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THE MACKEREL MARKET IN SOUTH KOREA: WHAT ARE THE RECENT CHANGES?

A REPORT FOR THE NORWEGIAN SEAFOOD COUNCIL

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1 INTRODUCTION

The following is a report on the potential and opportunities for Norwegian mackerel in the Korean market. Project Background

In 2015, Promar conducted a detailed study on the market for mackerel in South Korea. Almost 3 years have passed since then and the present moment appears to be a good time to update the relevant trade and consumption data, review market findings and analyze new trends in the market.

Some of the important questions we will tackle in this update are:

- What has changed in the mackerel market in Korea over the past 5 years in terms of domestic production and imports?
- How are Norway's competitors – domestic and other importing countries – performing?
- What is the situation with Korean domestic production and has it been impacting imports in recent years?
- Does retail continue to be the right sector for NSC's mackerel marketing efforts?
- How is Norwegian mackerel competing against domestic products in retail?
- How is mackerel performing in HORECA, a sector which was identified as minor in 2015?
- Are there any new possibilities for further developing Norway's position in the market?

1.1 Project Objectives

Based on our initial discussion with NSC, we have identified the following main objectives for this project, summarized below.

1. To update data with regard to the mackerel supply in South Korea with a particular focus on:

- Total mackerel consumption by volume and its fluctuations over the past 5 years
- Domestic production trends and segmentation and any impact on the import market.
- The position of the key market players and their recent strategies in South Korea
- Details of the main distribution channels, including retail, HORECA and other possible segments
- Recent trends and happenings in the market over the past 5 years

2. To explain the main product segments through:

- estimates of shares per segment (fresh, frozen, salted, etc.)
- analysis of seasonal consumption by segment
- analysis of end-use by product segments
- analysis of the competitive position of salted mackerel

3. To analyze the competitive position of Norwegian mackerel in the market and in the key product segments (such as fresh, salted)

- To update the 2015 estimates and calculations
- To outline and analyze any specific trends and occurrences in the market over the past 5 years
- To advise how Norwegian products could become more competitive against domestic products

4. To examine the potential for further market growth

- For the total mackerel market
- For Norwegian product in the present market

1.2 Conduct of the Study

The project was conducted with the following steps.

1.2.1 Undertaking desktop research

Promar collected and surveyed all publicly available information in English and Korean on mackerel trade and consumption. We used the following sources:

- Ministry of Agriculture, Forestry and Fisheries
- Ministry of Internal Affairs and Communication
- Korea Customs
- Korea Agricultural Marketing Information Service (KAMIS)
- Korea Chain Store Association
- Retail Industry Year Book 2016
- Various media sources (web, newspapers and magazines, TV)

1.2.2 Interviewing of key industry contacts

We interviewed a total of 10 key players across the value chain to understand the different perspectives of the market with a special emphasis on importers and retailers.

1.2.3 Analyzing the information obtained from the above

After conducting the interviews, we combined our interview notes with available statistics in order to complete a full analysis of the market. We also used news articles and other sources to confirm some of the comments and statements we received at interviews.

1.2.4 Writing this report

The present report is organized as follows:

1) Introduction
2) Total Mackerel Supply in South Korea
3) Major Product Segments and End Uses
4) Distribution Channels
5) Mackerel Demand by Key Market Sectors
6) Norway's Competitive Position

1.3 Definitions

There are many forms of mackerel analyzed in this report, as well as various end products which sometimes appear similar. To avoid confusion, we have explained the key terms used in this report in the following table.

Terms Used

Term	Definition
Fresh Mackerel	Mackerel that has not been frozen or re-freshed products
Frozen Mackerel	Mackerel that is frozen and imported to Korea. Most of the frozen mackerel is later processed into salted mackerel or fillets. It is not commonly sold as frozen round fish in the market.
Salted Mackerel	*Jaban* in Korean. This mackerel is salted in processing factories and is in a ready-to-eat form.
Mackerel Fillets	Fillets are usually sold non-salted, or very low salt (>1%). Fillets require extra seasoning before consumption.
De-frosted Mackerel	De-frosted mackerel was once frozen, but it is sold in a non-frozen form. This is common among domestic mackerel in the off season.

The table below is a summary of the existing HS codes for mackerel in Korea which we use in the report.

There were no fresh mackerel imports in 2012 and 2013.In the past, fresh mackerel was imported mainly from Japan, but since the Fukushima nuclear power plant accident in 2011 and the fear of radioactive ocean contamination, fresh imports were ceased.

Dried and salted import volume is very small (approximately 1% of total), which means that most of the mackerel entering Korea is in frozen form. Note that the HS code for frozen mackerel has changed since 2012.

HS Codes

03.02	**Fish, fresh chilled, excluding fillets**	
	03.0264.000	Fresh Mackerel
03.03	**Fish, frozen excluding fillets**	
	03.0503740 (2009~2011)	Frozen Mackerel
	03.0354 (2012~2017)	Frozen Mackerel

Source: Korea Customs

2 TOTAL MACKEREL SUPPLY IN SOUTH KOREA

In this section, we analyze the Korean mackerel market and highlight some of the key changes in supply and consumption in the past 5 years. Mackerel Consumption in South Korea

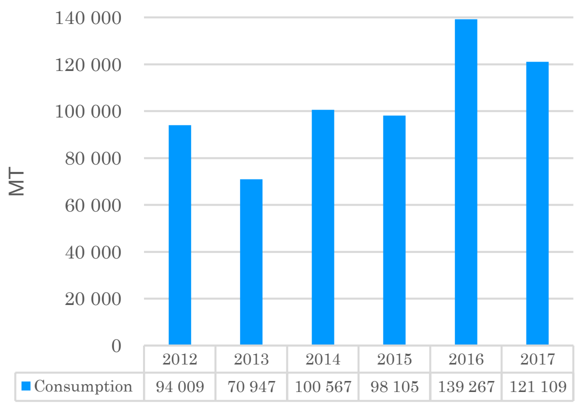
2.1 An Overview of the Mackerel Market in Korea

Mackerel consumption in Korea fluctuated since 2012. There was a shortage in 2013 due to the low domestic catch and fewer imports from China, which used to be the largest foreign supplier. In the past two years, thanks to the large supply of Norwegian mackerel, the total consumption has bounced back to a high level. **In 2017, the total mackerel consumption was approximately 121,109 MT in whole fish volume**.

Korea's import volume of Norwegian mackerel in 2017 was at a high level. The import volume of 40,511 MT (WFE) was more than double the average import volume from 2012-2013. Since 2015, Norway supplied over 38,000 MT of mackerel to Korea.

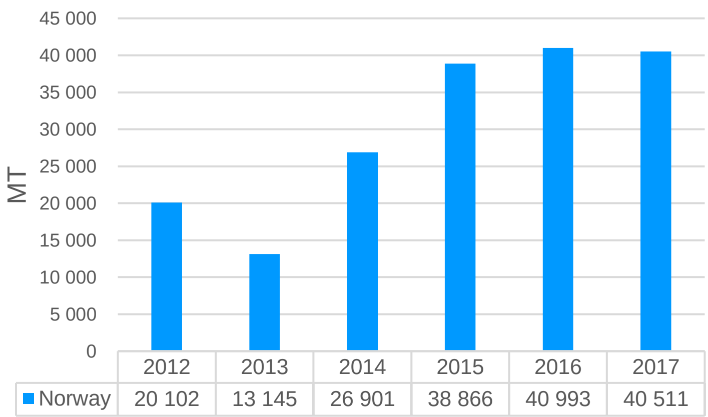
Prior to 2015, Korean traders usually purchased and received their shipments from October to February the following year. Last year, however, many traders extended their purchasing period. Since the supply from China was low, they believed it was a good opportunity to expand the Norwegian mackerel business.

Figure 1 Korean Mackerel Consumption (2012-2017)



Source: Ministry for Food, Agriculture, Forestry, and Fisheries of Korea, Korea Customs and Trade Development Institute (KCTDI), Fish Flow Information System (FIFIS) of Korea

Figure 2 Korea's Imports of Norwegian Mackerel



Source: Korea Customs and Trade Development Institute (KCTDI)

In 2017, the domestic catch of approximately 116,000 MT, the second lowest level in past six years. In addition, a large portion of it consisted of fish smaller than 200 grams, which was not suitable for retail or food service. In Korea, most of the smaller fish are used as fish feeds or exported (e.g. African countries). Promar estimated approximately 50% of the domestic catch (which were not exported) were used as fish feeds, and 50% are sold in retail and HORECA. The table below provides a more detailed breakdown of the market:

Table 1 Breakdown of the Korean Mackerel Market (2013-2017)

Unit: MT

		2013	2014	2015	2016	2017
a	Beginning Of Year Storage	79,087	77,954	79,669	99,195	79,095
b	Korean Supply	44,372	68,691	64,039	74,411	49,857
c	Import Whole Mackerel	24,144	33,031	50,886	42,528	39,720
d	Import Fillets (WFE)	1,298	560	2,706	2,228	3,992
e	End Of Year Storage	77,954	79,669	99,195	79,095	51,555
	Consumption	70,947	100,567	98,105	139,267	121,109

Note: Consumption = a + b + c + d – e

Source: Ministry for Food, Agriculture, Forestry, and Fisheries of Korea, Korea Customs and Trade Development Institute (KCTDI), Fish Flow Information System (FIFIS) of Korea

Storage was at the lowest level in the past five years. This may due to the lack of domestic supply in the market; industry players are selling their storage stocks to compensate to lack of supply.

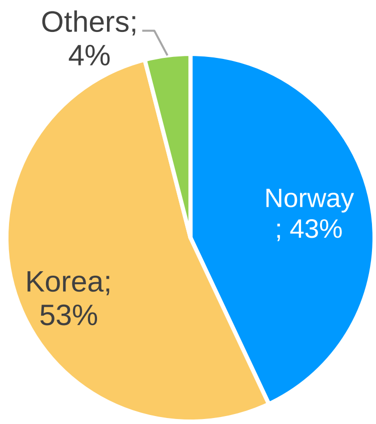
The total volume of Norwegian mackerel consumed is estimated to be approximately 40,511 MT in whole fish volume in 2017, which accounted for 28% of the total market.

In 2017, a total of 50,000 MT of Korean mackerel were consumed, which represented 53% of the market.

The volume of Norwegian mackerel was still abundant in the beginning of 2018. Nevertheless, Korea will continue to rely on Norway as its biggest foreign mackerel supplier.

Norway's increase in market share has been smooth, with no fluctuations compared to domestic supply and imports from other countries.

Figure 2 Market Breakdown by Mackerel Origin (2017)

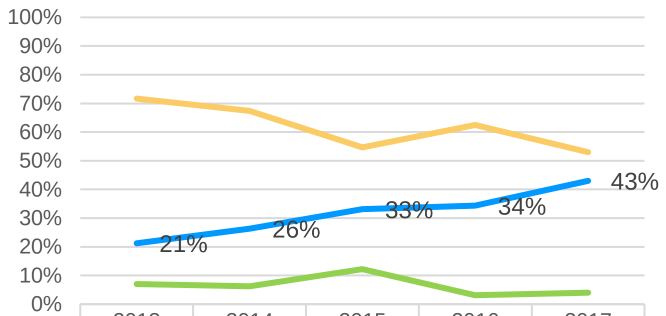


Total Volume (2017): 121,000 MT

Norway: 40,511 MT (WFE)

Source: Promar Consulting

Figure 3 Changes in Mackerel Market Share by Origin



	2013	2014	2015	2016	2017
Norway	21%	26%	33%	34%	43%
Korea	72%	67%	55%	62%	53%
Others	7%	6%	12%	3%	4%

Norway's share has slowly increased over the years and it is the only supplier that shows a consistent growth

Source: Ministry for Food, Agriculture, Forestry, and Fisheries, Korea Customs, Promar Consulting

"The Norwegian mackerel has very good taste – once you try it and are aware of its country of origin, it is hard to switch back to other types of mackerel," said a Korean importer who has over 10 years' experience in importing seafood from more than 20 countries. The market share for Norwegian mackerel appears to continue increasing in the future.

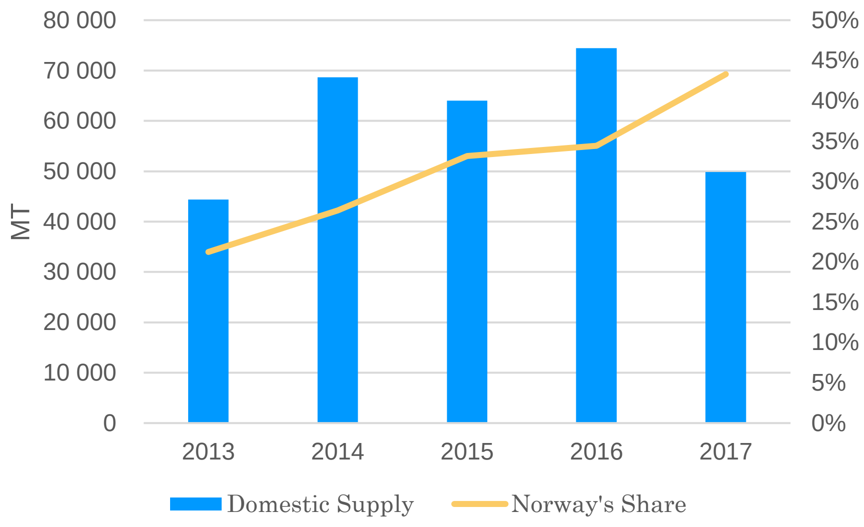
2.2 Correlation between Domestic Supply and Import

In the past, the Korean mackerel market was heavily dependent on domestic supply (mackerel for the domestic mackerel that are for human consumption). Around 10 years ago, the imported mackerel began to slowly enter the market. Its role has been to provide extra supply, when the domestic supply is down. However, there appears to be no clear indication that when domestic supply is low for the year, the import for that year is high. Based on our interviews, this is because importers often put more focus on the price of the imported mackerel than on the domestic supply situation when they purchase.

In general, the importers are more sensitive to price than the catch volume. If the price for imported mackerel is at an acceptable level and they believe they can be profitable, they will increase their import volume for the year.

In the same fashion, Norwegian mackerel is not directly affected by the domestic supply. This is because Norwegian mackerel has established a firm presence in the Korean market. Most of the domestic mackerel is sold as a fresh product at a lower price, while Norwegian mackerel are processed products that are sold at a higher price. The presence of Norwegian mackerel is expanding slowly, and it is only mackerel that shows consistent growth. As we can see in the following figure, Norwegian mackerel continues to grow its share in the market despite the fluctuation of domestic supply.

Figure 4 Comparison of Domestic Supply and Norway's Mackerel Share



Source: Ministry for Food, Agriculture, Forestry, and Fisheries, Korea Customs, Promar Consulting

"Some vendors treat Norwegian mackerel as a separate product from domestic mackerel, which means they will buy Norwegian mackerel regardless of the situation of domestic mackerel," commented a Korean importer.

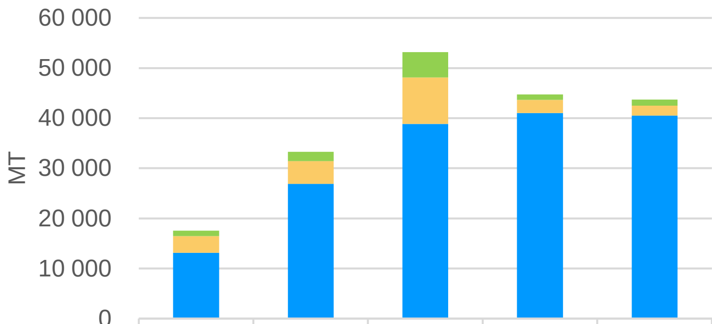
2.3 Total Imports

Mackerel imports to Korea include frozen and fresh products. The most mackerel imports are frozen whole round fish. After the Fukushima incident, supply from Japan, which was traditionally the only importer that supplied fresh mackerel to Korea, dropped to 0 MT since 2012.

As we can see in Figure 9, mackerel imports have dropped significantly in the past two years after a huge increase in 2015. Norway is the only supplying country that has provided stable supply over the past 3 years. The other large supplying country, China, has decreased volumes significantly.

Figure 5 Mackerel Imports (2013-2017)

Norway's mackerel supply to Korea has been consistent over the past three years, while supply from China and Japan declined significantly.



	2013	2014	2015	2016	2017
Others	1 055	1 876	5 096	1 057	1 220
China	3 325	4 525	9 240	2 678	1 981
Norway	13 145	26 901	38 866	40 993	40 511

Source: Korea Customs, Promar Consulting

**The estimated volume of Norwegian mackerel in 2013 is based on trade statistics and Promar trade interviews*
*** The total volume includes frozen, salted, and fresh. Frozen has more than 99% of the total volume.*

Decrease in Chinese Mackerel Volumes

Though China has been aggressively catching mackerel, the large catch they had in 2010 and 2011 seemed to have negative effect on their fisheries stock according to Promar's interviews. As a result, the stock available in the ocean was greatly reduced. In addition, there is a growing interest in eating mackerel in China at present. Mackerel is not part of traditional Chinese cuisine; however, Chinese consumers are becoming more aware about the health benefits of eating mackerel. The volume consumed in China is still small compared to the volume consumed in Korea, but the industry estimates it is likely to increase in the future.

China, which was the leading mackerel supplier in 2010 and 2011 is currently losing market share. In 2017, Chinese mackerel was less than ¼ of its supply in 2012. China supplied only 5% of the market compared to Norway's 93%.

Table 2 Summary of China and Japan's decrease supply to Korea

Country	2012	2017	% decrease	Reason for decreased supply to Korea
China	8,818 MT	1,981 MT	78% ↓	Low mackerel catch due to over fishing in the previous years Increased mackerel demand in China

Mackerel supply from China and Japan has been very unstable in the past two years. This further created opportunity for Norway - the only supplying country to the Korean market which has not had a decrease in supply volumes.

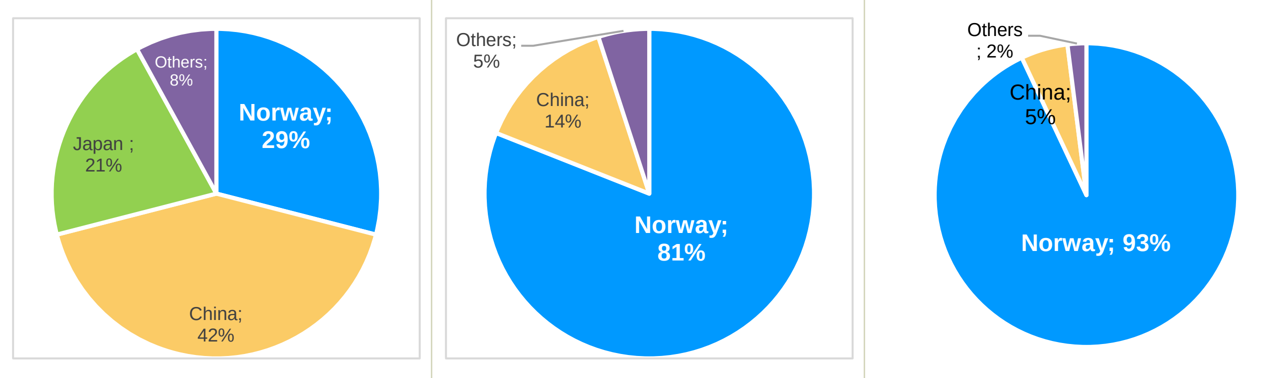
2.4 Major Players

Prior to 2012, there were several major players in the market: Norway, China, Japan, and Taiwan. In the past five years, however, Norway has become the dominant mackerel supplier, accounting for over 91% of the market in 2016, and 93% in 2017 which is the highest share Norway has ever gained in Korea.

Figure 6 Key Import Countries' Shares (2010, 2014, 2017)

The shift in shares has been dramatic in the past two years.

2010	2014	2017



Import Volume*: 42,000 MT	Import Volume*: 33,000 MT	Import Volume*: 44,000 MT

**Round to the nearest 1,000*

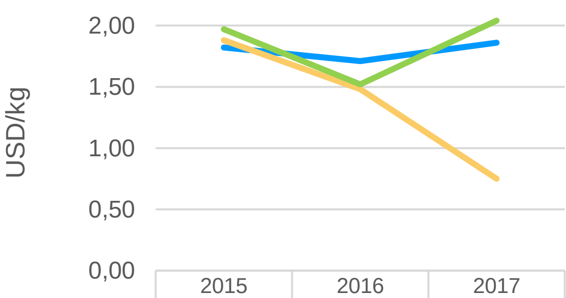
Source: Korea Customs, Promar Consulting

Japan was the third largest player in 2010. However, in 2014, Japan was no longer a significant player.

2.5 Price Analysis

The average import price of Norwegian mackerel has been stable in the past three years and was approximately 1.80 USD/kg.

Figure 7 CIF Mackerel Price (2015-2017)



	2015	2016	2017
Norway	1,82	1,71	1,86
China	1,88	1,48	0,75
UK	1,97	1,52	2,04

In 2017, the Norwegian CIF price was 1.86 USD/kg This was much higher than the Chinese mackerel price, but despite the price advantage, the volume for Chinese mackerel was low. One of the primary reason for the low price of Chinese mackerel was size. China lack mackerel that are 400 grams or larger, and could only sell its mackerel at a discounted price.

UK's mackerel price of 2.04 USD/kg was higher than Norwegian price. Not only was higher in price, the quality was perceived as lower than Norwegian mackerel. In 2017, UK only supplied approximately 600 MT of mackerel to Korea.

3 Major Product Segments and End Uses

In this section, we analyze the key mackerel products, their end uses and the changes in segmentation that occurred in the market since our 2015 study.

3.1 End Uses and Segmentation Trends in the Past 5 years

The two main forms in which domestic Korean mackerel are sold in the market are fresh (defrosted to be exact) and salted, as well as a very small amount of frozen mackerel.

The Norwegian mackerel are also broken into 2 major products – fillets and salted – with a very minimal share of de-frosted products.

Table 3 Key Mackerel Products in the Market

Origin	Main Products	
Domestic Mackerel	Fresh	Salted
Norwegian Mackerel	Fillets (mostly frozen)	Salted

Domestic - Fresh

Domestic - Salted

Norway - Fillets

Norway - Salted

Photo credit: Promar Consulting

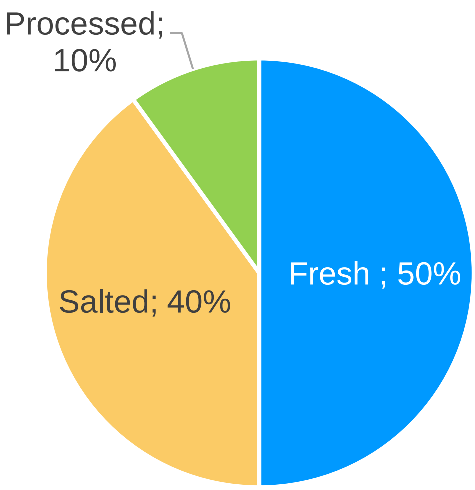
The trend for domestic product is that more people are moving away from fresh products to processed products. As for the Norwegian products, we learned that there is more preference for fillets than salted. We will look at the different products in more detail in the following sections.

3.2 Domestic Mackerel End Uses

According to our interviews, Korean mackerel is either for the domestic market or for export. The ones that are used in the domestic market, approximately 50% were used as feed and 50% were used as human consumption in 2017.

In 2017, approximately half of the domestic mackerel was sold fresh. This is especially popular during the peak season, which goes from September to February. To many end consumers, fresh mackerel is perceived as the best quality mackerel because of its freshness. During periods in which the catch is low or there is no catch (for 3 weeks from March to April mackerel catch is prohibited), frozen mackerel is sold in de-frosted form. About 40% of the domestic mackerel is processed into salted mackerel or *jaban* in Korean.

Figure 8 End-Uses of Domestic Mackerel by Share (2017)



**Round to the nearest 1,000 MT*

Source: Promar Consulting based on industry interviews

In recent years, there has been a switch to more processed products as the younger Koreans detest doing their own fish preparation. Preparing fresh fish requires more time, effort, skills and, naturally, touching cold fish which is something the younger generation is not fond of. “Many women under 40 really dislike touching fresh fish. They prefer pre-sliced and salted products, which save their effort and time,” commented some of the retail representatives we met.

3.3 Norwegian Mackerel End Uses

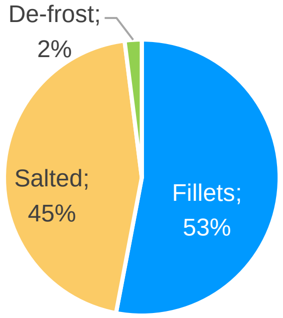
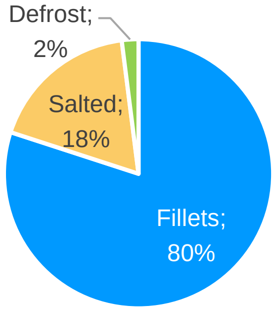
There are two main types of Norwegian mackerel products in the market: 1) fillets (no flavor added) and 2) salted mackerel. In 2014, Promar estimated that about 53% of the Norwegian mackerel was sold in fillet forms, while 45% was salted mackerel. There was also a small volume of defrosted round mackerel distributed in the market. Defrosted whole mackerel appeared in the market to make up for the lack for domestic fresh and frozen supply in 2014. The volume was very small.

In 2017, fillets have become the dominating product, accounting for 80% of Norway's mackerel product in Korea. Salted mackerel products, known to be less healthy due to the high level of salt (5-7%), have decreased in volume and share.

A comparison between the breakdown of Norwegian mackerel end use in 2014 and 2017 is shown in the table below.

Figure 9 End-Uses of Norwegian Mackerel 2014 vs 2017

Fillets now have much more share than salted mackerel

2014	2017
	
Norwegian Volume*: 27,000 MT	**Norwegian Volume*: 41,000 MT**

**Round to the nearest 1,000 MT*

Source: Promar Consulting

The increase in fillet sales is pushed by the increasing number of busy working consumers. Fillets are easy to cook, and they allow for more flexibility in terms of preparation compared to salted mackerel, e.g. consumers can decide the amount of salt to be added by themselves or they can stew it in Korean sauces, or *Jorim* style hot-pot cooking. In addition, fillet packages often contain 8 pieces which is very convenient for busy consumers who do not have time to shop frequently.

Figure 10 Mackerel, Korean "Jorim" style

Photo Credit: "Maangchi," Korean cooking site

Salted mackerel are still on the market, but the volume and share have decreased. The most popular product form for salted mackerel is a package of two fish which is known in Korean as "*kid inside a mom*.", as the packaging positions one fish body slightly inside the other fish body. This is a very popular product especially for families because reportedly one package is enough for a regular dinner for a family of four.

Head-on salted mackerel is very popular especially among people over 40. There are also headless salted mackerel products which are more popular among the younger generation because for many younger people eating fish with the head on is not considered a very delightful experience.

Figure 11 Norwegian Mackerel Products

Frozen Fillets	Salted Mackerel (*kid inside mom*)
	
A package of 8 frozen mackerel costs 11,800 KRW (approx. 89 NOK) in hypermarket chains.	Salted mackerel products are usually sold in a 2-item package. The retail price for a package of two Norwegian salted mackerel amounts to 3,900 KRW (approx. 29 NOK).

Photo credit: Promar Consulting

In summary, fillets are growing in popularity in Korea because:

Figure 12 Mackerel Cooked in the Microwave

Fillets are cooked on a microwavable grill pan.

Photo Credit: Naver Blog

- There is flexibility in usage. Fillets can be consumed salted, or they can be stewed. In addition, Korean consumers can also use special grill pan to prepare mackerel dishes in the microwave which is considered a convenient, as well as clean, cooking method.
- They are frozen and can come in large packs. For busy working-class consumers who can only grocery shop once or a week or even once every two weeks, this packaging is very convenient. Since the fish is frozen, there is less concern regarding the expiration date.

3.4 Future of Mackerel Products

3.4.1 New Product Forms

The trend has favored easier-to-prepare mackerel products. Consumers under 40 want food that can be prepared quickly and easily. For this reason, fresh mackerel may see some sales drop in the future, while prepared salted mackerel and fillets will gain more share.

In addition, we have heard that some of the Korean importers have plans to bring in some “boneless mackerel” to Korea as they heard it has been quite successful in Japan. According to our interviewees, boneless mackerel has the potential to become popular among the younger generation that wants ready-to-eat products, but it can also be very popular among the senior generation. Many seniors have a hard time removing the bones in the fish. In addition, there is also the risk of choking on fish bones. The boneless mackerel might solve all these consumer difficulties. The challenge would be whether the Korean consumers will be willing to pay for this high price product. It is estimated that due to the extra labor cost, boneless mackerel can be up to 30-40% more expensive than the salted mackerel in the stores now. Some retailers have showed some interest on doing “test” sales to see how the consumers react. “People want something easy to eat and easy to prepare, so in the future we might even see instant mackerel packs!” said one importer, referring to the ready-to-heat vacuum packed mackerel products found in Japan.

Figure 13 Consumers’ Preference for Convenience in Mackerel Products

Source: Promar Consulting based on industry interviews

Another challenge for boneless mackerel is that most of the processors in Korea do not have much experience picking out the smaller bones. It would require time for training, and the total labor cost may be higher than many players expected. An alternative would be to outsource the processing to China or Southeast Asia. This, however, may impact sales negatively as most consumers do not have confidence in products proceeded in China and Southeast Asia due to food safety concerns.

3.4.2 Competition with Other Seafood

Mackerel is one of the top three most popular fish products in Korea together with hairtail.

Hairtail is a higher priced product and for that reason it is not often thought of as the head on competitor for mackerel. As explained previously, due to the media coverage of the radiation contamination in Japan, many Korean consumers are eager to buy fish from distant oceans. In the case of hairtail, the domestic catch was low in the past few years and the market demand since 2013 was covered with hairtail supplied from Senegal in Africa for the first time. The sales of the Senegalese hairtail were reportedly very good because of its “distant sea” image and the low price.

While Senegal hairtail had competitive price when it first entered the market, its price has increased significantly over the years due to low catch. Hairtail, both products from Korea or Senegal, is no longer considered a competitor to mackerel.

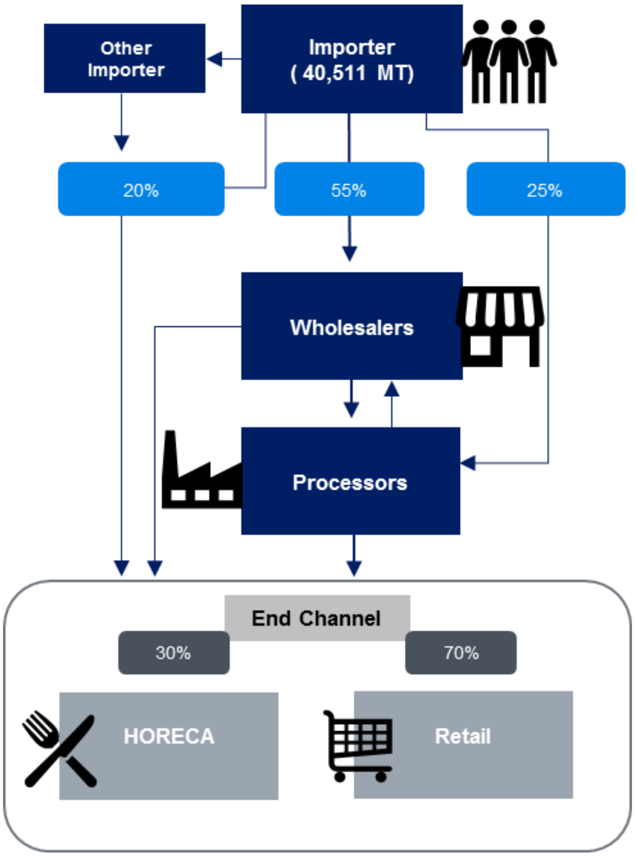
4 Distribution Channels

In this section, we analyze the key channels in which Norwegian mackerel are distributed in Korea, and the role of the key players in the distribution flow.

4.1 Distribution of Norwegian Mackerel

As discussed in the previous sections, Norway has become the dominant supplier of imported mackerel in Korea. Let us look at the distribution of Norwegian mackerel in the following diagram.

Figure 14 **Norwegian Mackerel Distribution**



*HORECA stands for (Hotels, Restaurants and Café)

Stage One

There are two main players in the first stage: exporters and importers.

1) Importers distribute approximately 20% of the Norwegian mackerel directly to the hypermarkets.
2) Importers sell about 55% of Norwegian mackerel to wholesalers.
3) Importers sell approximately 25% of Norwegian mackerel directly to processors.

Most of the large importers do not provide delivery for their customers; instead, the buying side has to pick up their mackerel orders. In the case of frozen round mackerel, once landed, approximately 50-70% are stored in warehouses in Busan, while the remaining 30% are stored in the Incheon and Seoul area.

Stage Two

Wholesalers and processors are the key actors in the second stage of mackerel distribution.

1) Approximately 80% of the volume handled by wholesalers is delivered to processing companies. Some wholesalers work on a contract base with processors and receive the ready processed mackerel back to distribute it to their end clients. However, the majority of wholesalers simply supply processors with round raw mackerel and are not involved in further distribution. Therefore, most of the wholesalers are not very familiar with the distribution of the mackerel once it leaves their warehouses.

2) Wholesale markets distribute the remaining 20% directly to both the retail and the HORECA sector. In these cases, processing is conducted in-house.

Stage Three

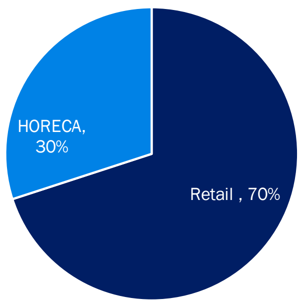
In the last stage of the distribution, it is estimated that 70% of the processed mackerel goes to retail, while 30% is supplied to the HORECA sector. Large hypermarkets work with their contracted processors for processing their orders of mackerel into fillets. In this case they will ask wholesalers/importers to bring the mackerels to their designated processors, and then distribute the final products to their outlets.

There have not been major changes in the retail/HORECA breakdown in the last 5 years. In recent years restaurants began to use Norwegian mackerel believing that it is better quality product and the lack of large domestic mackerel.

In most cases, the origin of the fish is not indicated at restaurants, therefore it is hard for consumers to know what kind of mackerel they are eating. In retail, however, the country of origin is clearly shown.

Figure 15 End Channels for Norwegian Mackerel

Retail continues to be the dominant channel for Norwegian mackerel. However, in HORECA, Norwegian mackerel has increased its presence.



Source: Promar Consulting based on industry interviews

5 MACKEREL DEMAND BY KEY MARKET SECTORS

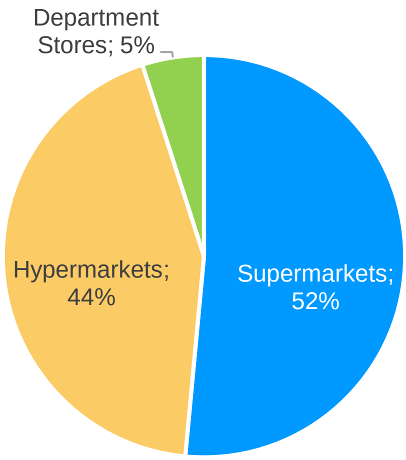
In this section, we will analyze the key end channels for mackerel in Korea: retail, which mainly includes hypermarkets, grocery supermarkets and department stores and HORECA.

5.1 Retail Sector Demand

As we mentioned in the beginning of the report, in the past decade, the Korean seafood market has begun to rely more on imported seafood because of the FTAs that Korea signed recently, as well as the insufficient domestic production which required imported supply to satisfy local demand. In the case of mackerel, this new trend is especially apparent in the retail sector.

Retail is a broad sector, and for this report we will focus on the retail types that Norwegian mackerel is sold at, which are supermarkets, hypermarkets and department stores. We have compared the shares of overall food sales of each sub-sector in the chart below.

Figure 16 Food Sales by Major Retail Type (2016)



Total Food Sales of these 3 Key Retail Sectors: 62 Trillion KRW

Source: Korea Chain Store Association, Promar Consulting

As of 2016, supermarkets have the largest share of food sales, accounting for half of the sector. Hypermarkets are the second largest sub-sector with 44% share and department store food sales recorded a 5% of the total in 2016.

We estimated that approximately 95% of Norwegian mackerel is sold at the three main retail types, in addition to some other channels such as internet, home shopping, and telemarketing.

Norwegian mackerel has been gaining more popularity in Korea, especially over the past few years. There are various reasons for this trend, and the key ones are explained below.

1) **Limited domestic supply (for large mackerel) allowed for more Norwegian mackerel to enter the retail market.**

Considered as the "national" fish, mackerel could not simply disappear from retail shelves due to insufficient domestic supply. As a result, imports of mackerel, especially from Norway, increased considerably. Factors such as reduced supply from China also contributed to the large share of Norwegian mackerel in the import mix.

2) **Consumers are recognizing Norwegian mackerel as a high quality product.**

Norwegian mackerel is not a new product in the Korean market. Over the years, Korean consumers accepted that the quality and taste of Norwegian mackerel is similar to or even superior to domestic mackerel. In all retail subsectors, the name "Norway" is clearly visible on the product label or on the shelf, so consumers are aware of the product. "Korean consumers are very practical. They are always looking for the best product for the best price," shared a seafood buyer at a key retail chain.

3) **Norway as a country has a clean and safe image in Korea.**

Norwegian ocean is known to be clean from pollution among Koreans. The cold-water bodies in Norway also portray a positive image among Korean consumers.

4) **Frozen fillets are favored by busy working class**

We estimated that over 80% of Norwegian mackerel are distributed in the market as fillets. Frozen fillets are a popular easy-to-use product (the most popular product has 8 fillets in a pack), especially among busy consumers with both husband and wife working, often long hours. In addition, unlike older Koreans who had the skill to gut and prepare fresh fish, the younger generation shuns touching fresh fish and prefers to buy ready-to use fillets.

5.1.1 Supermarkets

Supermarkets lead the food sales among all retail subsectors, accounting for half of the total sales. As mentioned in the previous section, many of the supermarkets chains are under the same umbrella as the hypermarkets. Many of the purchasing has been centralized to cut costs. The supermarkets are smaller than hypermarkets which have an average of over 10,000 square feet space and subsequently have a smaller seafood section as well.

Some of the supermarket chains have been more conservative than hypermarkets. They usually watch and then follow what hypermarket chains sell. However, some supermarket chains have increased non-Korean mackerel sales over the years. For example, Kim's Mart (part of the E-Land Group), one of the leading supermarket chains in Korea, which once only sold domestic mackerel, put more weight on their Norwegian mackerel sales in recent years.

Figure 17 Norwegian Mackerel at Supermarkets

(Left: NSC promotional poster at retail; Right: Norwegian and domestic mackerel have distinctive and attractive package).

Photo Credit: Promar Consulting

Generally, the majority of the large supermarkets have a seafood section which includes an open space with fresh fish displayed on top of ice. In some of the smaller stores, or the so called “express supermarkets”, however, only packaged mackerel is available since there is no extra space, nor extra staff to manage the fresh section. In these express supermarkets, the choice of seafood products is limited and the most common fish available are the popular packaged hairtail and mackerel.

While supermarket sale’s volumes cannot compete with the volumes of hypermarkets, both subsectors have the capacity to sell mackerel in large volumes.

Norwegian mackerel’s future growth in the Supermarket subsector: High

5.1.1 Hypermarkets

Hypermarkets, armed with economies of scale and one-stop shopping convenience, have become the largest retail force in Korea since 2002, replacing department stores (in terms of total food sales, supermarkets still have the edge). The most popular hypermarket chains include E-mart, Lotte Mart, Home Plus, and Costco. Korean hypermarket chains such as E-mart and Lotte Mart have been aggressively buying other supermarket chains or establishing different end-channels. A good example is Lotte Shopping which owns the hypermarket chain Lotte Mart, as well as grocery supermarkets, department stores, convenience stores, outlet shopping malls, TV home shopping and internet shopping malls. The leading retail companies in Korea today are known to be “horizontally integrated” which means that many of the similar end channels have been acquired by a few large companies.

At present, all hypermarket chains are carrying Norwegian mackerel. Approximately 25% of the Norwegian mackerel in Korea is purchased by hypermarket chains, directly from Norway or through local importers Hypermarkets have strong negotiating power because of their large number of stores and sales capacity.

They compete intensively on price by cutting the middlemen on the supply chain in order to offer consumers products at the best possible prices.

Mackerel products available at hypermarkets can be divided into three big categories: fresh, salted, and fillets. There is also the de-frosted domestic mackerel that is sold when the fresh volume is low. The volume of de-frosted domestic mackerel is reportedly low and not all hypermarkets carry this product.

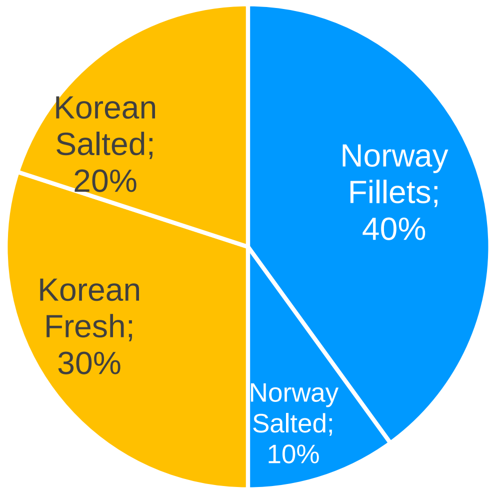
Fresh mackerel includes mainly Korean products, although some hypermarkets have offered fresh Japanese mackerel in the past when Korean catch was low. Ever since the Fukushima incident, however, Japanese mackerel has completely disappeared from the shelves.

The second category, **salted mackerel**, is a mix of both domestic and imported products. In the past, consumers preferred mainly domestic salted mackerel, but in the past few years, consumers have started to realize that Norwegian mackerel has a better taste. As one of our interviewees put it, “Korean consumers are very conscious buyers, especially these days when food safety is becoming a big issue. They first start to recognize that they are eating mackerel from Norway, and then they realize it tastes better than what they are used to eating.”

The third category is **fillets**. Most of the fillets are supplied by Norway, and are often sold frozen in large packs. These fillets have become especially popular among the busy consumers, who do not have time to shop frequently or to process fresh fish.

The following chart illustrates the breakdown of mackerel products sold at hypermarkets. Our estimates are based on trade interviews and store checks.

Figure 18 Breakdown of Mackerel Sales in Sample Hypermarkets by Product



Source: Promar Consulting

Norway provides consistent mackerel supply to hypermarkets, and according to our interviews, it is expected that it will continue to be the most dominant mackerel supplier to the hypermarket sector. One of the reasons for the expected continuing growth is the good flavor, as well as the “convenience” of fillets.

In this table, we summarize the different prices of mackerel products in one of Korea’s largest hypermarket chains.

Table 4 Mackerel Products and Prices at Hypermarkets

Country	Product Type	Photo	KRW/package	NOK/package
Korea	Fresh Fillets (2 pieces)		7,200 KRW	54 NOK
Korea	Salted (2 mackerels)		3,800 KRW	29 NOK
Norway	Frozen fillets (8 pieces)		11,800 KRW	89 NOK
Norway	Salted (2 mackerels)		3,900 KRW	29 NOK

Source: Promar Consulting based on store checks

Norwegian mackerel's future growth in hypermarket: Very High

5.1.2 Department Stores

Compared to hypermarkets and supermarkets, the food sales in department stores are much smaller, only holding 7% of the total retail food sales. There is a food section within most department stores. The food products sold in there are usually priced higher than hypermarkets and supermarkets. The space available for seafood is even smaller than the supermarkets. However, consumers believe department stores deliver higher quality food products than other retailers.

We had the opportunity to interview one of the largest department stores in Korea, and learned that while they purchase their own domestic mackerel, the imported mackerel section is outsourced. The department store charges a margin based on the imported seafood sales, including mackerel, but do not provide any support other than usage of the shelf space. The breakdown of the domestic mackerel versus Norwegian mackerel sales at department stores is approximately 70% to 30%.

Most of the consumers who do their grocery shopping at department stores do it as part of other shopping at the department store. This impacts sales and somewhat limits promotions as well. Even when the mackerel products are on a 20% sale, the sales volume could only increase by as much as 5%. “Since mackerel, or food in general, is not our main business, consumers will not just come here if we do some sort of promotion,” mentioned a department store manager. The sales of Norwegian mackerel are forecasted to stay flat in this sector.

Norwegian mackerel’s future growth in department stores: Low to Average

5.1.3 Other Retail: Internet/Home Shopping/Telemarketing

Internet, home shopping and telemarketing do not have a large share of the Norwegian mackerel sales compared to “in-store” retail, but they have been very effective in promoting Norwegian products and it is estimated that there is potential for growth in the future. Furthermore, the message that these channels deliver to consumers is likely to have greater impact on them than the actual sales they generate. In this section we highlight the home shopping channel, which we believe is the most effective of the three.

Home shopping, especially TV shopping, is a fast growing retail channel in Korea. Unlike neighboring countries such as Japan, China and Taiwan where TV shopping programs are considered to be dry and monotonous, the TV shopping channels in Korea appeal to viewers as entertaining, fashionable, as well as addictive. They have a reputation of having inspired several “booms” in new food products entering the Korean market. One of the most recent examples is how a TV shopping channel has been credited with helping imported walnuts triple their sales in Korea, according to several of our interviewees.

While TV shopping cannot compete with hypermarkets on price, they are able to directly educate consumers in very influential and entertaining way. The presentation and the enthusiastic performance are designed by the TV directors get viewers excited about the product. Norwegian mackerel has been sold through TV channels. Korean consumers are educated on the advantages of Norwegian mackerel through visuals, background information and attractive explanations. A TV Shopping Manager at one of the top TV shopping channels once told Promar staff that "*The more they [viewers/consumers] know, the more emotionally connected they are to the product. And that is what stimulates them to purchase*."

Table 5 Top 4 TV Online/Home Shopping Channels in Korea (2015)

Company Name	Sales (KRW)	Internet Site
GS Home Shopping	1.1 trillion	www.gseshop.co.kr
CJ O Shopping, Co.	1.1 trillion	www.cjmall.com
Hyundai Home Shopping	891 billion	www.hmall.com
Woori Home Shopping	854 billion	www.lotte.com

*Sales includes both home shopping and internet sales

Source: Retail Industry Year Book 2016

TV shopping channels often sell products in larger packages. For example, in the TV shopping show mackerel is sold in a 3 kg box for 35,900 KRW (approx. 270 NOK).

Figure 19 Norwegian Mackerel in Home Shopping Channel

Mackerel purchase comes in large package (3kg)

Photo Credit: G Mart

There are currently 6 TV shopping channels, and the top 4 channels - GS Home Shopping, CJ O Shopping, Hyundai Home Shopping, and Woori Home Shopping – have the largest sales and the greatest influence on consumers. Large home shopping channels own both TV and internet shopping outlets. Consumers that missed their chance to buy the product while it was being aired on TV, can later purchase it on the home shopping internet site. One difference is that during the on-air time, channels often have a special limited time discount which is not available online.

TV shopping channels are a great medium for introducing Norwegian mackerel in Korea. The programs can educate the consumers and make them more excited about the product.

Internet and telemarketing are other channels for selling Norwegian mackerel. Similar to TV shopping, consumers are able to learn more about the product through the information provided. However, these two channels are not able to generate the enthusiastic message TV shopping shows do.

Norwegian mackerel's future growth in Home Shopping:		**Medium**
	Internet:	**Medium**
	Telemarketing:	**Low**

5.2 HORECA Sector Demand

HORECA is still a smaller sector for Norwegian mackerel sales compared to retail, however it recent years it had grew. In most restaurants or other eating establishments, the country of origin is not revealed to the end customer. Hence when purchasing, price is the most important factor. We did hear that some restaurants are starting to use Norwegian mackerel because they appreciate the tastier meat and the higher fat content. Reportedly, in Jeju Island, the southern Korean island famous for its mackerel caught in the surrounding waters, some restaurants actually offer Norwegian mackerel instead of the domestic product. In recent years, there has been a trend of using more Norwegian mackerel due to its good quality and consist supply (large size domestic mackerel has been decreasing).

Figure 20 Mackerel in Restaurants

Salted Grilled Mackerel	"Jorim" Style Hot-Pot Mackerel
	
Set meal is about 8,000 KRW (60 NOK) in average family style Korean restaurants	The price for jorim style mackerel is in the same price range as salted mackerel set meal - 8,000 KRW (60 NOK)

Photo Credit: Ziny Image Site, Daum Blog

Restaurants have the highest volume of mackerel consumption in the HORECA sector. The next would be institutional users, such as schools, hospitals, factories and office cafeterias, among other. Hotels have the lowest volume. According to one of our interviewees, 80% of the mackerel purchased for catering for HORECA is frozen, while 20% is salted. The frozen mackerel is preferred because it has the most competitive price.

Norwegian mackerel’s future growth in HORECA sector: Medium to High