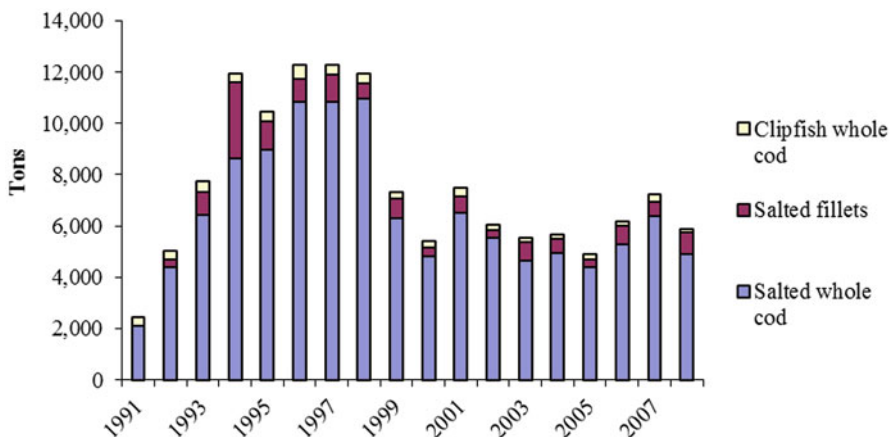


Fig. 10.6 Norwegian exports of salted cod to Spain. (Source: NSC (2009))

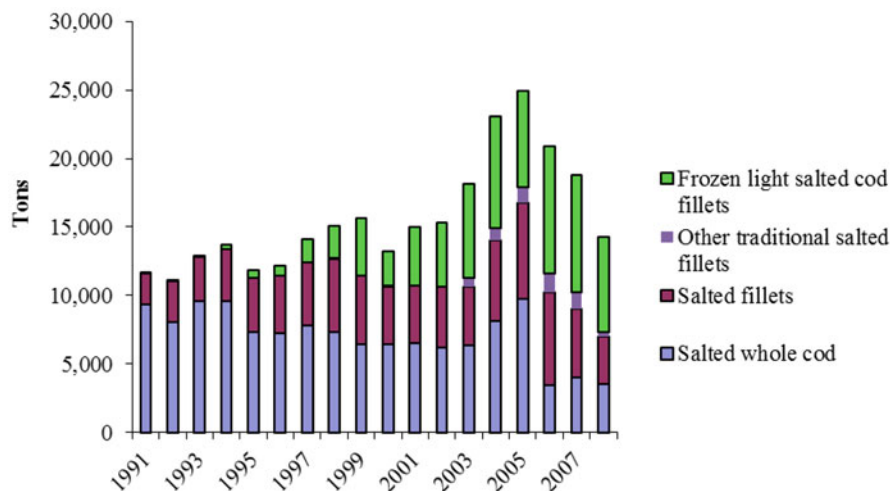


Fig. 10.7 Icelandic exports of salted cod to Spain. (Source: NSC (2009))

According to standard marketing and strategy literature, value growth of commodity products is related to industries’ ability to segment buyer preferences, differentiate, and focus their product marketing strategies towards the most attractive buyers (Porter 1980). Figure 10.6 shows that Norwegian exports to Spain stick to salted whole fish, which dominated 85% of its total exports throughout the years from 1991 until recent years. Opposite to Norway, Iceland has many more product differences. From 1991 to 2007, it cut the exports of salted whole fish from 9300 to 4000 t, slightly increased the exports of fillets from 2300 to 5000 t, and greatly expanded the exports of frozen light salted fillets from 47 to 8600 t (Fig. 10.7). In 2007, it had a market distribution of 25 % for salted whole fish, 24 % for salted fillets and 46 % for

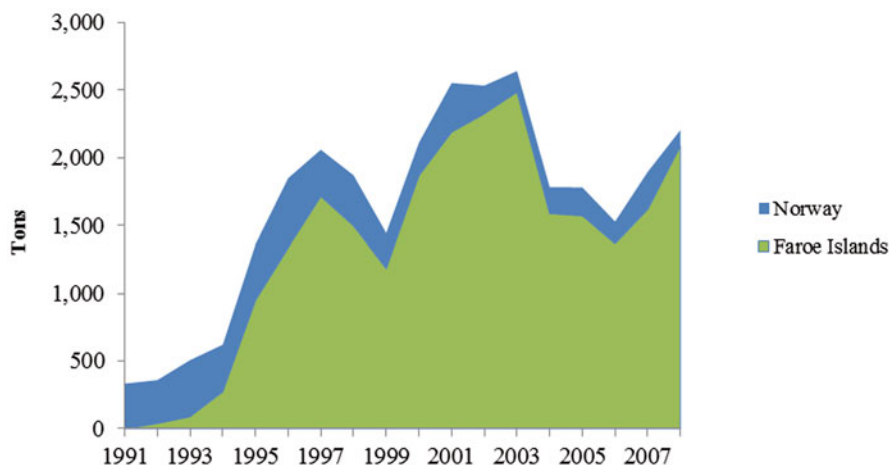


Fig. 10.8 Spanish imports of clipfish from Nordic countries. (Source: NSC (2009))

frozen salted fillets. In addition, it also tried to export salted cod eggs and tongues: 6 % in 2007.

If we compare how many product items specified as salted cod are exported to Spain in the national statistics of Norway, Iceland, and the Faroe Islands, there are 3 for Norway, 15 for Iceland, and 4 for the Faroe Islands. Table 10.1³ presents that the 3 items from Norway are salted whole fish, salted fillets, and clipfish. No product forms or packages have been changed since the year 1990, which is the earliest year in our data set. The reality is that it has never been changed since 1980 when the large scale salted fish export started. For the Iceland product group, it includes 14 different products, 5 of which are salted whole fish or light salted whole fish in consumer packages, 2 of which are light salted fillets, and 3 of which are other salted cod such as tongues, belly, and eggs.

What we can conclude from these figures is that the Icelandic industry tried different product forms and packages to differentiate their products and to satisfy consumers in different segments. Although the Faroe Islands have only four items, the majority of their clipfish fillets are in consumer packaging. This more convenient packaging for consumers might be one of the reasons that the Faroe Islands has dominated the market share of clipfish in Spain (Fig. 10.8).

As discussed above, Spanish imports of traditional wet salted whole fish and fillets dropped from 86 to 52 % in the last 16 years, and the growth of the Spanish market was mainly a result of import of frozen light salted fillets. Since the market for traditional products is significantly shrinking and the Norwegian industry still keeps producing and exporting traditional products, it is no surprise that Norway is losing market share.

³ According to the product HS numbers listed in the national statistics of these countries.

Table 10.1 Products exported by Norway and Iceland to Spain

Norway		Iceland	
<i>Wet salted whole cod</i>			
1990–2009.03	03056200 Cod, salted	1990–2006	03056209 Cod, other salted
		2007	03056299 Cod, other salted
			03056294 Cod, flattened, consumer packaging, salted
		2008–2009.03	03056299 Cod, other salted
			03056219 Cod, in consumer packaging, other salted
			03056212 Cod, in consumer packaging, light salted parts with skin and bone
			03056211 Cod, in consumer packaging, light salted parts without skin and bone
			03056214 Cod, in consumer packaging, other salted parts with skin and bone
			03056213 Cod, in consumer packaging, other salted parts without skin and bone
			03056294 Cod, flattened, in consumer packaging, salted
<i>Salted cod filets</i>			
1990–2009.03	03053004 Cod, salted fillet	1990–2007	03053011 Cod, salted fillet
		2008–2009.03	03053032 Cod, salted fillet, otherwise
<i>Clipfish</i>			
1990–2008	03055107 Cod, clipfish	2008–2009.03	03053022 Cod, light salted frozen fillet, otherwise
2009.01–2009.03	03055108 Cod, Atlantic clipfish		03053012 Cod, light salted frozen fillet in consumer packaging
	03055109 Cod, Greenland/pacific clipfish		

The problem is even worse for the Norwegian industry if we look at the prices of different products from different sources (Fig. 10.9). To make prices comparable, the prices of the products in Fig. 10.9 are calculated in round fish weight. It shows that prices of the three Norwegian products are the second cheapest only next to the Icelandic light salted fillet. Norwegian salted whole cod, the dominant product in Norwegian export, is much cheaper than its main competitors, salted whole cod from Iceland and the Faroe Islands.

When the traditional salted fish market reaches maturity, products from different suppliers substitute each other, and prices become the only competitive tools. Businesses have, according to Porter (1980), three strategic options: cost cutting,

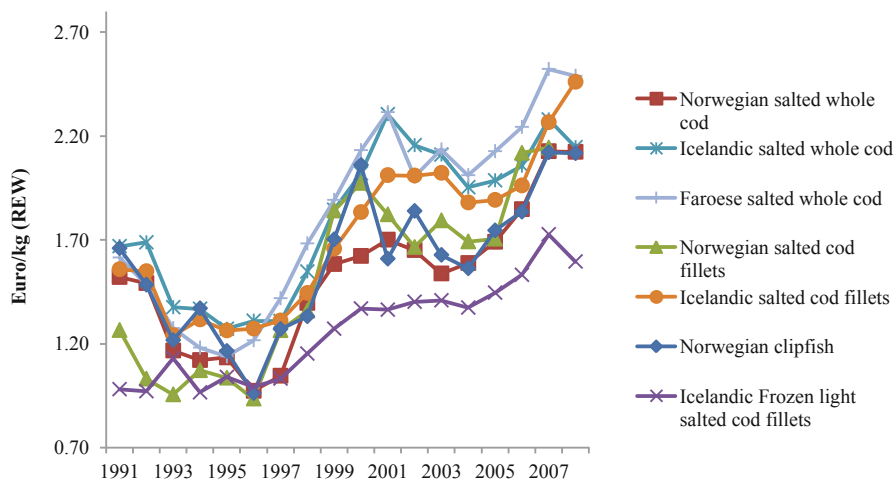


Fig. 10.9 Prices of Nordic exports of salted fish to Spain. (Source: NSC (2009))

differentiation, and focus, or a combination of these strategies (Trondsen 1994). However, when the Norwegian products are much lower than that of competitors and production of salted fish largely depends on raw fish, it is questionable how much room there exists for the Norwegian salted fish industry to lower its prices.

To summarize, the new growing exports of frozen light salted fillets from Iceland are a strong substitute for traditional salted products, while Norway is dominant in export of traditional wet salted whole cod. In the relatively even shared wet salted whole cod market, products from these three Nordic countries are expected to strongly compete against each other. The price of Norwegian salted whole cod is much cheaper than that of its competitors. The strategy of lowering price to expand market share is not feasible in the long run. We therefore conclude that the Norwegian industry is facing a great challenge in the Spanish market. In the next section of econometric modeling, the estimated results of econometric modeling confirm these market characters.

10.4 Econometric Modeling of the Spanish Salted Fish Market

Xie and Myrland (2010) estimated the demand for salted fish commodities in Spain using the Almost Ideal Demand System (AIDS) and specified it as:

$$w_{i,t} = \varphi_i + \sum_{k=2}^4 \phi_{ik} D_{k,t} + \varsigma_i T_t + t_i T_t^2 + \sum_{j=1}^6 \sigma_{ij} \ln p_{j,t} + \theta_i \ln (X_t / P_t) + \lambda_i W_{i,t-1} + u_{i,t},$$

$$i = 1, \dots, N; \quad t = 1, \dots, T.$$

where $N = 6$ is the number of salted fish products in the system, and i indexes the equation for each product. $w_i = p_i q_i / \sum_{j=1}^6 p_j q_j$ is the budget share of the i th good, and $\ln P = \sum_i w_i \ln p_i$ is the Stone price index. $X = \sum_{j=1}^6 p_j q_j$ is the total Spanish import value of salted fish products in the system. D_k is the seasonal dummies and T is the trend.

The estimated results suggest that a structural change may be at work in the Spanish salted fish market. This claim is based on estimated parameters of the trend variable T presented in Table 10.2. The positive sign of the trend parameter of a product indicated that keeping prices and total expenditure on salted products constant, consumers will buy more of this product, which is explained by the change of consumers' preference. Therefore, the positive signs of Icelandic light salted frozen fillet, clipfish and Faroe Island salted whole equations in Table 10.2 suggest that consumer preferences for these products are strengthening. Paralleling, negative signs of Norwegian salted whole cod and Icelandic salted whole cod indicate consumers' preference for these two products are weakening. This result therefore confirms the finding in Sect. 10.3, that the Spanish market is restructured by a significant increase in consumption of frozen light salted fillets at the expense of traditional products. The estimated parameter of T^2 suggests the speed of the trend. For example, the positive sign of T^2 in the Norwegian equation means that the consumer's preference for buying less Norwegian salmon increases.

The estimated Hicksian price elasticities in Table 10.3 give us an insight into the relative strength of substitution relationships. The positive and large magnitude of e_{13} , e_{21} and e_{32} , indicate that salted whole fish from different sources are competing strongly against each other⁴. This result is expected since the Spanish market for salted whole cod is a traditional saturated market, relatively on average shared by Norway, Iceland, and the Faroe Islands.

The cross price elasticity of Norwegian salted whole fish with respect to frozen light salted fillets is 1.09. This means that a 1 % decline of light salted fillet prices will drag down the Norwegian salted whole fish demand by 1.09 %. Icelandic light salted fillets are thus a strong substitute for Norwegian salted whole fish.

10.5 Suggestions for a Market Strategy for the Norwegian Salted Fish Industry in Spain

The problems for Norwegian salted fish in Spain are basically concluded from the comparative analysis of the Spanish market in Sect. 10.3 and the stricter econometric analysis of the Spanish market structure in Sect. 10.4. Norway is losing competence in both quality and quantity in the Spanish traditional market and failing to adapt production to Spains growing demand for new products and new packages. In agreement with Lindkvist (2009), the overall suggestion for the Norwegian salted fish industry to improve the situation is to shift from a production-oriented strategy to

⁴ For a detailed discussion, see Xie and Myrland (2010).

Table 10.2 Estimates results of the trend variables (sample 94.01–09.02). (Source: Edited based on table IV in Xie and Myrland (2010))

Independent variables	Norway		Iceland		Faroe Islands		Nordic		Nordic		Icelandic	
	Salted whole fish		Salted whole fish		Salted whole fish		Salted fillets		Cliffish		Light salted fillets	
T	-0.003 (-5.12)*	-0.001 (-2.31)*	0.002 (4.09)*	0.002 (4.09)*	-0.001 (-1.36)	-0.001 (-1.36)	0.001 (3.21)*	0.001 (3.21)*	0.002 (5.45)*	0.002 (5.45)*	0.002 (5.45)*	0.002 (5.45)*
T ²	0.00001 (3.19)*	0.00000 (-0.002)	-0.00001 (-3.21)*	-0.00001 (-3.21)*	0.000003 (1.49)	0.000003 (1.49)	0.000000 (-2.83)*	0.000000 (-2.83)*	-0.000002 (-0.90)	-0.000002 (-0.90)	-0.000002 (-0.90)	-0.000002 (-0.90)

Numbers in parentheses are asymptotic t-ratios, *, ** indicate significance at the 5 and 10 % levels, respectively

Table 10.3 Estimated Hicksian price elasticities (long run). (Source: Edited based on table VII in Xie and Myrland (2010))

Quantity demanded from	ei1	ei2	ei3	ei4	ei5	ei6
Norwegian salted whole cod	-1.13 (-3.27)*	-0.63 (-1.45)	0.75 (2.77)*	0.27 (0.62)	-0.35 (-1.24)	1.09 (2.71)*
Icelandic salted whole cod	0.56 (2.21)*	-0.50 (-1.56)	0.02 (0.08)	0.59 (1.84)**	0.07 (0.35)	-0.75 (-2.53)*
Faroe Island salted whole cod	-0.24 (-0.58)	1.49 (2.85)*	-1.00 (-3.05)*	0.69 (1.30)	0.52 (1.52)	-1.46 (-3.01)*
Salted cod fillet	0.27 (1.37)	0.15 (0.61)	0.01 (0.05)	-0.97 (-3.84)*	0.16 (0.98)	0.37 (1.63)**
Clipfish	-0.20 (-0.62)	0.04 (0.10)	0.26 (1.03)	1.18 (2.88)*	-0.64 (-1.70)**	-0.65 (-1.72)**
Frozen light salted cod fillet	0.51 (1.45)	0.13 (0.29)	-0.44 (-1.59)	-1.10 (-2.46)*	0.06 (0.15)	0.84 (2.05)*

Numbers in parentheses are asymptotic t-ratios, *, ** indicate significance at the 5 and 10 % levels, respectively

a market-oriented strategy. From the market point of view, the suggestion can be further specified as follows.

10.5.1 Improve the Quality of Fish

Figure 10.9 in Sect. 10.3 indicates that, for the same product categories, the prices of Norwegian products are uniformly much cheaper than those from Iceland and the Faroe Islands. In addition, low prices are associated with small market shares. This confirms the findings given by Lindkvist (2009) from a panel study between 1998 and 2006 that Spanish importers consider salted fish from Iceland and the Faroe Islands to be of better quality than that of Norwegian products. It is also consistent with the historic findings of Richter-Hanssen in Chap. 3: The Norwegian salted fish industry has never succeeded in improving quality according to Spanish complaints in the long term. With a growth of income, people do not eat food simply to fill their stomachs. They are willing to pay for quality. As pointed out by Lindkvist (2009), single actors meet barriers against deliveries of the same products as their competitors in the Norwegian control system regulating the production chain. It is time for government, organizations and industries to work together to solve the problem, given that the whole industry is facing the same problem.

10.5.2 Increase the Exports of Salted White Fish Other than Cod

Figure 10.10 and also Fig. 10.4 in Sect. 10.3 show that, over the last decade, Spain has expanded imports of other salted white fish, mainly saithe and ling. Its market share grew from 6 to 14 % between 1991 and 2009. Although the expansion speed is not that fast, the pattern of growth is always present without any exception between the years. Figure 10.10 suggests that the Norwegian industry started quite early in exploring this market. However, the market was taken up by Iceland and the Faroe Island in recent years. Again, the price of Norwegian fish is much lower than that of its competitors.

10.5.3 Enhance the Product Variety

It is not unrealistic to assume that consumer demand for food is actually the demand for the attributes of food, which include nutrients, taste, smell, appearance, safety, culture etc. (Lancaster 1966). The choice of attributes is constrained by prices of products, disposal income of the consumer, and consumer preferences. Social factors such as size of the family, level of education, age of the head-of-household and so on are important driving factors (Cheng and Capps 1988; Asche 1996; Kinnucan et al. 1993; Cortez and Senauer 1996; Myrland et al. 2000; Olsen 2003; Altintzoglou 2012). Therefore, the demand for food products must be various and vibrant. The point for producers is to provide various products to meet the different demands from each subgroup.

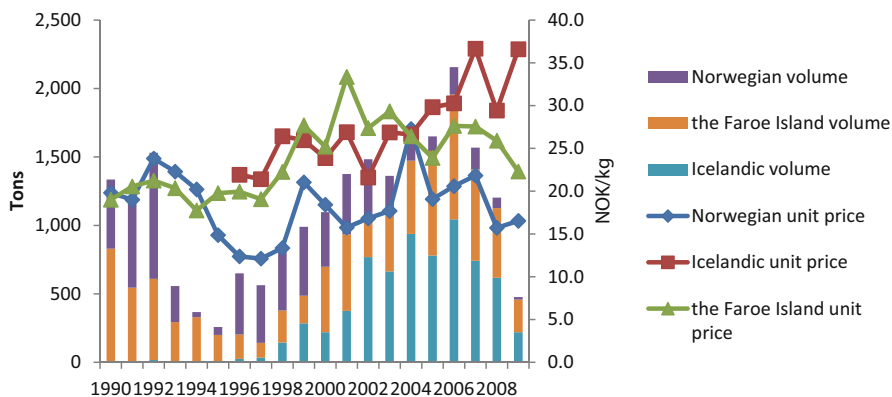


Fig. 10.10 Nordic exports of other salted fish (not cod) to Spain. (Source: NSC (2009))

Norway has been providing the exact same products of salted whole cod and salted cod fillets to Spain. The only change is that, starting in 2009, it separated clipfish according to the sources of catches, (i.e. Atlantic and Greenland clipfish, respectively). In contrast, Iceland provided seven different salted whole cod, three different salted cod fillets, and two different frozen salted light salted fillets starting in 2008. The Faroe Island provided the clipfish in consumer packages. Their variety happened both in the product itself and the packaging of products. Market success depends on many conditions, but the basic principle is that producers should adapt their production to market needs. When the market’s needs become more sophisticated, it is necessary for producers to come up with a greater variety of products.

10.5.4 Segment the Market According to the Need of Each Customer Subgroup

As mentioned, consumers’ demands for the attributes of products are constrained by economic factors such as prices and income and also by social factors such as size of the family, education level, and so on. Therefore, the demand is a function of prices, income, and social factors. We can find a common characteristic of a subgroup that prefers to buy a specific product. For example, busy young couples might prefer to buy frozen light salted fillets with consumer packaging since it is easier to cook, while retired people might prefer to buy high quality traditional salted cod since they have time to cook, and it also provides a good memory of the past (Geeroms et al. 2008). The importance is to segment the market and provide the products according to the needs of specific sub-markets.

As pointed out by Lindkvist (2009), market conventions are not homogenous. Although new light salted products have encroached on the Spanish market, traditional salted fish still accounted for about 50 % of the market share. A good example

is the Faroe Islands' positioning of selling salted whole cod to the customers who prefer the traditional product with good quality. Although the total Spanish demand for salted whole fish has been greatly decreasing over the last decade, the export of salted whole fish from the Faroe Islands remains at the same level and is the most expensive among all the salted cods from Norway (Fig. 10.9).

The success of the Icelandic salt fish industry in Spain is not entirely but very primarily due to its attention to market segments. Figure 10.9 shows that it exports the cheap frozen light salted fillets probably to those consumers who prefer fast, tasty, and cheap salted fish. On the other hand, it exports the salted whole fish with and without consumer packaging to those who are willing to pay for good quality conventional salted fish.

10.6 Conclusion

The salted fish products in Spain consist of three main traditional products including whole wet salted cod, slated cod fillets and clipfish, and one relatively new product called frozen light salted fillets. The total Spanish imports of salted fish grew rapidly between the years 1991 and 2007. This is mainly attributed to a huge expansion of frozen light salted fillets. Both the data description and the econometric results indicate that the Norwegian salted fish industry is losing competence to the Icelandic industry in the Spanish salted fish market. The main problem of the Norwegian industry is failing to adapt to Spain's growing demand for new products and new packages. Similar to Lindkvist (2009), our overall suggestion for the Norwegian salted fish industry is to shift from a production-oriented strategy to a market-oriented strategy. Specifically, they are: to improve the quality of fish, to increase the exports of salted white fish other than cod, to enhance the product variety and to segment the market according to the needs of customer subgroups.

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