

# MASTER THESIS

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## Title

How does the brand image affect the Norwegian salmon export to China

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## **Abstract**

International trade has become the mainstream worldwide and we live in a “global village”. It is a great chance for Norwegian salmon to go out of Norway. Now is the time that the governments of both Norway and China break the political ice and China has been a potential large market for Norwegian salmon.

In order to conquer the Chinese salmon market, it is necessary to know how is your brand image in consumers’ mind and how to satisfy them. In this customer-oriented world market, customer satisfaction becomes important than ever before. The old Chinese saying “knowing yourself and your enemies, you can win in a hundred of wars.” tells the importance of knowing your customers.

This thesis uses Aaker’s(1996) model that brand image can be described as brand value, brand characteristic and brand association. The model has been used by Lin Chien-Hisung (2011) to investigate whether there is positive relationship between brand image and customer satisfaction in cater industry. And she got the positive relationship between brand value and customer satisfaction, brand characteristic and customer satisfaction, but failed to get the positive relation between brand association and customer satisfaction.

This thesis follows Lin Chien-Hisung’s (2011) study in cater industry and hypothesizes the positive relationship between brand image and customer satisfaction in Norwegian salmon export to China. The relationship is supported by correlation test and multiple regression test.

## **Acknowledgement**

This thesis is written as the final part of my master degree at Bodo Graduate School of Business for half a year. The specialisation of the thesis is International Business and Marketing, counting for 30ECTS.

I am interested in the international trade and the Norwegian salmon industry. And China has emerged to be the most promising market nowadays. So I decided to write about Norwegian salmon export to China.

I am so grateful to my supervisor, Associate professor Richard Glavee-Geo in Aalesund University College. He is always available to give me suggestions for my questions and gives me feedback for each chapter so that I can correct where I don't write well. Thank you for your knowledge, patience, inspiration and your constructive feedback.

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Wenlei Fan

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# CHAPTER 1. INTRODUCTION

## 1.1 Background of the study

Norway's long and jagged coastline surrounded by cold, fresh seawater provides excellent conditions for aquaculture activities (Aquaculture,2014). According to Aquaculture (2014), in 2012, Norwegian aquaculture production amounted to approximately 1.3million tons, 99 percent of which was Atlantic salmon and trout which made Norway the world's leading producer of Atlantic salmon and the second largest seafood exporter in the world. Norwegian salmon is not only popular in the near European countries, but also famous even in the far-away Asian countries. There has been a long history of exporting Norwegian salmon to Japan since 1980s after a Norwegian seafood delegation visited Japan and the imported Norwegian salmon is mainly used as sushi (Norway exports, 2011). And Norwegian salmon came to China along with the Japanese sushi. Then Norwegian salmon was warmly welcomed by Chinese people due to its fine quality, good taste and its special nutrition.

When talking about the Norwegian salmon, the Norwegian Seafood Council (short for NSC) which works for the promotion of Norwegian salmon in all markets can't be neglected. The NSC is focused on the "Norge" brand, quality labeling and environmental labeling. The "Norge" brand gives a mutual value to the Norwegian seafood industry which is more powerful when marketing. NSC encourages all exporting companies to use the "Norge" brand. So the brand image in the thesis will be focused on the Norge brand image rather than a specific exporting company brand image. Brand image is the concept of a brand that is held by the consumer and is largely a subjective and perceptual phenomenon that is formed through consumer interpretation whether reasoned or emotional (Dobni & Zinkhan, 1990). Thus a good image in consumers' mind is of great importance for successful branding. And Norwegian Seafood Council label the Norwegian seafood with the image that "the best seafood comes from Norway", which makes positive associations about its products and is very important for its branding in overseas markets, especially in China where the market has great potential.

Since brand image is the concept formed by consumers, but how does it work on customer's

purchase behavior to obtain as many consumers as they can? Zaidi and Amin (2009) suggest that customer satisfaction plays an effectual job between customers and organizations to enhancing and maintaining long term profitable relations. Many empirical studies confirm that overall customer satisfaction with a product or service is strongly associated with the behavioral intention to return to the same service provider (e.g. Armstrong and Seng, 2000; Hansenmark and Albinsson, 2004; Hellier et al., 2003). So customer satisfaction is a predicting factor for customer purchase intention and a positive brand image can strengthen customer satisfaction. Customer satisfaction can be one of the most important factor when Norwegian salmon is reintroduced into the Chinese market after the trade ban. Modern customer-oriented marketing theory requires an enterprise to take customer satisfaction into consideration when making decisions and establishing brand image (Khyati, 2013). So the study here is to investigate whether there is positive relationship between brand image and customer satisfaction in exporting salmon to Chinese market.

## **1.2 Research question**

There are different emphases on the research of brand image. Biel (1992) considered three elements of brand image, namely the maker's image (enterprise image), the product image and the image of competitor's image. Aaker (1996) explained brand image from brand value, brand characteristic and brand association. According to Dobni et al. (1990), some researchers emphasize on meaning and messages, some emphasize on personification and some focus on cognitive or psychological elements. This thesis is based on Aaker's model that brand image contains brand value, brand characteristic and brand association. The good brand image as a whole have positive effect on customer satisfaction and in turn customer satisfaction will help improve brand image. So the goal of this thesis is to investigate how does brand image affect the Norwegian salmon export to China using customer satisfaction as a predictor of consumers' purchase intention.

Specifically, five research questions are formulated:

- 1) Do Chinese people have a positive image of Norway and do they know that salmon is a typical product of Norway?

- 2) Is there a positive relationship between brand value and customer satisfaction?
- 3) Is there a positive relationship between brand characteristic and customer satisfaction?
- 4) Is there a positive relationship between brand association and customer satisfaction?
- 5) Does some demographic variables like gender, age have effect on the relationship between customer satisfaction and brand image?

## **1.3 Justification of the study**

### **1.3.1 Motivation for the topic**

The Norwegian economy relies greatly on its petroleum and fish business and is now suffering bitterly from the impact of the worldwide oil crisis. Because Norway is not a member of EU, so the country has to handle the consequences of oil crisis by itself without assistance from any other countries. Under this circumstance, the sales of Norwegian fish become more important than ever before, especially the salmon sales. According to Norwegian Seafood Council (NSC, 2017), Norway has exported salmon to a value of NOK 61.4 billion in 2016 and this is an increase of 29 percent, or NOK 13.8 billion compared with 2015. But the increase in sales is due to the increase of the price per kilo. In fact, Norway exported 98000 tonnes of salmon in 2016, which is 5.2 percent or 53340 tonnes less than 2015 (NSC, 2017). In the news from NSC (2017), it also pointed out that approximately 76 percent of all Norwegian salmon exports by volume went to EU in 2016 and the volume exported to Asia remained stable. So until now the main market for Norwegian salmon is the EU market and its good performance is mostly due to the sales increase in EU markets and Japan in Asian markets. Because of the short geographical distance and similar dietary habit in European countries, it is easier for Norway to sell salmon successfully in EU market. Besides the free trade mode in the European countries is a great factor for its success in EU markets.

Although it is easier for Norwegian salmon industry to sell its products in the EU market,

there is a limit to the capacity of the market. Due to the size of the EU market, Norwegian salmon has reached a high level that is almost saturated. So it is more difficult to expand its sales in this market than to open a new market. But why China? Actually, China is not a totally new market for Norwegian salmon. Norwegian salmon has entered China mainland a decade ago and caught the mouth of local customers immediately, but failed later due to the intense political atmosphere. Norwegian salmon has also been of great success in Japan and Hongkong which can be used as successful references of opening the Chinese mainland again now. Besides China now is the most rapidly developing market and becoming the most potential market in international trade. So it is a chance as well as challenge to enter the market again.

The good political relationship lays the basic foundation for bilateral trade. But the relationship between Norway and China has been on the ice since the Norwegian committee awarded the Nobel Peace Prize to the Chinese dissident in 2010, which had the salient and direct reflection on the salmon export to China from 2010 -- Norway's market share of salmon export to China has plummeted from 92 percent in 2010 to just 29 percent in the first half of 2013 (Milne, 2013). However, the political conflict does not affect the enthusiasm of Chinese people towards Norwegian salmon due to its yummy taste and fine quality. After the ban on the import of salmon from Norway, the market share of Norwegian salmon has been taken by the salmon from UK and Faroe Islands. But still, Norwegian salmon is exported to China via a third party like Vietnam and Japan resulting in higher prices and poorer quality which negatively affects consumers more than the suppliers. Now the ice is broken on 19th of September, 2016 when the two countries issued a joint declaration that the bilateral relationship will be normalized (Sewell, 2016). Then it is a great chance for Norwegian salmon going into China mainland again.

### **1.3.2 Contributions of this study**

Dolich (1969) stated that image considerations guide purchase choice and Sirgy (1985) showed that a product is more likely to be used and enjoyed if there is congruity between its image and the actual or ideal self-image of the user. Brand image works on customer satisfaction to guide the purchase behavior of the product. The image of a brand is ultimately

a deciding factor for product sale (Hitesh Bhasin, 2016). This gives managerial implication of how to improve its brand image to appeal to customers. For example, if discounted price that is a real price lower than the value customers perceive will make customers more satisfied with the product, then such methods like bundle sales can be used when opening a new market. When using advertisement for the product for the first time, it is very important to make the brand characteristic as clear as possible.

In Aaker's (1996) model, brand image includes brand value, brand characteristic and brand association. The three elements are interpreted as brand as product, brand as person and brand as organization here in this thesis and research on their separate relationship with customer satisfaction when exporting salmon to China. There has been a lot of studies about exporting Norwegian salmon but research about exporting salmon to China using this method is not that much. Study's contribution is that of three parts - brand image, brand characteristic and brand association which one can influence customer satisfaction most. In more and more customer-oriented theories, customer satisfaction and customer loyalty has come out from customer behavior indicators. This thesis will also strengthen the position of customer satisfaction in behavior activities.

#### **1.4 Scope of the study**

The thesis is written to investigate the relationship between brand image and overall customer satisfaction, thus providing some practical suggestions when exporting Norwegian salmon to China. The sample is confined to n=201 Chinese people including university students and young workers. The data was collected through a questionnaire with questions regarding to overall customer satisfaction, brand value, brand characteristic, brand association, repurchase intention, WOM recommendation and some basic information about Norwegian salmon.

#### **1.5 Organization of the study**

The study is organized as follows:

Chapter 1 is the introduction part which consists of the background of the study, some

relevant theories and the main research questions of the study. In the end, the justification of the study, its practical implications and the organization of the study are discussed.

Chapter 2 is an overview of Norway exporting salmon to China. This chapter introduces why Chinese people like Norwegian salmon and its sales before and after the political issue. The main producers in Norway and the industry structure, the role of Norwegian Seafood Council, the Chinese market and the solved practical issues in salmon sales between the two countries.

Chapter 3 is the literature review and the research hypothesis which introduces the research model from Aaker (1996) and literature about brand image and customer satisfaction. Finally eight hypotheses are formed.

Chapter 4 is the research methodology. Philosophical position of the study, research design, empirical setting and geographical location of the study, data collection and measurement of the constructs are presented in this chapter.

Chapter 5 is the measurement assessments and data validation, which makes preparation for the data analysis. In this chapter, data screening and cleaning, the presentation of descriptive statistics, testing the reliability of the scale and the convergent and discriminant validity of the variables are done.

Chapter 6 is the data analysis and empirical findings. This chapter presents correlations and multiple regression for constructs, correlation matrix and multiple regression analysis, comparison of responses by demographic factors and hypothesis testing.

Chapter 7 is the discussion and conclusion part. This chapter presents the summary of the findings, discussion of the results, implication of the study, limitation and further research and conclusion.



# **CHAPTER 2. NORWAY EXPORTS SALMON TO CHINA: AN OVERVIEW**

## **2.1 Introduction**

In the first chapter, the background of the study, the research questions, motivation and contribution, scope and organization of the study were discussed. In this chapter, why salmon is popular, a general overview of Norwegian salmon industry, the sales of salmon, introduction of some seafood companies, the role of NSC, some examples of Seafood Companies from Norway, China as both an exporting and importing country of seafood, the potential of Chinese seafood market and the solution of two practical issues hampering the salmon import from Norway.

## **2.2 Why is salmon so popular**

As has mentioned before, Norway produces most Atlantic salmon. Salmon is the common name for several species of fish of the family Salmonidae, for example Atlantic salmon, Pacific salmon, while other species in the family are called trout (e.g. Brown trout, seawater trout). Although several of these species are available from both wild and farmed sources, most commercially available Atlantic salmon is farmed (Marine Harvest, 2016). One of the reason why salmon is a popular choice because salmon is considered to be healthy for its high content of protein and Omega-3 fatty acids as well as being a good source of minerals and vitamins. The rich content of the long chain omega-3, EPA and DHA can reduce the risk for cardiovascular disease and also reduce the risk of some other health issues. The micronutrients, minerals, marine omega-3 fatty acids, high quality protein and several important vitamins are all good for human health and represent an important part of a varied and healthy diet. There is a substantial evidence from multiple studies on the nutrients present in seafood that including salmon in your diet will improve your overall nutritional status, and may even yield significant health benefits (Marine Harvest, 2016). In light of the global obesity rates, governments and food and health advisory bodies in Europe and the United States are encouraging people to consume more fish (Marine Harvest, 2016). Besides farmed

Atlantic salmon is a versatile product, which can be used for a variety of categories such as smoked, fresh, sushi, as well as ready-made meals. These different ways of eating are all warmly welcomed by people all over the world.

Compared to other protein food resources like chicken, pork and cattle, salmon behaves well in protein retention, energy retention, edible yield, feed conversion ratio (FCR), edible meat per 100 kg fed (Marine Harvest, 2016).

**Table 2.1: Resource Efficiency by Marine Harvest (2016)**

Category	Salmon	Chicken	Pork	Cattle
Protein Retention	31%	21%	18%	15%
Energy Retention	23%	10%	14%	27%
Edible Yield	68%	46%	52%	41%
Feed Conversion Ratio	1.1	2.2	3.0	4-10
Edible Meat per 100 kg fed	61kg	21kg	17kg	4-10kg

Protein resource efficiency is expressed as “Protein retention”, which is a measure of how much animal food protein is produced per unit feed protein fed to the animal. Salmon has a protein retention of 31%, which is the most efficient compared with Chicken, Pork, and Cattle (see table 2.1). Energy retention is measured by dividing energy in edible parts on gross energy fed. Both cattle and Atlantic salmon has a higher energy retention compared to pork and chicken. The main reason why salmon convert protein and energy to body muscle and weight so efficiently is because they are cold-blooded and therefore do not have to use energy to heat their bodies, as well as not having to stand up, compared to land animals (Marine Harvest, 2016). Edible yield is the ratio by dividing edible weight by total body weight. The highest percentage of 68% of Atlantic salmon is edible meat, while other protein sources have a higher level of waste or non-edible meat. Feed conversion ratio measures how productive the different animal protein productions are. In short, we can calculate the kilograms of feed needed to increase one kilo of the animal’s body weight. Feeds for Atlantic salmon is high in protein and energy explaining why feed conversion is easier for Atlantic salmon than protein and energy retention when comparing with land animal for protein productions. Edible meat

per 100kg of feed fed: the combination of the FCR ratio and edible yield, gives salmon a favorably high quantity of edible meat per kg of feed fed (Marine Harvest, 2016). So Atlantic salmon is the most efficient resource in its production process among the common protein food sources and also the most environmentally-friendly resource because it makes best use of the feed with least waste. Atlantic salmon is not only nutritious and yummy, but also environmentally-friendly which make it recommended by governments, industries, consumers and societies. No wonder why it is popular all over the world.

### **2.2.1 Why Chinese people like salmon**

Chinese people have a long history of eating fresh seafood especially citizens in cities nearby the ocean. In their eyes, salmon is a kind of fish whose pronunciation is the same to one other word “surplus” which means having something left and good luck for the future. It is taken as a good implication for the Spring Festival celebrating the new year. Chinese people have a variety of ways to cook fish, some of which can also be applied to salmon cooking. Besides because China is the neighbor country of Japan, many Japanese food are very popular in China such as sushi and sashimi for which salmon is the best material. And most Chinese people have a belief that seafood is delicious as well as nutritious which is very good for health. Norwegian salmon is demonstrated to contain omega-3, EPA, DHA and vitamins that are pursued by Chinese people who put great emphasis on eating healthily. Meanwhile, to be slim is to be good-looking in China nowadays. One can feel free to eat salmon without being afraid to gain weight due to its high protein content and less fat.

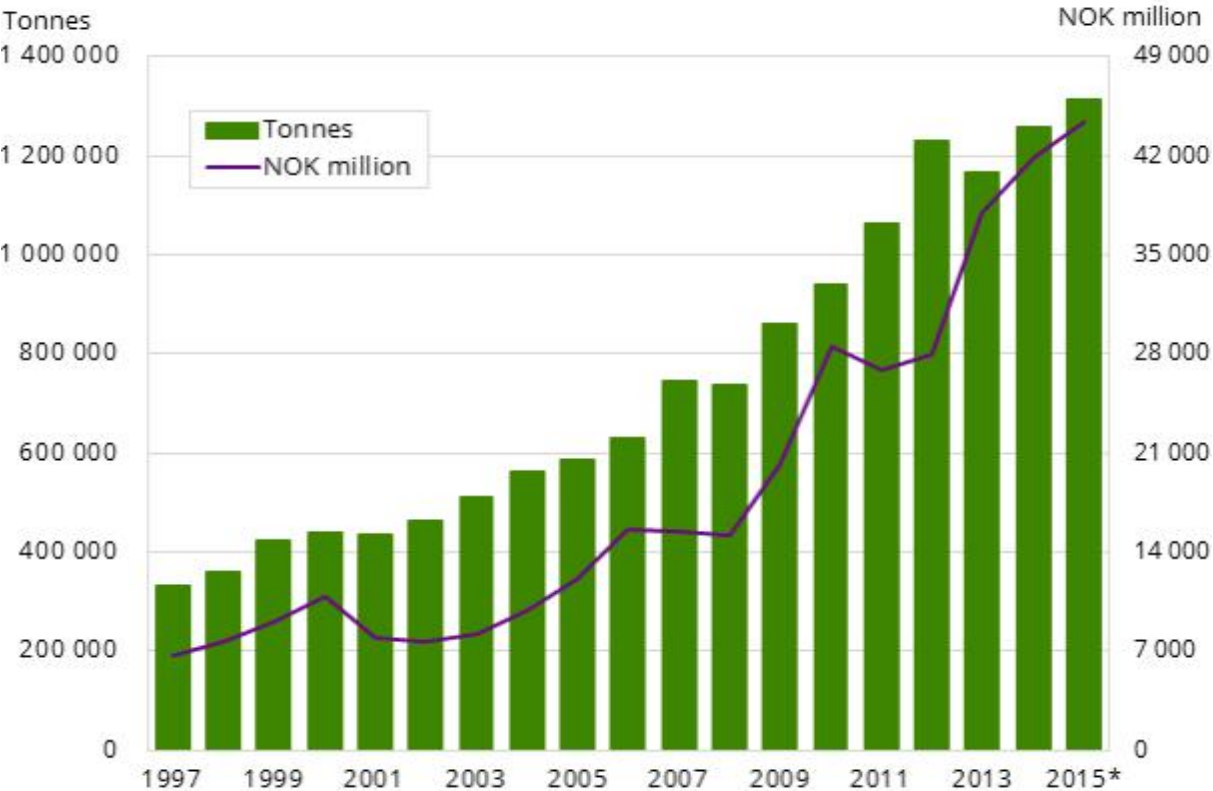
### **2.3 Norwegian salmon industry**

The Norwegian coast is 21,000 km long and the prospect for expanding fisheries and marine aquaculture in the country is huge (Eurofish). The advantage of Norway’s geographical characteristic, the long coastline and its climate together contribute to its fishery industry. Norway dominates the world’s farmed salmon industry, accounting for over half of the world’s production of farmed Atlantic salmon and now Norway is the world’s leading producer of Atlantic salmon and the second largest seafood exporter in the world, exporting to 140 countries all over the world (Eurofish). Due to biological constraints, seawater

temperature requirements and other natural constraints, farmed salmon is only produced in Norway, Chile, UK, North America, Faroe Islands, Ireland and New Zealand/Tasmania (Harvest, 2016).

Salmon farming in Norway started as a government-supported activity to strengthen the livelihood of rural fishing communities facing depressed economies due to declining wild fisheries in the late 1960s and the beginning of the 1970s (Hjelt, 2000; Sonvisen, 2003). During the 1970s, many breakthroughs with respect to biological and technological bottlenecks, such as smolt rearing and development of dry feed, fundamentally advanced salmon aquaculture (Aarset, 1998) and then the real scale commercial operation took off in the 1980s. Since then, salmon aquaculture has experienced remarkable growth as a result of expanded new culture locations, improved productivity, enhanced husbandry practices and management and growing global markets (Asche, 2006). In just over four decades, the Norwegian yearly farmed salmon production has increased from less than 500 tonnes in the early 1970s to 1.31 million tonnes in 2015 with a first-hand value over 44.3 billion NOK (see figure 2.1) according to the Statistics Norway (<http://www.ssb.no/english/subjects/10/05/>)

**Figure 2.1 Sales of salmon, quantity and first hand value**



Source: Statistics Norway

The success expansion of salmon production in Norway is mainly because of the successful industry management as well as its good natural location. The access and quota regulation works together with capacity adjustment schemes to measure and regulate the optimal capacity for the environment that reduces the overcapacity problem to a great extent. But still Norwegian salmon has gradually undergone a number of structural and technical changes as it expanded, intensified and diversified through time (Asche, 2006). As shown in table 2.2, the Norwegian salmon growth in production can be seen clearly that the growth rate is not so fast as before and even lower than the total annual growth rate in 2010-2016E.

**Table 2.2 Historical Atlantic Salmon Harvest Growth Rate 1996-2016E**

CAGR	Norway	Chile	UK	North America	Others	Total
1996-2016E	7%	9%	4%	5%	7%	7%
2005-2016E	7%	2%	3%	3%	10%	5%
2010-2016E	4%	24%	3%	2%	9%	7%

Note: CAGR represents Compound Annual Growth Rate

Source: Kontali Analyse

According to Marine Harvest (2016), the background for this phenomenon is that the industry has reached a production level where biological boundaries are being pushed. It is therefore expected that future growth can no longer be driven by regulators’ decisions alone, but be subjected to implementation of means to reduce the industry’s biological footprint. This requires progress in technology, development of improved industry regulations and inter-company cooperation.

**2.3.1 Norwegian salmon sales**

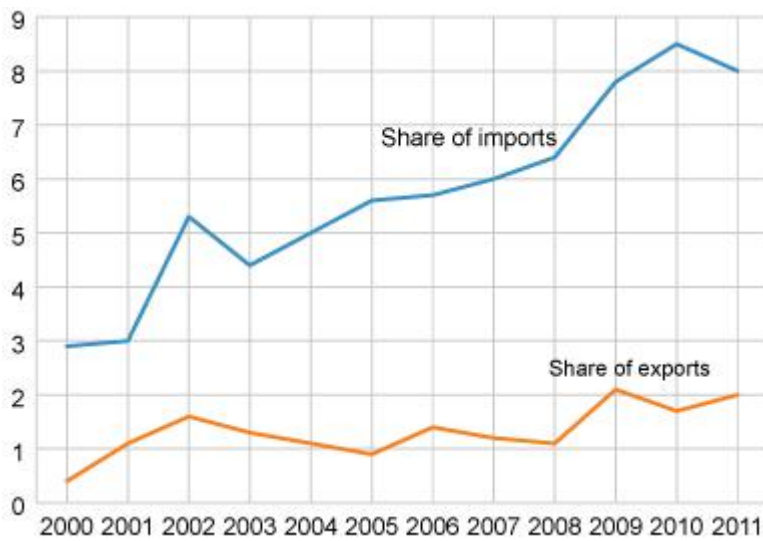
According to news from NSC (2017) “Salmon and trout exports treble in 3 years - NOK 65 billion in 2016”, Norway exported salmon worth NOK 61.4 billion in 2016. This is an increase of 29 percent, or 13.8 billion compared with 2015, and is the highest export value of salmon ever. Measured by volume, Norway exported 980000 tonnes of salmon in 2016, which is 5.2 percent or 53340 tonnes less than 2015. In 2016, Poland and France were the biggest markets for Norwegian salmon. By volume, Greece was the strongest EU growth market, with

an increase of 2261 tonnes, while the largest decline was in Spain with volumes reduced by 7544 tonnes or 12 percent (Fish Information & Service, 2017). Outside the EU market, sales increased in the US market in 2016 with 39774 tonnes of salmon worth 3.4 billion, which is an increase by volume of 2262 tonnes or 6 percent (FIS, 2017). The US market has grown by 36 percent or NOK 888 million compared with 2015 by value, which was benefited from a favorable exchanged rate. The main driving force of the volume growth was the increase in export of fresh fillets which had an increase of 43% compared with 2015 (NSC,2017). In Asia, Norway exported salmon to a value of NOK 10.5 billion in 2016 (NSC, 2017). This is an increase of 39 percent compared to the year before. Measured by volume, the export to Asia remained virtually unchanged. The biggest buyers of Norwegian salmon in Asia were Japan, Vietnam and South Korea by volume (NSC, 2017).

The main export market for Norwegian salmon is still EU countries with 749000 tonnes of salmon worth 45.3 billion NOK exported to EU in 2016 which takes up 76 percent of the total export by volume. And by value, the proportion is almost 74.8%. But for further expansion in the EU market it is quite difficult due to the high proportion of the market share and the limitation of the market. China mainland emerges as one of the most promising market is of great potential for Norwegian salmon sales. There was two turning points of Norwegian salmon exported to China mainland: one was the Liu Xiaobo political issue in 2010 and the other one was the declaration of the normalization of the bilateral relationship in 2016.

Before 2010, both export and import between China and Norway has seen a steady increase for the last 10 years (see figure 2.2). And this trend goes with the Norwegian salmon export to China. And China was the third biggest salmon market in Asia by that time following Japan and Chinese Hongkong.

**Figure 2.2 China's share of total Norwegian trade, from 2000 until 2011**



Note: the share is in percent

Source: Statistic Norway (Skivenes, 2011)

However, the salmon exported to China plummeted immediately since the Nobel Peace Prize awarded to the Chinese dissident Liu Xiaobo (see figure 2.3). From exporting over 1 million kg of whole salmon in December 2010, the volume fell to around 315000 kg in January 2011, and further to 75000 kg in February in 2011.

**Figure 2.3 Export of whole salmon to China, January 2009-July 2011**



Source: Statistics Norway (Skivenes, 2011)

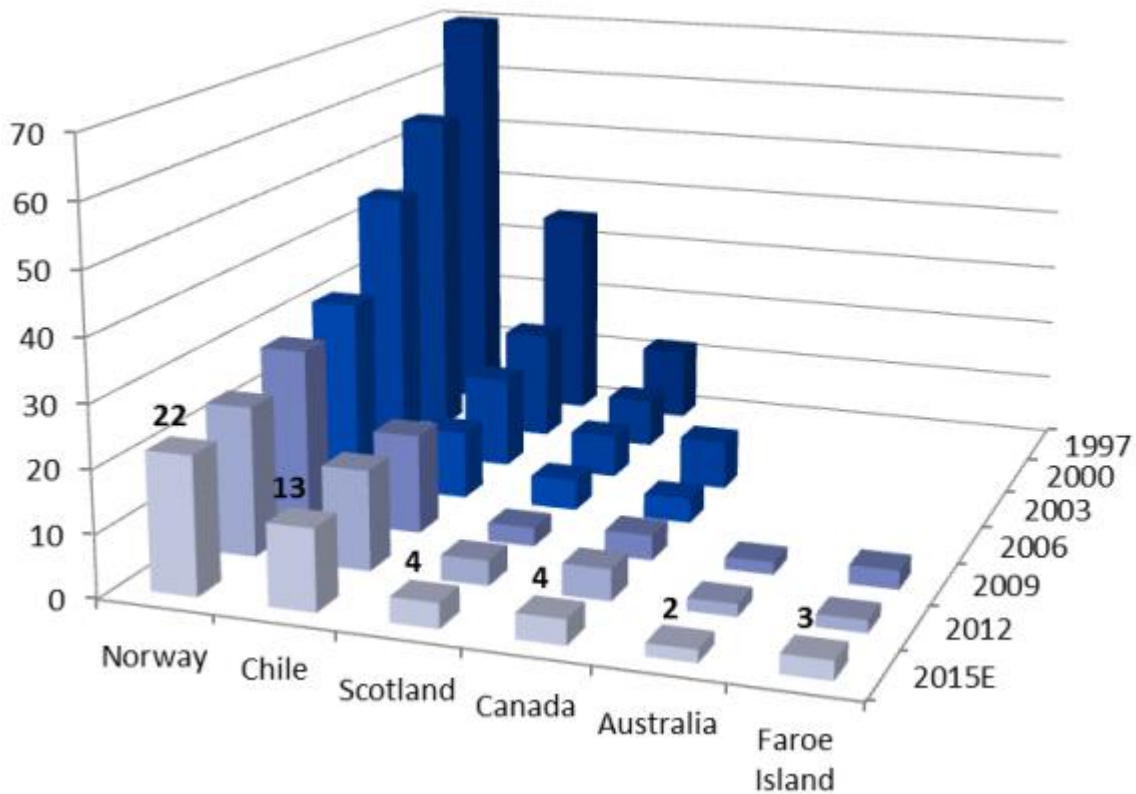
Before 2010, the market share of fresh salmon was over 90% and has dropped to 30% by the middle of 2014 (Tallaksen, 2015). In the early 2014, NSC put a marketing campaign aimed at winning back Norwegian salmon main producers' place in China. Even though efforts are made to improve the situations, for the whole of 2014, exports totaled just 11000 tonnes or an increase of barely 2000 tonnes from the previous year. It did not improve that much. When December 19th, 2016, the two countries declared that the relationship between them has come back to life, then voices from all sides like commentators, analysts, officers became optimistic about the salmon sales to China. Sales director for Fish Pool-Piotr C Wingaard noted that the salmon production in 2017 will be a little higher than in 2016, but the increase will be so little that the market isn't fully satisfied. He also continued that the reopening of the Chinese market after Norway and China normalized diplomatic relations just before Christmas will also boost demand (Seafood sales keep soaring into 2017, 2017). Marine Harvest Asa Chief Executive Alf Helge Aarskog said that the company planned to resume exports of Norwegian salmon to China in Q1 or Q2 and exports made possible by the recent normalization of diplomatic and political ties (Reuters, 2017).

### **2.3.2 Industry structure**

As mentioned before, farmed salmon is only produced in Norway, Chile, UK, North America, Faroe Island, Ireland and New Zealand/Tasmania. The figure illustrates the number of players producing 80% of the farmed salmon and trout in each major producing country. As the figure 2.4 shows, the salmon industry consisted of many small companies that made contributions together in history. This was the case with Norway, and to some degree with Chile and Scotland. The higher level of fragmentation in Norway compared to Chile is the result of the Norwegian government's priority to decentralized structures and local ownership. In Chile the government put fewer demands on the ownership structures in order to let the industry grow faster. In recent years, the salmon industry has been through a period of consolidation in Norway. The number of companies producing 80% of the total salmon production has been sharply cut from almost 69 in 1997 down to 22 in 2015.



**Figure 2.4 Number of players in producing countries (Kontali Analyse)**



There are a total of 151 companies owning commercial licenses for salmon and trout in Norway, but the total number of companies producing 100% of the supply in Norway is 98 (through themselves or subsidiaries) ( Marine Harvest, 2016). Because some of these are controlled by other companies. The table 2.3 lists the top ten producers of Norwegian salmon in 2015, the top one is Marine Harvest which is also very successful in exporting what is produced, followed by Salmar and Leroy Seafood. The Marine Harvest Group represents the largest total production and holds about one quarter of the quantity in Norway and about one third of the quantity in North America and UK (Marine Harvest, 2016). The top ten companies produced 779200 tonnes of salmon, taking 70% of the total production in 2015 while 22 companies together produced 80% of the total production., from which we can see the power of the top ten companies.

**Table 2.3 Top 10 producers of Norwegian salmon in 2015 (Harvest, 2016)**

Top 10 in Norway		Harvest
1	Marine Harvest	254800
2	Salmar	136400
3	Leroy Seafood	135000
4	Mitsubishi (Cermaq)	58000
5	Nordlaks	39000
6	Nova Sea	37400
7	Midt-Norsk / Bjoroya	32000
8	Grieg Seafood	31700
9	Norway Royal Salmon	27900
10	Alsaker Fjordbruk	27000
	Top 10	779200
	Total	1110800
	Total	70%

Here we are going to make a brief introduction of the top three companies in seafood industry in Norway:

- **Marine Harvest** : According to the website of Marine Harvest (<http://www.marineharvest.com/>), Marine Harvest ASA whose headquarter is situated in Bergen, Norway, is one of the largest seafood companies in the world and the world's largest producer of Atlantic salmon satisfying one fifth of the global demand. The company has 11700 employees and is represented in 24 countries, taking the top position in the UK and the second position in North America of farmed Atlantic salmon. In 2015 the company had produced 420000 tonnes of farmed salmon and the turnover in 2015 was NOK 28 billion. Marine Harvest supplies healthy, delicious and sustainable farmed salmon and processed seafood to more than 70 markets worldwide. Marine Harvest has a number of well-recognized brands and part of them are presented in the figure 2.5.

**Figure 2.5 Some well-recognized brands owned by Marine Harvest**



*Source: Marine Harvest website*

- **Salmar:** According to the website of Salmar (<http://www.salmar.no/>), Salmar ASA has its headquarter and its VAP factory located at the island of Froya in the Region of Central-Norway (Sor-Trondelag). Salmar is one of the world's largest and most efficient producers of farmed salmon and owns 100 licenses for marine production of Atlantic salmon in Norway of which 68 licenses in the company's principal producing region in Mid-Norway (Trondelag and Nordmore) and 32 licenses in Northern-Norway through Salmar's wholly owned subsidiary Salmar Nord AS. In addition, Salmar owns 50% of Norskott Havbruk AS, which owns 100% of Scottish Sea Farm Ltd, Great Britain's second largest salmon farmer with production capacity in excess of 30000 tonnes gutted weight (<http://www.salmar.no/>). In 2015, the total volume of seafood was 150000 tonnes gutted weight.

➤ **Leroy Seafood:** According to the website of Leroy Seafood (<https://www.leroyseafood.com>), Leroy Seafood Group has its head office in Bergen, Norway and has sales offices and sister companies in France, USA, Sweden, Japan and China. Leroy Seafood Group is the leading exporter of Norwegian seafood and the world's second largest producer of Atlantic Salmon (<https://www.leroyseafood.com>). The company has 14 processing facilities located in different European countries. Besides the company pays a lot of attention on food safety and sustainability of the industry. The company has more than 2300 employees and exported more than 220000 tonnes of seafood in 2014.

## **2.4 The role of Norwegian Seafood Council (NSC)**

NSC is a public company owned by the Ministry of Trade, Industry and Fisheries who work together to appoint the board of directors for NSC for a 2 year period (<https://en.seafood.no>). NSC works together with the Norwegian fisheries and aquaculture industry to develop markets for Norwegian seafood and is financed by the Norwegian seafood industry through fees levied on all exports of Norwegian seafood. The mission of NSC is to increase the value of Norwegian seafood resources by way of market insights, market development, market risk management and reputational risk management in selecting markets around the world (<https://en.seafood.no>). NSC is the approval authority for Norwegian seafood exporters and also acts as an advisor for the Ministry of Trade, Industry and Fisheries in affairs concerning seafood exports and trade (<https://en.seafood.no/about-norwegian-seafood-council/about-us/>). NSC has a lot of representatives in different countries, China (shanghai) included. NSC has five advisory groups, one for each of the most important seafood species or industries:

- Norwegian salmon and Norwegian trout
- Ground fish (cod, saithe, haddock etc.)
- Prawn and shellfish
- Conventional products (salt fish, clip fish, stock fish)
- Pelagic products (herring, mackerel, capelin)

In addition, three advisory groups for different functions have been established; one for the

Norwegian domestic market, one for environmental documentation and one for new markets. The advisory groups are made up of in total over 70 representatives from the Norwegian seafood industry. The advisory groups give NSC input and opinions regarding the work that is being carried out that ensures both affiliation and understanding of what is being done and why and is also a media ensures the flow of information between NSC and the Norwegian seafood industry (<https://en.seafood.no/about-norwegian-seafood-council/advisory-groups/>).

NSC works in three areas:

### **-Marketing**

The aim of NSC marketing is to further promote the demand for Norwegian Seafood in both new and established markets by first identifying and developing new markets, then hosting a series of marketing activities to help Norwegian seafood exporters as well as drawing attention from local consumers. In detail, NSC works together with the Norwegian fisheries and aquaculture industry to identify and develop markets for Norwegian seafood products (<https://en.seafood.no/about-norwegian-seafood-council/about-us/>). The marketing activities can raise awareness and preference for Norwegian seafood, thus promoting for Norwegian seafood exporters' sales and marketing.

### **-Market insight**

NSC continually monitors trends and developments in both the Norwegian seafood industry and the global market, thus providing statistics, trade information, consumption and consumer insight of Norwegian and international trade relating to seafood as well as effective and rational services for more knowledge and insight to help Norwegian seafood exporters do better in all markets. These insights provided by NSC help Norwegian seafood exporters to form the basic strategic decisions and competitive advantages.

### **-Communication and market risk management**

NSC focuses on building and strengthening the good reputation of Norwegian seafood continuously in both domestic and foreign markets. To increase the awareness of Norwegian seafood as well as the knowledge of all relative stakeholders, NSC engages in active information work and cooperates closely with media, NGOs, various interest groups, the fishery industry and Norwegian authorities. To be able to further broaden the popularity of

Norwegian seafood, NSC hosts 13 websites in different languages presenting consumer information like seafood recipes. For the reputational risk management part, NSC works in close cooperation with experts and Norwegian authorities to provide reliable, accurate and updated information about Norwegian seafood. It is of great importance to safeguard and strengthen the image of Norwegian seafood.

#### **2.4.1 Trademarks and Labeling**

Labeling is an important market tool constituting an integral part of communication between actors in society, i.e. Businesses, public authorities and consumers (Sustainable Business Associates, 2016). NSC focuses on building the “Norge” brand, quality labeling and eco-labeling which are of great significance in Norwegian seafood exporting industry. The “Norge” brand labeling is the joint value for the whole Norwegian seafood industry, thus all actors perceived in the same way in all markets. Since it was found that consumers from different countries have already associated the “Norge” brand with quality, NSC encourages all members in the Norwegian seafood industry to use the logo on their products and also develop guidelines for them to use the logo. For the quality labeling, NSC use the quality label to tell consumers that the product can reach a certain standard. Otherwise the product can not use the label. For example, the Norwegian seafood industry has defined a Norwegian Standard (NS 9406-Skrei) that is linked to a quality label for Skrei (<http://en.seafood.no/>). Only Skrei and Skrei products that are handled and packaged in accordance with NS 9406-Skrei can carry the Skrei quality label. For eco-labeling, NSC uses “MSC” label. The Marine Stewardship Council (MSC) is an international non-profit organization established to address the problem of unsustainable fishing and safeguard seafood supplies for the future (<https://www.msc.org/>). Using its blue label is a signal that the product is produced environmental friendly and a third party certification is the highest assurance. Norway has a tradition of managing its fisheries in harmony with the environment for sustainable development. That the idea of sustainable development of Norwegian fisheries is in line with the concept of MSC made Norway have the highest proportion of MSC certified fisheries in the world- a total of 73.6% of all wild fish caught and exported from Norway was certified in 2014 (Fishupdate, 2014). The use of MSC eco-label makes the brand more trustworthy and

responsible and stands out among a lot of similar products. The Figure 2.6 are the “Norge” label, Skrei label (one of the Norge label) and the MSC eco-label.

**Figure 2.6 The “Norge” label, the quality label and eco-label (<http://en.seafood.no/>)**



#### **2.4.2 Collaboration between NSC and Norwegian companies**

NSC mainly works as a media between markets and Norwegian seafood companies to increase awareness and demand for Norwegian seafood in both domestic and foreign markets. NSC focuses on the “Norge” brand which can tell a lot of positive characteristics about the Norwegian seafood when it appears in front of consumers. One of the important symbols of the “Norge” brand is that the best seafood comes from Norway. NSC helps Norwegian seafood companies with marketing and tries to build a good image and reputation in all markets. NSC helps Norwegian companies not only in sharing business information through websites, but also conducts practical activities to help them like shared materials and demonstrations and media assistance (<http://www.nortrade.com/sectors/publications/norwegian-seafood-export-council/>).

**-Shared materials:** NSC develops materials that can convey the message of Norwegian origin and remind people of its fine qualities and encourages companies to use the material together with their own logo to make the seafood from Norwegian companies more recognizable. The shared materials can save companies a lot on advertising and help Norwegian seafood to be more competitive in markets.

**Figure 2.7 Shared materials for cooperation (Norwegian Seafood Council)**



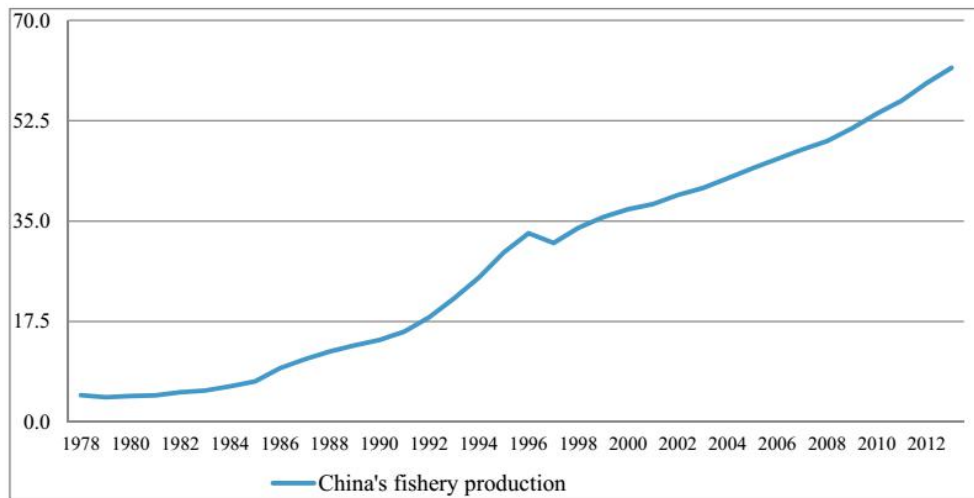
**-Demonstrations and Media Assistance:** NSC can unite companies in co-financing to reduce the demonstration cost for example cooking competitions, food fairs. NSC also helps companies in co-financing in the purchase of media time in magazines and also helps them in broadcasting media (<http://en.seafood.no/>).

## **2.5 Mainland China fishery and seafood market**

Fisheries, known as “capture and aquaculture industries”, is an ancient business in China, but highly developed after the Reform and Opening-up Policy in 1978 after the economy transformed from planned economy to market economy. This can be proved by the figure 2.8, from which we can see that from 1978 to 2013, China’s annual fishery production increased from 4.7 million to 61.7 million tonnes which is more than 13 times of what was produced in 1978. And from figure 2.9, China’s aquatic production (excluding the products of aquatic plants) in proportion to world total output has increased from 6.19% in 1980 to 37.42% in 2014, with the sharpest increase from 13.44% in 1990 to 24.35% in 1995. In the period of 2011 to 2015, China’s aquatic products accounted for more than 35% of global production and China’s aquaculture products took up more than 60% of global aquaculture production (Wenwu, 2016).

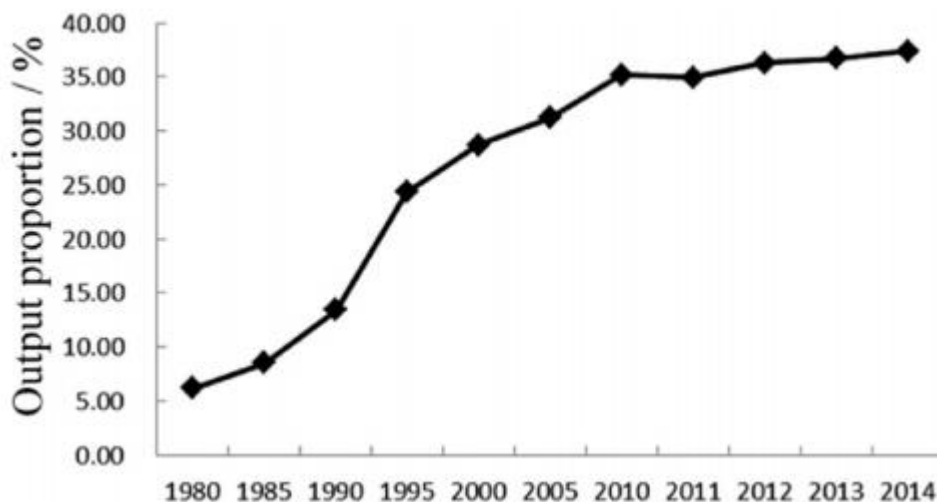


**Figure 2.8 China's Annual Fishery Production (millions of tonnes)**



Source: China Fishery Yearbook (2014)

**Figure 2.9 China aquatic production in proportion to world total output (Wenwu, 2106)**



What is different from Norway and many other countries surrounded by sea is that in China, freshwater aquaculture is also an important part for fishery industry since there are a lot of lakes, rivers, ponds which make great contribution to China's fishery industry. In freshwater aquaculture, pond aquaculture from the period of 2011 to 2015 accounted for about 70% of the national freshwater aquaculture production, and fish products were proportionally higher than others (Wenwu, 2016). Meanwhile, in mariculture, bottom sowing and raft culturing

products accounted for more than 50% of total marine aquaculture production and shellfish production was proportional higher than others (Wenwu, 2016). China has the largest fishery industry in the world by now. From table 2.4, China has the highest production in fish, molluscs and crustaceans and as a whole taking 61.63% of the global aquaculture production.

**Table 2.4 Aquaculture production in the world’s major fishery countries or regions in 2014. (FAO, 2016)**

Country/Region	Fish	Molluscs	Crustaceans	Others	Total	Percentage (%)
China	27219.4	13418.7	3993.5	839.5	45471.1	61.63
India	4481.1	14.2	385.7	0	4881.0	6.62
Indonesia	3639.9	44.4	613.9	0.1	4298.3	5.83
Vietnam	2687.0	198.9	506.2	4.9	3397.0	4.6
Bangladesh	1826.8	0	130.2	0	1957.0	2.65
Norway	1330.5	2.0	0	0	1332.5	1.81
Chile	968.1	246.4	0	0	1214.5	1.65
Egypt	1129.9	0	7.2	0	1137.1	1.54
Myanmar	903.7	0	42.8	15.6	962.1	1.30
Thailand	420.6	209.6	300.4	4.1	934.7	1.27
Global	49861.9	14978.7	8049.6	893.6	73783.7	

Note: The quantities in the table are in thousand.

The role of China’s fishery industry in the world can be described in three respects: China has the largest fishery industry in the world; China is the leading exporter and importer of seafood; China is the largest seafood processor.

### **2.5.1 Largest Fishing Industry**

China’s fishery industry has expanded over the last three decades and has the largest fishing industry (includes both capture and aquaculture) all over the world now. The large industry can be shown by its high quantity of products, the huge number of fishing fleets and people working in this industry. China’s total fishery production in 2013 reached 61.7 million tonnes, accounting for over one-third of the world’s total fishery production. China’s gigantic fishing

industry is supported by the largest fishing fleet in the world, with nearly 200000 marine fishing vessels and 2460 distant-water fishing vessels in 2014 (Hongzhou, 2015). As for the number of people working in the industry, according to table 2.5, the number has increased a little bit from 12936 thousand in 2000 to 14161 thousand in 2014, and taking up about 25% of the world number. Compared to other leading fishing countries, the working number is far more than their numbers.

**Table 2.5 Number of fishers and fish farmers in selected countries and territories (FAO, 2016)**

	2000	2005	2010	2012	2013	2014
World	46845	51518	57667	58272	56780	56632
China	12936	12903	13992	14441	14282	14161
Indonesia	5428	5097	5972	6093	5984	6011
Mexico	262	279	272	266	273	271
Norway	24	19	19	18	18	18

Note: All the numbers are in thousands. And people involved include both fishing and aquaculture.

As for the catch of live fish from the ocean, China is also by far the leading producer throughout the world. Table 2.6 illustrates some major marine catch producers in 2014, from which we can see in 2014 China caught 14.81 million tonnes live fish from ocean, taking up 22.12% of the world amount which is more than twice as the production of Indonesia in the second place.

**Table 2.6 Major Marine Catch Producers in the world, 2014 (FAO, 2016)**

Rank	Country	Production (millions of tonnes)	% of the world
1	China	14.81	22.12
2	Indonesia	6.02	8.99
3	United States	4.95	7.40
4	Russia	4.00	5.98

5	Japan	3.63	5.42
6	Peru	3.55	5.30
7	India	3.42	5.10
8	Vietnam	2.71	4.05
9	Myanmar	2.70	4.04
10	Norway	2.30	3.44
11	Chile	2.18	3.25
12	Philippines	2.14	3.20
13	South Korea	1.72	2.57
14	Thailand	1.56	2.33
15	Malaysia	1.46	2.18

### 2.5.2 The Leading exporter and Importer of seafood

According to FAO, China has been the largest exporter of aquatic products since 1989 by volume and by value since 2002, and enjoyed 11.6 billion USD surplus with the export value of USD 19.6 million and the import value of USD 8 million from its external fishery trade in 2013 (FAO, 2014). However, China is not only the leading exporting country, but also the leading importing country in the world. China has become the world's third-largest importing country since 2011, following the United States and Japan. The table 2.7 below is the top exporters and importers in 2012 and 2014.

**Table 2.7 Top 5 exporters and importers of fish and fishery products (FAO,2014; FAO, 2016)**

Top 5 exporters	2012	2014	Top 5 importers	2012	2014
China	18228	20980	United States	17561	20317
Norway	8912	10803	Japan	17991	14844
Vietnam	6278	8029	China	7441	8501
Thailand	8079	6565	Spain	6428	7051
United States	5753	6144	France	6064	6670

World Total	129107	148147	World Total	129388	140616
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Note: the export and import amount are in US\$ millions.

China exports significant quantities of canned and otherwise preserved fish products to almost every country. In 2013, the top export markets were Japan with a share of almost 20%, followed by the US and Hongkong. The leading export species were frozen cuttlefish and squid (USD 1.6 billion), frozen shrimp and prawns (USD 1.2 billion), frozen fish (USD 1 billion), frozen Alaskan Pollock fillets (USD 899 million), and prepared or preserved fish (USD 895 million) (AAFC, 2014). The European Union (Member Organization) is the largest market for imported fish and fishery products, and its dependence on imports is growing (FAO, 2016). Within the EU, the main markets for Chinese fishery products are Germany, Spain, the Netherlands and UK. Over a half of all Alaska Pollack and a quarter of the whitefish fillets go into these markets.

According to table 2.7, China's import of fishery products were worth 8501 million dollar in 2014, mainly from Russia, United States, Japan. In terms of salmon, China signed a bilateral agreement with Chile to trade freely which gave great convenience and advantage for Chile salmon going into China. The salmon import are mainly from UK, Chile and Norway (but not directly).

### **2.5.3 Largest seafood processor**

There was an overall growth in production of processed aquatic products, particularly frozen aquatic products, surimi-based products and dry-cured products which together accounted for more than 80% processed seafood products (Wenwu, 2016). In 1979, China had only 52 fishing processing companies with 15229 employees processing the output of less than 0.7 million tonnes. At the end of 2013, the number of fishing processing companies developed into 9774 producing 19 million tonnes. As mentioned that China now jump into the third-largest importer in the world, the increase is partly a result of the seafood process procedure. China's processors import raw materials from other regions, including South and North America and Europe, for processing and re-export. One example is that more than 90% of US seafood exported to China are reexported by China for consumption elsewhere, often back to the US (Sanchez et al, 2008).

### **2.5.4 China's seafood market**

China's seafood market is very promising for exporters in the future. China has the largest population in the world accounting for about 18.84% of the world population in 2015. The large population means the potential for consumption. Meanwhile, as the country is now developing fast, people are becoming richer and richer, meaning more consumption power. Nowadays there is a trend for Chinese people to experience new things including new food, especially for the younger generation. When they have more disposable revenue at hand, they would turn to the quality and diversity of food. For example, western restaurants are very popular in China nowadays and people are willing to have a nice meal there. Actually "made in China" is not only cheap price in their eyes, but also low quality. So they would rather pay more for imported seafood for better quality too. So the diversity and quality of imported seafood are very attractive to Chinese people. The import growth in China's fishery reflects that China's domestic supply can not satisfy all its diversified demand. Moreover, China's booming fishery industry was developed at the sacrifice of the fishing environment. On the one hand, the salient growth in the fishing industry can be largely attributed to overutilisation of the country's limited fishery resources which may cause devastating result to the industry; On the other hand, because of the industrialization process, pollution is a great threat for cleaning water for fish-farming (Hongzhou, 2015). The Chinese government has decided to slow down the pace to exploit the fish resources and regulated more on the optimal exploitation quantity for sustainable development. So with the reduced supply from local market and increasing demand from local consumers, there is great potential for foreign seafood going into the promising market.

### **2.6 Two practical issues are solved when exporting salmon to China**

The first issue solved is that China introduced a new quality inspection regime quickly following the Liu Xiaobo's political conflict in 2010. The new inspection regime delayed the time for Norwegian seafood entering the Chinese market greatly, causing the seafood waiting in the customs rotten or stale. That behavior caused a great loss for Norwegian seafood exporting companies for almost 6 years. But when the declaration that the relationship

between the two countries is now normalized was issued on the day 19th, December, 2016, great chances for Norwegian seafood goes into Chinese market again. The second issue is that due to the long transportation from Norway to China, the cost by air is quite expensive while the cost by water can save a lot. But shipping by water is rather slow which may lower the quality and freshness of seafood when arriving in China mainland. Actually this is the common problem for all Asian markets as the transportation cost is quite similar for these areas. Chinese people have a preference for fresh seafood for food safety, nutrition and good taste while they think that the stale seafood is not that juicy and nutritious, but also sometimes poisonous. So freshness is the key point when seafood goes into Chinese market. But luckily, the newly invented proton magnetic freezing technology from Japan can help solve this problem perfectly. Transporting salmon with this technology keeps it as juicy as fresh salmon by prevention of crystallization and cell damages. Coolnova salmon is “fresh” frozen salmon that is stored using proton magnetic freezing technology. In freezing practice, freezing speed and freezing temperature have great impact on the quality of thawed fish fillets. Freezing at the fastest possible speed with temperature of below -18/20 degree gives the best quality of frozen seafood (Luan, 2011). To make Coolnova salmon, setting at an air temperature below -40 degree frozen at the fastest possible speed in the proton freezing equipment protects against ice crystallization, cell damages and juice leakage which is the key factor to keep the freshness of salmon when thawed. Now the technology is underway in market and Norwegian seafood industry can buy this technology to apply it into the salmon transportation to China or other Asian markets to keep the fresh and juicy taste of salmon to appeal to local flavor. This technology is a great breakthrough for Norwegian seafood going freshly all over the world.

## **Chapter 3 Literature review and research hypothesis**

### **3.1 Introduction**

In previous chapter, an overview of Norway exporting salmon to China has been discussed. In this chapter, customer satisfaction, brand image using Aaker's (1996) model will be discussed.

### **3.2 Previous research review**

Webster (1994) indicated that, due to the change of the environment, customers had already become the most important strategic resources for businesses. And customer satisfaction is positively related to marketer profitability and market share (Anderson et al.,1994). Antreas et al. (2001) examine the direct effects of customer satisfaction on customers' behavioral responses. They argue that satisfied customers decide to stay with the existing service provider, engage in a positive word-of-mouth communication, and are unlikely to switch service providers.

Kavita et al. (2013) stated that corporate image is consequently assumed to have an impact on customers' choice of company when service attributes are difficult to evaluate. And they also showed corporate image is established and developed in the consumers' mind through communication and experience. Corporate image is believed to create a halo effect on customers' satisfaction judgment. When customers are satisfied with the services rendered, their attitude towards the company is improved. This attitude will then affect the consumers' satisfaction with the company. Corporate image has also served as an important factor that influence customer loyalty and repeat patronage (Andreassen & Lanseng, 1998). Brand image is a circumlocutory tool which can positively modify the purchasing behavior of the consumers and it also plays a significant role to improve any business performance (Malik et al., 2013).

#### **3.2.1 Brand image**

The importance of stressing brand image has reached a consensus among researchers and practitioners. Aaker (1991), says image create value in a variety of ways, helping consumers



to process information, differentiating the brand, generating reasons to buy, giving positive feelings, and providing a basis for extensions. But the definition for brand image hasn't reached an agreement yet. Mohajerani and Miremadi (2012) explained that image is the overall impression made in the minds of the public about something. They also stated that the image of service organization is diverse, and therefore, each customer has different types of expected impressions, experiences and contacts with the organization, and that leads to a different image acceptance. The so called brand image is something shaped in the mind of the consumer based on the consumers' feelings, beliefs and impressions in combination with the information provided by the company (Richard & Zhang, 2012). It is thus stated that when it comes to brand image it is not reality itself that is of the essence but rather the perception of reality in the mind of the consumer because that is where the actual image is created (Dobni & Zinkhan, 1990). The construct of corporate brand image still provides an opportunity for companies to, with their marketing actions, influence how customers view their brands (Stephanie Ekorn & Silvia Khan, 2014). Saleem and Raja (2014) posited that brand image is a reflection of a brand held in consumer memory. They also explained that in a simple word, brand image is basically what comes into the customers's mind when a brand is placed in front of the customer.

Nischay and Shipa (2014) simply stated that brand image is the overall impression in consumers' mind that is formed from all sources. They also pointed out that an image is formed about the brand on the basis of subjective perceptions of association's bundle that the consumers have about the brand, like that Volvo is associated with safety and Toyota is associated with reliability. So as far as I can say that brand image is the subjective image formed in consumers mind in face of the products from all sources and can be influenced in many ways. For example, when you want to choose cola between Coca Cola and Pepsi, the experience before or what you know about the two brands as well as advertisements by the two companies will occur in your mind to help you make the decision. Also some scandals or charity activities and some other factors may influence your choice.

Aaker (1996) believed that brand image could be measured through three dimensions, including: (1) Brand value, in relation to functional benefits, also the basic condition required

by the brand, (2) Brand characteristics, the connection between brand characteristics and customer perception that appeared differences, (3) Brand associations, the associations the customers presented to the brand that the customer would expand to other merchandise and service of the brand.

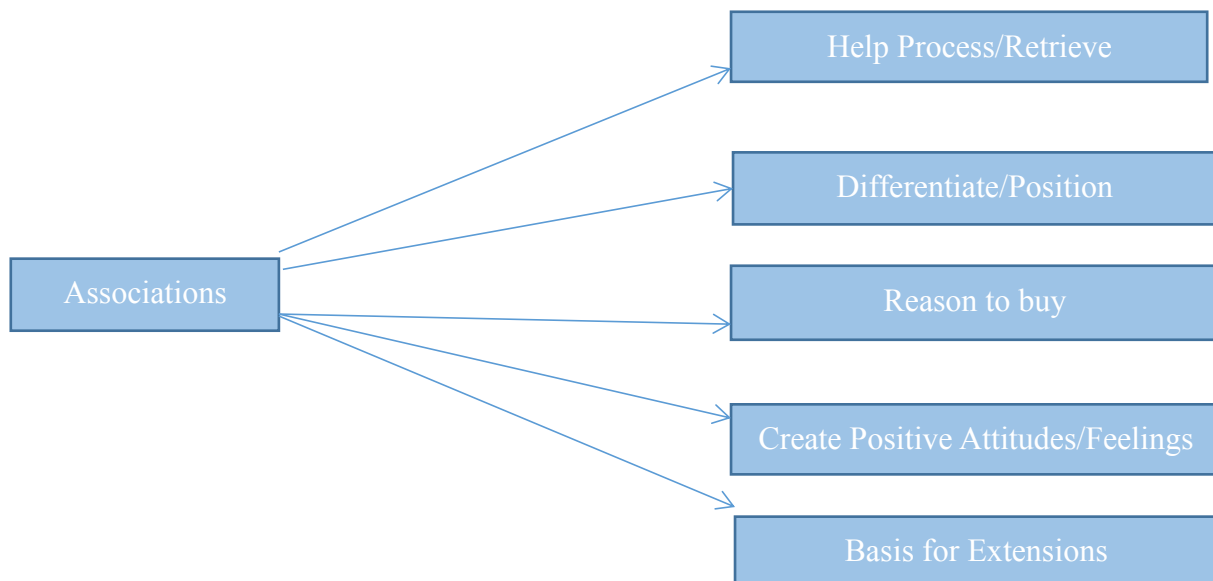
➤ **Brand value:** According to Aaker (1996), the value proposition, which usually involves a functional benefit, is basic to brands in most product classes. We can imagine that if the brand does not generate any value, how can it compete with competitors? So it is the basic condition that the brand should have. Brand value in terms of consumers is the premium that people will pay for brands over and above a baseline (Paul, n.d.). The brand value explains whether the brand provides good value for the money and whether there are reasons to buy this brand over competitors (Aaker, 1996). The satisfaction from customers will add up the brand value and in turn, the dissatisfaction will be loss of the brand value.

➤ **Brand characteristics:** Brand characteristics come to your mind when the brand is mentioned. It is a perception about the product or service. So it connects the features of the product or service and how the customer understand the product or the service, and then the customer would know whether this is what he or she needs or not. We can understand brand characteristics as human personality. Specific brand characteristic will stand out in a range of similar products or services in the market. For example, Nokia mobile phone is characterized as strong resistance to fall off; iPhone is characterized as the mainstream of mobile phone. So when you know about the characteristics of different brands and make clear about what is your real need, then you can make a right choice.

➤ **Brand association:** Keller (1993) indicates that brand image could be interpreted as brand association because brand image is composed of particular brand and information stored in consumer's memory so that the brand image has significant brand meanings. Brand association is anything which is deeply seated in customer's mind about the brand. If the brand is associated with something positive, so customers will relate your brand to being positive and then the chances of buying increases. But if the brand is associated with something negative, then customers will relate your brand to being negative and reduces the chance of buying. Brand association also presents whether the customer would expand to

other merchandise of the same brand (Lin Chien-Hsiung2011). For example, Tine produces both milk and yoghurt. Whether a milk customer will expand his or her consumption to yoghurt is brand association. Here in the below is figure 3.1 that helps us to better understanding of brand association:

**Figure 3.1 How to understand brand association (Akash C. Mathapati, 2014)**



### 3.2.2 Customer satisfaction

Cardozo (1965) first did the experimental study of customer satisfaction in 1965. Then after a lot of studies about customer satisfaction came out. There are two main viewpoints for customer satisfaction (Yang, 2006). One viewpoint considers customer satisfaction after the behavior that leads to the purchase. Howard and Sheth (1969) defined satisfaction as “the buyer’s cognitive state of being adequately or inadequately awarded for their sacrifices”. Oliver and Gerald (1981) suggested that the most epistemologically efficient explanation derives from Howard and Helson’s (1964) adaptation level theory, which suggests that judgments of newly perceived stimuli are affected by prior experience with the general class of objects and the discrepancy perceived between the new stimulus and previously determined stimulus levels.

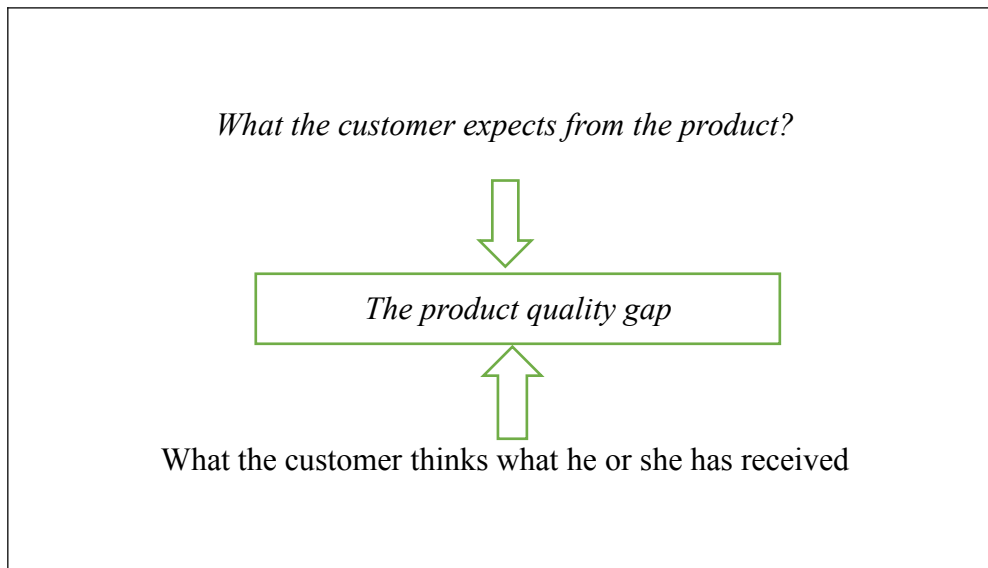
The other viewpoint defines customer satisfaction from the process angle, that is, researchers

define what customers do to become satisfied (Oliver, 1999). Hunt (1977, p.459) suggest that satisfaction is “an evaluation rendered that the experience was at least as good as it was supposed to be.” Engle and Black (1982, p.501) conceived satisfaction as “an evaluation that the chosen alternative is consistent with prior beliefs with respect to that alternative.” Tse and Wilton (1988) suggested that satisfaction is a general psychological phenomenon, describing the emotional state resulting from an evaluation of the perceived discrepancy between prior expectations and the actual performance of the product. The second definition about customer satisfaction includes the buyer’s experience and shows the development of the satisfaction, so it is more useful than the first one (Yang, 2006).

Huang (2000) later gave a detailed measurement for customer satisfaction: four dimensions in measuring customer satisfaction, as (1) customer expectation which reflected the expected product performance of customers whose previous consuming experiences before purchasing would become the expectation on product performance; (2) product performance, as a kind of comparison standard that customers would compare the actual product performance after purchasing with the expectation before purchasing; (3) disconfirmation, as a kind of major agent variable that a person’s expectation would be confirmed to correspond the product performance to his or her expectation, and (4) customer satisfaction, as an output after purchasing that, then the actual product performance was larger than or equal to the expectation before the act, the customer would feel satisfied. It can be clearly shown in the figure 3.2 below.

Yes, it is true that customers have an expectation for any products they buy before purchasing. If the actual product performance exceeds the expectation on the product, then customers would be very satisfied and this is a good experience. They will have the intention to continue with the product if they need again. If the actual product performance is just so so and equals to the expectation, it is hard to say whether they will try other similar products or continue with it. But if the actual product performance is awful and worse than the expectation, customers will certainly change to other substitute goods if they can reach them. So from all the above, we can see the importance of customer satisfaction on customers’ intention to consume.

**Figure 3.2 Product Quality Gap (Khyati, 2013)**



Fonvielle (Fonvielle, 1997) pointed out that, for sustainable management, businesses had no other alternatives but to enhance the customer satisfaction in such competitive market. So the customer satisfaction can provide an advantage for the brand, and a brand has to do its best to satisfy as many customers as it can to acquire the advantage.

### **3.2.3 Customer satisfaction and behavioral intentions**

A positive relationship between customer satisfaction and behavioral intentions has been well presented by many scholars. For example, Antreas et al. (2001) examine the direct effects of customer satisfaction on customers' behavioral responses. They argue that satisfied customers decide to stay with the existing service provider, engage in a positive word-of-mouth communication, and are unlikely to switch service providers. This argument is in line with Teo and Lin's (2001) study that customer satisfaction was positively correlated with re-patronage intentions and negatively correlated with negative word-of-mouth intentions. Many empirical studies confirm that overall customer satisfaction with a product or service is strongly associated with the behavioral intention to return to the same service provider (e.g. Armstrong and Seng, 2000; Hansenmark and Albinsson, 2004; Hellier et al., 2003). Moreover, Venkatesh et al. (2003) argue that when customers assess customer satisfaction to be high, they not only engage in repeat purchase but also reflect strong loyalty. Host and Knie-Anderson (2004) have examined that customer satisfaction has a direct positive effect on loyalty and willingness to recommend. Hence, re-patronage behavior depends on prior

satisfaction.

According to Washingtonian (2007), there are two ways in which satisfaction may affect behavioral intentions. First, given that the customer is satisfied, the satisfaction serves to narrow the variance of expectations. This in turn is likely to reduce uncertainty and provide cognitive economy in future choices, which may be important objectives. This is in agreement with the theory of consideration sets which states that a decrease in uncertainty might lower consumers' evaluative cost, which in turn increases perceived utility (Hauser and Wernerfelt, 1990). Second, given again that the customer is satisfied, the result is positive evaluation (Soderlund, 2003). Therefore, we assume a positive association between customer satisfaction and repurchase intentions.

However, the relationship between customer satisfaction and behavioral intentions has not reached an agreement yet. Bart et al. (1998), the link between satisfaction and behavioral intentions is not necessarily straightforward. Jones and Sasser (1995) argue that many customers say they are satisfied but buy elsewhere. Satisfaction is a necessary prerequisite for loyalty but it is not sufficient on its own to automatically lead to repeat purchase or brand loyalty (Bloemer and Kasper, 1995). Commitment to, and involvement with the service and the specific brand will also play a role (Alan, 2002). In addition, Eugene and Sullivan (1993) found the elasticity of repurchase intentions with respect to satisfaction to be lower for firms that provide high satisfaction which means when the degree of satisfaction is high, the repurchase intention will not increase with the degree of satisfaction.

Repurchase intentions is "the individual's judgment about buying again a designated service from the same company, taking into account his or her current situation and likely circumstances" (Hellier et al., 2003, p.1764). So from this definition, repurchase occurs when the customer buys the same product or service from the same company more than once. Intention of customers can be evaluated and assessed through customers' demand on her or his future goals, in order to repurchase goods and services (Shahrودي et al., 2014). Furthermore, Jones and Sasser (1995) pointed out (1) companies can acquire such information (i.e., the purpose of purchasing) while evaluate the level of customer satisfaction toward goods and services; (2) the customer repurchase intention can be evaluated at any time,

through making relationship with customer; (3) customer repurchase intention is a very good indicator to future behaviors.

Although there is a conflict of the relationship between customer satisfaction and repurchase intentions, in our case is the salmon export to China which is a simple and specific condition. Actually Norwegian salmon was first successful in Japan and became popular as Sashimi which is the speciality food in Japan and is welcomed by Chinese people. So Norwegian salmon in China mainland is mostly consumed as sashimi in restaurants and households. For food consumption, people may keep health, taste, price, nutrition and some other factors in mind which contribute to the satisfaction of the food. Norwegian salmon is famous for its fine quality and high nutrition which may satisfy consumers. Moreover before the political issue, the sales of salmon in China was great because it can satisfy people's needs. It is a simple consumption behavior. Therefore in salmon consumption, satisfaction is in a direct positive relationship with consumer repurchase intentions.

#### **3.2.4 Brand image and customer satisfaction**

Satisfied customers remain loyal with brand and dissatisfied ones choose another alternative brand, which creates positive relationship in customer satisfaction and brand loyalty. Moreover, Customer satisfaction is positively related with brand loyalty. On the other hand, several researches see the sights that customer satisfaction plays an effectual job between customers and organizations to enhancing and maintaining long term profitable relations (Haq and Amin, 2009). Customer satisfaction can also be accomplished by providing them a premium quality which is useful in customer loyalty and strengthening the overall reputation of the brand. A good reputation help improve the brand image and brand loyalty. Once a customer is satisfied with the product or service, he may have the intention to tell the good experience to their friends, families or even people they meet. Then it will be free advertisement and good reputation for the brand. So it is a virtuous circle for the brand. Good brand conquers customers by its products or services. Customer loyalty can explain as to why a customer would pick one brand over the other. Loyalty can be regarded as the highest degree of satisfaction because loyalty forms only when customers are satisfied for at least a period.

Satisfaction leads customers towards long term profitable relationship with the brand, it also gives value to brand and the word of mouth marketing technique can build good brand reputation (Hanif, 2010). Some researchers conceptualize corporate image as a multidimensional concept, and claim that its main dimensions are reputation and credibility (Grönroos, 1984; Lapierre, 1998), elements that may be applied to different contexts. Reputation is an asset of the brand equity (Delgado & Munuera, 2002) that represents a global assessment of the company over time (Gotsi & Wilson, 2001). On the other hand, the organization's credibility is an extremely important dimension in the assessment of services, due to their intangible nature and trust attributes (De Ruyter & Wetzels, 2000). According to Grönroos (1984), corporate image works as a filter that influences the perception of the operation of the company.

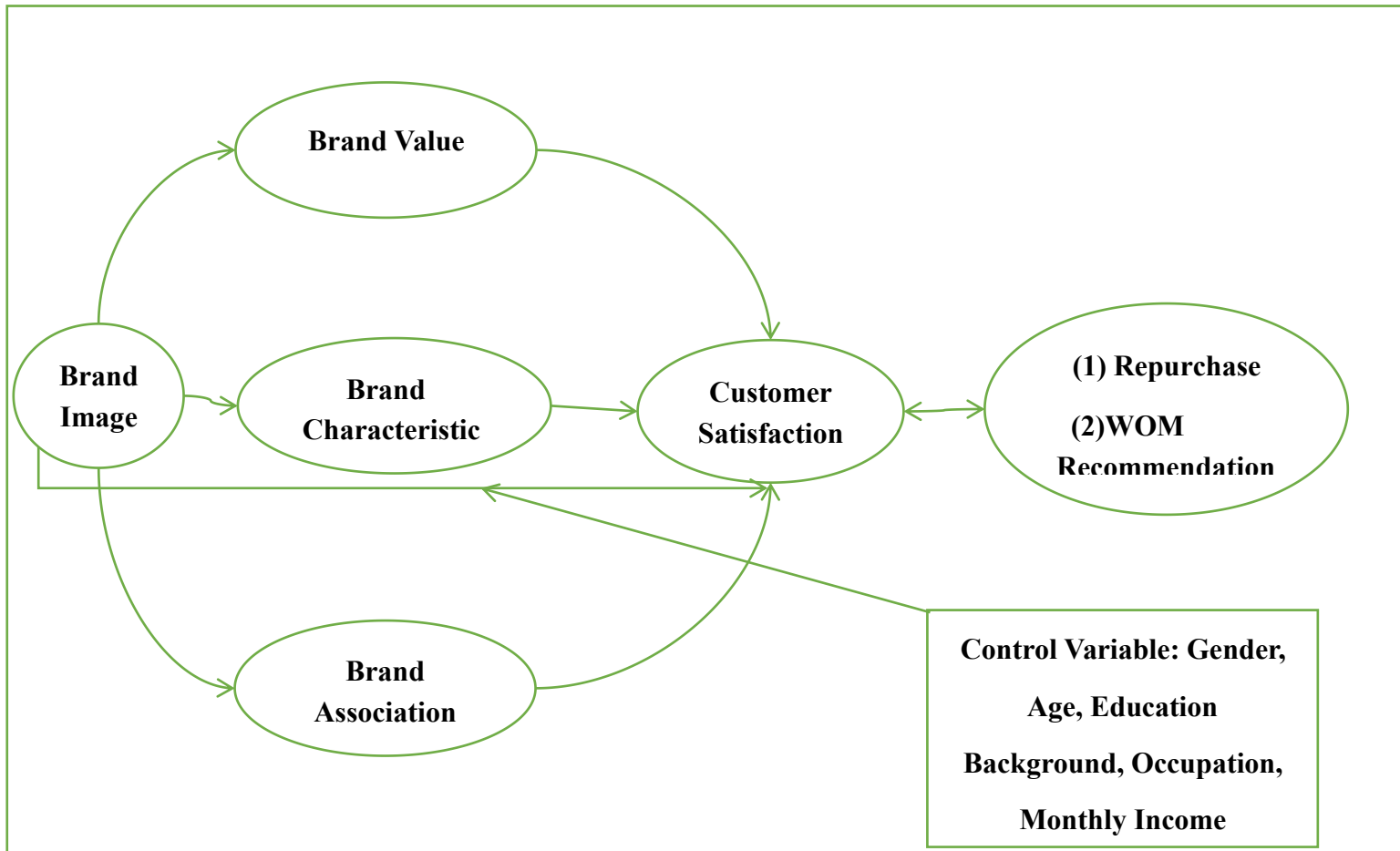
Kavita et al. (2013) stated that corporate image is consequently assumed to have an impact on customers' choice of company when service attributes are difficult to evaluate. And they also showed corporate image is established and developed in the consumers' mind through communication and experience. Meanwhile corporate image is believed to create a halo effect on customers' satisfaction judgment. When customers are satisfied with the services rendered, their attitude toward the company is improved. This attitude will then affect the consumers' satisfaction with the company. Corporate image has also served as an important factor that influence customer loyalty and repeat patronage (Andreassen & Lanseng, 1998). Chen (2008) considered that the measuring dimensions of customer satisfaction contained the satisfaction with professional level and customer interaction, and the overall customer satisfaction and brand image presented significant relation.

### **3.3 Research model**

The research model of this thesis is based on the theory of Aaker (1996) that brand image can be interpreted as three part, i.e. brand value, brand characteristic and brand association. The purpose of the thesis is to investigate whether there is positive relationship between brand image and customer satisfaction. So the overall research model is presented in figure 3.3.



**Figure 3.3 The overall research model of the thesis**



The model will be tested based on formulated hypotheses and theories. The separate influence of the three independent variables - brand value, brand characteristic and brand association on the dependent variable - customer satisfaction will be the major clue for the study. Repurchase and WOM recommendation are two factors that will be used as predictors for customer satisfaction. The influence of the independent demographic variables (age, gender, education, occupation and monthly income) on the relationship between brand image and customer satisfaction will also be studied in the thesis.

### **3.4 Relationship between the factors and corresponding hypotheses**

#### **3.4.1 The relationship between brand value and customer satisfaction**

According to Aaker (1996), brand value means the premium for the products or the products provide good value for the price. Brand value is also defined as the customer's overall

assessment of the utility of a product based on the perception of what is received and what is given (Zeithaml, 1988), which means a trade-off between the quality and benefits they receive in the product or service relative to the sacrifice they perceive in paying the price (Dodd, Monroe, & Grewal, 1991). That illustrates that even excellent quality can be regarded as poor value if it is too expensive to the customer (Rust and Oliver, 1994). Customers who perceive the sacrifices associated with the purchase are more than the benefits received are more likely to switch to rival brands (El-Adly et al., 2016). In other words, if customers think the product provides good value for the money, they would be more satisfied; if not, they would be unsatisfied and may increase the chance of turning to other brands.

So the following hypothesis is proposed:

**H1: Brand value positively influence customer satisfaction.**

### **3.4.2 The relationship between brand characteristic and customer satisfaction**

Brand characteristic is the personality of the brand. Today's customer has more power of understanding about the brand and they will buy the brand from specific product category if they feel that the product has right characteristics, quality and price (Zohaib et al., 2014). Expectations of performance represent consumers' perception of the most likely performance of a product or service (Kamal et al., 1996). The expectancy - disconfirmation paradigm has been the dominant theoretical approach for the studying consumer satisfaction with products and services (Cardozo, 1965; Day, 1977; Oliver, 1980). When the consumption of the product meets the expectation of the product, that is where the customer satisfaction comes from.

So the following hypothesis is proposed:

**H2: Brand characteristic positively influences customer satisfaction.**

### **3.4.3 The relationship between brand association and customer satisfaction**

Brand association would provide consumers with a purchasing reason, because most brand associations are related to brand attributes, the target consumer market, and the benefits that consumers need, so they form the foundation of brand loyalty and consumers' purchasing decisions (Len et al., 2007). Consequently, brand association plays a very important role in consumers' purchase decision making (Boisvert et al., 2011). Customer satisfaction and brand

association revealed notably positive relation (seyed et al., 2010). Satisfied customers would like to try to expand their consumption to other products of the same brand and talk others into the brand, from which a positive relation between customer satisfaction and brand association can be seen.

So the following hypothesis is proposed:

**H3: Brand association positively influence customer satisfaction.**

#### **3.4.4 The relationship between demographic variables and customer satisfaction**

Moderators are variables that affect the strength or direction of relationships between exogenous and endogenous variables; they divide “a focal independent variable into subgroups that establish its domains of maximal effectiveness in regard to a given dependent variable” (Kenny, 1986). Demographics have been cited in literature as influencers of customer satisfaction (Mburu, 2014). Studies on customer satisfaction indicated that younger generations and customers with higher educational background and higher income tended to have higher customer satisfaction (Day and Landon, 1977). Besides, gender has shown great differences in so many areas. So demographic factor gender will also be incorporated as moderators.

So the following hypotheses are proposed:

**H4: The relativity of brand image and customer satisfaction will show difference because of customer gender.**

**H5: The relativity of brand image and customer satisfaction will show difference because of customer age.**

**H6: The relativity of brand image and customer satisfaction will show difference because of customer education background.**

**H7: The relativity of brand image and customer satisfaction will show difference because of customer occupation.**

**H8: The relativity of brand image and customer satisfaction will show difference because of customer monthly income.**

### **3.5 Hypotheses summary**

Based on what is stated above, the three basic hypotheses are as follows:

Hypothesis 1:

H0: Brand value has no influence on customer satisfaction.

H1: Brand value has influence on customer satisfaction i.e. if the brand value of Norwegian salmon increases, the probability of customer satisfaction also increases.

Hypothesis 2:

H0: Brand characteristic has no influence on customer satisfaction.

H1: Brand characteristic has influence on customer satisfaction i.e. if the brand characteristic becomes better, the probability of customer satisfaction also increases.

Hypothesis 3:

H0: Brand association has no influence on customer satisfaction

H1: Brand association has influence on customer satisfaction i.e. if the brand association becomes better, the probability of customer satisfaction also increases.

Then the demographic hypotheses:

Hypothesis 4:

H0: The relativity of brand image and customer satisfaction will not show any difference because of customer gender

H1: The relativity of brand image and customer satisfaction will show significant difference because of customer gender.

Hypothesis 5:

H0: The relativity of brand image and customer satisfaction will present no difference because of customer age.

H1: The relativity of brand image and customer satisfaction will present significant difference because of customer age.

Hypothesis 6:

H0: The relativity of brand image and customer satisfaction will present no difference because of customer occupation.

H1: The relativity of brand image and customer satisfaction will present significance difference because of customer occupation.

Hypothesis7:

H0: The relativity of brand image and customer satisfaction will present no difference because of customer educational background

H1:The relativity of brand image and customer satisfaction will present significance difference because of customer educational background.

Hypothesis 8:

H0: The relativity of brand image and customer satisfaction will present no difference because of customer monthly income.

H1:The relativity of brand image and customer satisfaction will present significance difference because of customer monthly income.

Hypotheses from H1 to H8 are inspired by Lin Chien-Hsiung (2011).

## **Chapter 4 Research Methodology**

### **4.1 Introduction**

The previous chapter presented the overall research model and the eight research hypotheses. In this chapter, the research methodology will be discussed. Philosophical position, the research design of the study, empirical setting and geographical location of the study, data collection, measurement of constructs will be depicted one by one in this chapter. In the end, there will be a summary for the chapter.

### **4.2 Philosophical position**

Ontology and epistemology, positivism and interpretivism are two pair of paradigms in social science. Ontology is the nature of reality (Hudson and Ozanne, 1988) and the epistemology can be defined as the relationship between the researcher and the reality (Carson et al., 2001) or how this reality is inquired. Ontology keeps the reality and fact detached from human minds, while epistemology focuses on the way to capture the reality which means if you use different ways to study the reality, you may get various realities. Positivism contends that these realities are meaningful as long as they are observable, replicable and verifiable (Anderson, 1998). Positivism emphasizes the existence of “common reality on which people can agree” (Newman & Benz, 1998, p.2). Unlike positivists, interpretivists are concerned with “understanding the subjective world of the human experience” (Cohen et al, 2000, p.22). Interpretivist believes that behaviors can be understood by researchers who are involved with the activities and context. So interpretivist concentrates on qualitative rather than quantitative aspects or relationships (Wallen & Fraenkel, 2001) and positivist is more likely to be associated with quantitative methods (Punch, 2013). The philosophical position of the thesis is positivist epistemology. For the positivist epistemology, objective reality exists beyond the human mind (Crotty, 1998) which means that researchers have to be detached from the reality under investigation and the reality will be explained by means of objective observation, verification and measurement (Anderson, 1998). The work of the study is based on Aaker’s (1996) brand image model. The identified variables are to be measured based on the responses

from data collection procedure. This study uses quantitative research with applied statistical analysis.

### 4.3 Research design

The function of research design is to ensure that the obtained evidence enables the researcher to answer the initial questions (David de Vaus, 2001). The research aims to investigate the relationship between independent variables (brand value, brand characteristic, brand association, brand image) and dependent variable (customer satisfaction), in addition to five demographic variables (age, gender, occupation, monthly income, education background). After making clear what is going to be studied, eight hypotheses are listed and going to be tested after data collection. The study uses survey (questionnaire) to collect data about customer satisfaction about Norwegian salmon in China mainland.

### 4.4 Empirical setting and geographical location of the study

The fieldwork of the master thesis research was mainly conducted in one of the “Xinbao Norwegian salmon” chain store in Shenzhen city, which is located in Guangdong province in the south part of China.

**Figure 4.1 The city of Shenzhen-Location (wikipedia, 2017)**



Shenzhen is a major city in Guangdong province in China and one of the five wealthiest cities in China (Chris Harty, 2014). The city is located just north of Hongkong Special Administrative Region and holds sub-provincial administrative status, with powers slightly less than a province (wikipedia, 2017). Before Shenzhen was made a special economic zone in 1980, the city had a population of just 332900 people; but in 2016 the city had a population of 12357938, which made the city the 7th largest one in China (Country digest, 2016). Shenzhen is of great significance in Chinese economy. It is the largest financial and trade center in southern part of China and also the home of many tech companies, which makes it indispensable for the overall future of the Chinese economy. Shenzhen is also one of the biggest destinations for foreign investment, with more than \$ 30 billion being pumped into the city since 1979 (Chris, 2014). Besides, Shenzhen is a port city. The port of Shenzhen is a collective name of ports along parts of the coastline of Shenzhen. These ports as a whole form one of the busiest and fastest growing container ports in the world (Wikepedia, 2017).

#### **4.5 Data collection**

Primary data and secondary data are two types of data that are used in the study. Primary data is collected by questionnaire designed for the study, so the data is specific for the study. The questionnaire is available both in English and Chinese. I spread the questionnaire through Wechat (a Chinese social software) and I also asked my sister to go to a Japanese restaurant to collect data because Norwegian salmon is popular among Japanese sushi and sashimi. The total number of questionnaire spread out was 341 and 201 responses were collected. The secondary data is the data collected for other purposes than the present research but still useful for the undergoing research (Schiffman et al., 2008). The secondary data is available online and helps decide what you really want to write about, provides useful information along with your writing process like literature review and industry review, inspired ideas about hypotheses and questionnaire. So the secondary data can be more time-consuming and costly than the primary data (Schiffman et al., 2008), but it is a necessity for a study.



## **4.6 Measurement of the constructs**

The thesis uses the Likert scale to measure the constructs of the study. Likert (1932) developed the principle of measuring attitudes by asking people to respond to a series of statements about a topic, in terms of the extent to which they agree with them. It is a popular way for quantitative research. The measurement scales items for the constructs in this study are mostly adopted from previous scientific research. The respondents in this study are asked to choose a degree for agreement or disagreement from 1 to 5.

### **4.6.1 Brand value**

The easiest way to understand brand value (perceived value) is the definition by Zeithaml (1988) that perceived value is the customer's overall assessment of the utility of a product based on the perception of what is received and what is given. Aaker (1996) wrote about "good value for the money", "good value over competitors" and "price premium" for measuring brand value. So relevant questions were asked in the questionnaire like "Norwegian salmon provides good value for the price and good value over competitors". Four questions about brand value were asked using Likert scale ranging from 1 (Strongly disagree) to 5 (Strongly agree). But for the question "the Norwegian salmon is expensive", the Likert scale is from 1 (Strongly agree) to 5 (Strongly disagree.)

### **4.6.2 Brand characteristic**

For food consumption, the characteristic is more likely to be about taste, safety, nutrition. Somo and Naz (2015) asked questions about "healthy", "good taste", "higher quality level", "consumption safety" in their questionnaire. So in this part, I adopted 5 questions about brand characteristic from their questionnaire and the adapted questions are "It is healthy to consume Norwegian salmon", "I think that Norwegian salmon has a good taste", "Salmon from Norway has a higher quality level than salmon from other countries (for example: Alaska, Chile, Scotland)", "Eating Norwegian salmon prevents some disease due to its nutrition and micro-minerals", "Eating Norwegian salmon is safe". The respondents were asked to choose from 1 (Strongly disagree) to 5 (Strongly agree) in the Linkert scale.

#### **4.6.3 Brand association**

Brand association would provide consumers with a purchasing reason, because most brand associations are related to brand attributes, the target consumer market, and the benefits that consumers need, so that they form the foundation of brand loyalty and consumers' purchasing decisions (Len et al., 2007). Three questions were asked under this construct are that "I trust the Norwegian brand", "I can easily recall Norwegian salmon", "I will expand the Norwegian salmon consumption to other Norwegian products". Linkert scale from 1 (Strongly disagree) to 5 (Strongly agree).

#### **4.6.4 Customer satisfaction**

Customer satisfaction is defined as "people's feeling of pleasure or disappointment which resulted from comparing a product's perceived performance or outcome against his/her expectations "(Kotler and Keller, 2006, p.144). Satisfaction can influence the purchase decision and recommendation (Sun et al., 2013). The five scales measuring customer satisfaction are adapted from Hellier et al. (2003), Timothy et al. (2007) and Tser-Yieth Chen et al. (2012). Questions are that "Overall, I am very satisfied with the Norwegian salmon brand", "I think Norwegian salmon meets my expectation about salmon", "Norwegian salmon meets its reputation", "I am pleased that I purchase Norwegian salmon", "Norwegian salmon is my favorite brand". The construct is measured on a 5 Likert scale from 1 (Strongly disagree) to 5 (Strongly agree).

#### **4.6.5 Repurchase intention**

Most of consumers' purchase behaviors are potential repeat purchases (Peyot and Van Doren, 1994). Customers buy similar products repeatedly from similar sellers, and most purchases represent a series of events rather than a single isolated event (Eliasaph, 2016). So customers would like to buy similar products repeatedly from similar sellers when they are satisfied with the products. So the three questions in this part are "I am willing to purchase Norwegian salmon again", "If being asked to choose again, I'll choose Norwegian salmon", "I won't consider salmon in other brands.".The questions in this part are adapted from Han-Shen Chen and Tsuifang Hsieh (2011). The construct is measured on a 5 Likert scale from 1 (Strongly disagree) to 5 (Strongly agree).

#### **4.6.6 WOM recommendation**

WOM of mouth communication occurs anywhere at any time in our life. We do a lot of talking with others daily, talking about products or services we know about. WOM communication is driven by customer needs and it grows exponentially, for example, one tells a story to five people, they each tell it to five more, who tell it to five more after that (Cengiz, 2007). Katz and Lazar (1955) found positive WOM is more effective than newspaper, magazine advertising and personal selling. So it is a most powerful and profound way for a brand going into households. The questions are “I spoke of Norwegian salmon to many individuals.”, “I always say positive things about Norwegian salmon to others.”, “I strongly recommend people buy Norwegian salmon when choosing salmon.”, and are adapted from (Isabelle et al., 2010). The construct is measured on a 5 Likert scale from 1 (Strongly disagree) to 5 (Strongly agree).

#### **4.6.7 Control variables**

In this study, apart from the independent and dependent variables, there are five control variables: gender, age, education background, occupation, monthly income.

##### **Gender:**

There are always great differences between the female and male. Gender is asked by one single question here: Please indicate your gender.

##### **Age:**

Homburg and Giering (2001) pointed that younger customer’s purchase behavior is strongly influenced by satisfaction. A single question is used in measuring age: Please indicate your age.

##### **Education background:**

People with higher education may be satisfied more easily. The one question for education background is “what is your education background”.

##### **Occupation:**

Occupation is measured by the question “Please indicate your occupation”.

**Monthly income:**

The income may influence the customer satisfaction. This is measured by one single question: Please indicate your monthly income.

**4.7 Summary**

The study uses quantitative research involving applied statistical analysis. The research design in this study involves online questionnaires and face-to-face questionnaires. The total sample consists of 201 respondents who are all from China. The questionnaire is available in English and Chinese simplified. Both primary and secondary data were used. The questions used to measure the constructs were adapted from previous research using Likert scales developed by Renis Likert in 1932. The next chapter discuss measurement assessment and data validation.

## **Chapter 5 Measurement Assessments and Data Validation**

### **5.1 Introduction**

In the previous chapter, the research methodology and the measurement of variables were discussed. In this chapter, a preliminary data examination is presented, which include the data screening and cleaning, descriptive statistics, factor analysis, reliability and validity test.

### **5.2 Data screening and cleaning**

It is essential to check and correct the data set for errors (i.e. missing data and outliers) before starting to analyze the data, since these errors will distort greatly on the later statistical analyses. Missing data can easily occur on the condition that respondents omit the questions or researchers neglect the data in data entry. As what Pallant (2013) said, it is rare that a complete data can be obtained from every case when doing research with human beings. After examination for missing data, respondent number 52 (male) and 62 (female) were found missing information with age. So there is no evidence to show whether male or female has the potential to keep their age as private information. Besides the IBM SPSS statistical procedures offer researchers the choice to handle the missing data if the researcher wants to keep it for further research. When including variable in the statistical analysis, the researcher can choose to “exclude case pairwise option2, which will exclude the person only if they are missing the information required for the specific analysis, but in the analysis for which the person has the necessary information, they will be included (Pallant, 2013, p.61). So the author decides to keep all the respondents in this research, thus all the 201 surveys are kept for further analysis. Outliers are extreme responses that are out-of-range and are considered implausible. Outliers may influence the results of a multivariate analysis (Hair et al., 2010, p.35). After inspecting the data for outliers with IBM SPSS, no outlier is found. Data screening and cleaning are important to ensure that the results obtained from the regression or other multivariate analyses are truly valid and accurate (Hair et al., 2010, p.35). For this study, regression analysis is used, so it is important to assess the assumptions of normality, homoscedasticity, independence of errors and linearity (Hair et al., 2010, p.35).

## 5.3 Descriptive statistics

### 5.3.1 The sample

The sample consists of 201 respondents which are made up of 127 females (63.2%) and 74 males (36.8%), so women are the majority of the respondents. Regarding the age, the majority are in the 18-24 group and 25-30 group, taking up 53.3% and 35.7% respectively, so the age of the sample is relatively young. And two respondents did not give information about their age, probably they just omitted it. Most of the sample are students and working people, taking up about 94.5% of the whole. More interestingly, for the education background part, no one belongs to the primary school group and the majority (56.2%) are in the bachelor group, followed by the Master or higher group which is 22.4%. It seems that most of the sample are well-educated people. For the monthly income, this is the part that all groups are distributed the most evenly: the largest number is the 2000-5000 (RMB) group and the smallest number is the >10000 (RMB) group, with 38.8% and 14.9% respectively. The table 5.1 below depicts the socio-demographic information of the sample. The descriptive statistics of these socio-demographic variables were carried out using SPSS (see Appendix 1).

**Table 5.1 Socio-demographic information**

Gender	Male	63.2%	Age	<18	0.5%
	Female	36.8%		18-24	53.3%
				25-30	35.7%
Occupation	Student	37.3%		31-45	8.0%
	Working	57.2%		>45	2.5%
	Retired	0.5%	Education background	Secondary school	6.5%
	Other	5.0%		High school	14.9%
Monthly income (RMB)	<2000	23.9%		Bachelor	56.2%
	2000-5000	38.8%		Master or higher	22.4%
	5000-10000	22.4%			
	>10000	14.9%			

### 5.3.2 Descriptive statistics of univariate and multivariate variables

The descriptive statistics of brand value, brand characteristic, brand association, customer satisfaction, repurchase intention and WOM recommendation are presented in the following table 5.2 and table 5.3. Table 5.2 presents the univariate descriptive analysis, that is the

analysis of each of the terms used in the questionnaire. While in the table 5.3, it is the multivariate descriptive analysis with the mean score for each construct. All the question items had Likert scale with a minimum value of one for “ Strongly disagree” and a maximum value of five for “Strongly agree” except that the question “ Norwegian salmon is expensive” has a minimum value of one for “Strongly agree” and a maximum value of five for “Strongly disagree”.

**Table 5.2 Univariate descriptive statistics**

Items		N	Min	Max	Mean	SD
BVALUE01	Norwegian salmon is expensive.	201	1	5	2,54	0,741
BVALUE02	Norwegian salmon provides good value for the price.	201	1	5	3,39	0,623
BVALUE03	Norwegian salmon provides good value over competitors.	201	1	5	3,29	0,699
BVALUE04	I am willing to pay a premium for Norwegian salmon.	201	1	5	2,86	0,891
BCHARA01	It is healthy to consume Norwegian salmon.	201	2	5	3,74	0,619
BCHARA02	I think that Norwegian salmon has a good taste.	201	3	5	3,91	0,567
BCHARA03	Salmon from Norway has a higher quality level than salmon from other countries (for example: Alaska, Chile, Scotland)	201	1	5	3,43	0,668
BCHARA04	Eating Norwegian salmon prevents some disease due to its nutrition and micro-minerals	201	2	5	3,5	0,672
BCHARA05	Eating Norwegian salmon is safe.	201	2	5	3,63	0,696
BASSOC01	I trust the Norwegian salmon brand.	201	2	5	3,67	0,694
BASSOC02	When talking about salmon, I can easily recall Norwegian salmon.	201	2	5	3,66	0,809
BASSOC03	I will expand the Norwegian salmon consumption to other Norwegian products.	201	1	5	3,16	0,863
CSATIS01	Overall, I am very satisfied with the Norwegian salmon brand.	201	1	5	3,72	0,665
CSATIS02	Norwegian salmon is my favorite brand.	201	1	5	3,27	0,741
CSATIS03	I think Norwegian salmon meets my expectation about salmon.	201	1	5	3,63	0,659
CSATIS04	Norwegian salmon meets its reputation.	201	1	5	3,76	0,585
CSATIS05	I am pleased that I purchase Norwegian salmon.	201	1	5	3,62	0,637
REINTE01	I am willing to purchase Norwegian salmon again.	201	1	5	3,63	0,682
REINTE02	If being asked to choose again, I'll choose Norwegian salmon.	201	1	5	3,6	0,671
REINTE03	I won't consider salmon in other brands.	201	1	5	2,76	0,846
WOMREC01	I spoke of Norwegian salmon to many individuals.	201	1	5	3,23	0,831
WOMREC02	I always say positive things about Norwegian salmon to others.	201	2	5	3,22	0,782
WOMREC03	I strongly recommend people buy Norwegian salmon when choosing salmon.	201	1	5	3,44	0,767

From table 5.2, the mean value ranges from 2.54 to 3.91 and the standard deviation ranges from 0.567 to 0.891. The Likert scale in this thesis is from 1 to 5, but from the table 5.2, some of which have the minimum value of 2 or 3, which means that no one answered 1 or 2. For the question “ I think that Norwegian salmon has a good taste”, the minimum response value is three and the maximum value is five, meaning that no one dislikes the taste of Norwegian salmon. Besides, it is easy to find that the highest mean score 3.91 is for the question “I think that Norwegian salmon has a good taste”. Meanwhile, the SD for the item is the smallest among all the items. The high mean score and the small SD together mean that the score of responses are concentrated around the high average level. So most people enjoy the taste of Norwegian salmon. The question ‘The Norwegian salmon is expensive’ has the lowest mean

score of 2.54, followed by the question “I won’t consider salmon in other brands” with the mean score of 2.76, which means that the price of Norwegian salmon is expensive in their minds and they have no loyalty for Norwegian salmon.

**Table 5.3 Multivariate descriptive statistics**

	Factor	N	Min	Max	Mean	SD
BVALUE	Brand value	201	1	4.75	3.0199	0.5021
BCHARA	Brand characteristic	201	2	5	3.6438	0.45351
BASSOC	Brand association	201	2	5	3.4975	0.59453
CSATIS	Customer satisfction	201	1	5	3.602	0.54111
REINTE	Repurchase intention	201	1	5	3.3284	0.61597
WOMREC	WOM recommendation	201	1.67	5	3.2985	0.70899

Table 5.3 provides the descriptive statistics information for each construct. From the table, the mean for each construct ranges from 3.0199 to 3.6438 and the standard deviation ranges from 0.45351 to 0.70899. Brand characteristic has the highest mean score of 3.6438, which means that consumers agree to most of its positive characteristics. Brand value has the lowest mean score of 3.0199, which shows that consumers think it is expensive to consume Norwegian salmon.

**5.3.3 Assessing the normality**

As Pallant (2013) wrote, skewness and kurtosis (see Appendix 2) describe if the distribution of the data is normal. Skewness indicates symmetry in the distribution and kurtosis indicates the “peakness” (Pallant, 2013, p.59). If the distribution of the data would be perfectly normal, the value of skewness would be 0 sharply. The normality assessment of the distribution is sensitive to large numbers (more than 200), and is uncommon to have a perfect distribution in reality (Pallant, 2013). The values for symmetry and kurtosis between -2 and 2 are considered acceptable when proving normal univariate distribution (George, 2010). In this thesis, the values of skewness range from -0.508 to 0.639, which are in the acceptable area for assessing the symmetry. And the kurtosis values are from -0.753 to 1.721, which are also in the acceptable area for assessing the kurtosis. Besides, Kline (2005) suggested kurtosis with a value greater than 10, may indicate a problem and a value above 20 indicates a serious problem with kurtosis. So the normality assumption is not violated here.



## 5.4 Reliability of the scales

This section discusses the reliability of the scales used in the thesis. Cronbach (1951) stated the importance of reliability that any research based on measurement should be anxious with the accuracy or dependability, which is usually called the reliability of measurement. There are two types of methods for testing the reliability of the scale: test-retest reliability and internal consistency (Pallant, 2013). Test-retest reliability method measures between two periods on the same sample. Internal consistency is the most widely used method on the basis of Cronbach alpha, illustrating the degree to which the items made up of the scale measure the same underlying phenomenon.

Before assessing the reliability, it is necessary to do factor analysis. Factor analysis is not designed to test any hypotheses or tell you whether one group is significantly different from another (Pallant, 2013). It is just a data reduction technique in SPSS. According to Pallant (2013), there are two kinds of factor analysis: Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA). The difference between CFA and EFA is that EFA occurs when a researcher runs SPSS software and the factors are being determined by statistical results rather than from theory (Hair et al., 2010). In this thesis EFA method is chosen. Two issues have to be taken into consideration in determining whether the data is suitable for factor analysis: one is the sample size, the other is the strength of the relationship among the variables (Pallant, 2010). As for the sample size, researchers have not reached an agreement, but Pallant (2013) suggested the sample size is not less than 150. The sample size of the study is 201 that has reached Pallant's standard. The strength of the relationship is measured by Kaiser-Meyer-Olkin (KMO) and the Bartlett's Test of Sphericity. The significance of Bartlett's test of sphericity should be smaller than 0.05 to be considered appropriate; the KMO index ranges from 0 to 1, with 0.6 suggested as minimum value for a good factor analysis (Pallant, 2013, p.190). The KMO and Bartlett's test are done by SPSS and the result is presented in table 5.4. The KMO is 0.913, larger than 0.6 and Bartlett's Test of Sphericity significance is 0.00, smaller than 0.05, both indicating an appropriate factor analysis data.

**Table 5.4 KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,913
Bartlett's Test of Sphericity	Approx. Chi-Square	2746,758
	df	253
	Sig.	,000

In SPSS software, the exploratory factor was first run with 23 items. Using Kaiser's criterion, only components in the Total variance explained table (see Appendix 3b) that have an eigenvalue of 1 or more will be inspected later. From the Total variance explained table, five items have an eigenvalue greater than one and the five variables explained 64.814% of the variance (see Cumulative % column in Appendix 3b). Often the Kaiser' criterion is used together with the Scree plot. From the Scree plot (see in Appendix 3c), three components are suggested to be extracted. Two communality values smaller than 0.5 are also removed for further analysis and also four factors with small loading are removed. So six components are extracted from the original data. The results from the factor analysis is presented in the table 5.5 below.

**Table 5.5 Results from Rotated Component Matrix**

Components	Loadings
<i>Brand value</i>	
Norwegian salmon provides good value for the price.	0.895
Norwegian salmon provides good value over competitors.	0.668
<i>Brand characteristic</i>	
I think that Norwegian salmon has a good taste.	0.738
Salmon from Norway has a higher quality level than salmon from other countries (for example: Alaska, Chile, Scotland)	0.687
Eating Norwegian salmon prevents some disease due to its nutrition and micro-minerals	0.642
Eating Norwegian salmon is safe	0.636
<i>Brand association</i>	
I trust the Norwegian salmon brand.	0.772
When talking about salmon, I can easily recall Norwegian salmon.	0.688
<i>Customer satisfaction</i>	
Overall, I am very satisfied with the Norwegian salmon brand.	0.771
I think Norwegian salmon meets my expectation about salmon.	0.853
Norwegian salmon meets its reputation.	0.83
I am pleased that I purchase Norwegian salmon	0.746
<i>Repurchase intention</i>	
I am willing to purchase Norwegian salmon again.	0.924
If being asked to choose again, I'll choose Norwegian salmon.	0.935
<i>WOM recommendation</i>	
I spoke of Norwegian salmon to many individuals.	0.797
I always say positive things about Norwegian salmon to others.	0.924
I strongly recommend people buy Norwegian salmon when choosing salmon.	0.79

Extraction method: Maximum likelihood extraction method

The factor, that emerged after the exploratory factor analysis, are as follows:

1) Brand value is made of 2 variables, 2) Brand characteristic is made of 4 variables, 3) Brand association is made of 2 variables, 4) Customer satisfaction is made of 4 variables, 5) Repurchase intention is made of 2 variables, 6) WOM recommendation is made of 3 variables.

After the factor analysis, the reliability is going to be tested. In this thesis, the internal consistency method with Cronbach alpha coefficient is used since Cronbach alpha coefficient is the most commonly used one for the internal consistency method. Internal consistency describes that all items in a construct measures the same concept and they are connected to the inter-relatedness of the item in a test or the degree to which the items that make up the

scale “hang together” (Tavakol et al., 2011). An instrument cannot be valid unless it is reliable (Tavakol et al., 2011). So it is necessary to test the reliability before test of validity. Ideally, the coefficient of Cronbach’s alpha for a scale should be above 0.7 (Pallant, 2013, p.101). The following table 5.6 presents the Cronbach’s alpha coefficient for all the constructs. And the result of reliability test are presented in the Appendix 4.

**Table 5.6 Results from the reliability analysis**

Constructs	Items	No. of Items	Cronbach's alpha
Brand value	BVALUE02,03	2	0.727
Brand characteristic	BCHARAC02,03,04,05	4	0.704
Brand association	BASSOC01,02	2	0.689
Customer satisfaction	CSATIS01,03,04,05	4	0.875
Repurchase intention	REINTE01,02	2	0.927
WOM recommendation	WOMREC01,02,03	3	0.873

From the table 5.5, almost all Cronbach’s alpha are greater than 0.7 except for Brand association which is 0.689 and is close to 0.7. According to Pallant (2013, p.101), almost all indicators are designated an internal consistency greater than 0.7. So the reliability test is passed.

### **5.5 Convergent and discriminant validity**

According to Hair et al. (2010), convergent validity refers to the extent to which two indicators of the same concept are correlated, sharing a high variance. High convergence among the measures indicates that they measure its predetermined concept (Hair, 2010). The convergent validity of this study is assessed through the loadings and cross-loadings in the the EFA that has been done just now. In table 5.5 the factor loading for each construct shares a high variance in common, which confirms the convergent validity of the study.

The discriminant validity examines to what degree two constructs are different from each other. To assess discriminant validity, the test is done by comparing the average variance

extracted (AVE) for any two constructs with the square correlation estimate between two constructs (Hutcheson et al., 1999). AVE should be higher than the squared correlation estimate because a construct should better describe itself than other constructs. If the test is passed, then there is an excellent evidence of discriminant validity (Hair et al, 2010) . AVE first sums the square of the factor loading and then is divided by the number of variables. For example, from the table 5.5, the AVE of brand value is  $(0.895*0.895+0.668*0.668)/2=0.624$ . The shared variance between constructs are the square of the correlations. Each construct is measured by adding the value of the variables belong to the construct, thus for example total brand value which adds up the value of BVALUE 02 and BVALUE 03. The correlations are presented in table 5.7. So the shared variance between brand value and brand characteristic is  $0.508*0.508=0.258$ . After calculating the AVE and the shared variance between constructs, then comes the result for discriminant validity. For example, the AVE of brand value is 0.624 and the AVE for brand characteristic is 0.458. The shared variance between brand value and brand characteristic is 0.258 ( $0.508*0.508$ ) which is smaller than both brand value and brand characteristic. So the discriminant validity is established between the two constructs. The AVE is greater than the shared variance for each construct form table 5.8, thus the discriminant validity is confirmed.

**Table 5.7 The correlation between constructs**

Factor	1	2	3	4	5	6
Brand value (1)	1	0.508	0.383	0.474	0.52	0.469
Brand characteristic (2)	0.508	1	0.62	0.666	0.636	0.57
Brand association (3)	0.383	0.62	1	0.67	0.575	0.636
Customer satisfaction (4)	0.474	0.666	0.67	1	0.787	0.662
Repurchase intention (5)	0.52	0.636	0.575	0.787	1	0.631
WOM recommendaton (6)	0.469	0.57	0.636	0.662	0.631	1

**Table 5.8 Discriminant validity**

Factor	1	2	3	4	5	6
Brand value (1)	1	0.258	0.146	0.224	0.27	0.219
Brand characteristic (2)		1	0.384	0.443	0.404	0.324
Brand association (3)			1	0.448	0.33	0.404
Customer satisfaction (4)				1	0.619	0.438
Repurchase intention (5)					1	0.398
WOM recommendaton (6)						1
AVE	0.624	0.458	0.535	0.642	0.864	0.704

## **5.6 Summary**

The first step in this chapter is data screening, and the result from it was two missing data for age. However their data were still kept for further analysis because they may just ignore the question and have full information for other parts. The sample consists of 201 respondents in which 63.2% are females and 36.8% are males. Norwegian salmon seems to behavior best in its taste because it has the highest score of mean value 3.91 and most of the respondents think Norwegian salmon is expensive. After the factor analysis, 5 variables are reduced for further analysis. The reliability using the Cronbach' Alpha coefficient for internal consistency: almost all the coefficient for each construct is higher than 0.7. Finally the convergent and discriminant validity are confirmed.

## **Chapter 6 Data analysis and empirical findings**

### **6.1 Introduction**

In the previous chapter, data screening and cleaning, descriptive analysis, reliability and validity test were discussed. In this chapter, the correlations and multiple regression for constructs, correlation matrix and multiple regression analysis, comparison of responses by demographic factors and hypothesis testing are studied.

### **6.2 Correlations and multiple regression for constructs**

In this thesis, five correlations and one multiple regression are going to be analyzed by SPSS. The five correlations are: (1) the correlation between brand value and customer satisfaction; (2) the correlation between brand characteristic and customer satisfaction; (3) the correlation between brand association and customer satisfaction; (4) the correlation between repurchase intention and customer satisfaction; (5) the correlation between WOM recommendation and customer satisfaction. Brand value, brand characteristic and brand association together makes up brand image. So the correlations of (1), (2), (3) are actually the correlation between brand image and customer satisfaction. Besides, the correlations of (1), (2), (3) are going to be compared for different demographic groups, for example, the relationship between brand value and customer satisfaction for females and males separately. Five demographic variables are included in this thesis: gender, age, education background, occupation and monthly income. These demographic variables are used to test the hypothesis 4 to hypothesis 8.

The one multiple regression is the regression between customer satisfaction and brand value, brand characteristic, brand association: customer satisfaction as the dependent variable, brand value, brand characteristic and brand association as independent variables to account customer satisfaction. Both the correlations (1), (2), (3) and the multiple regression analysis are used to test the hypothesis 1 to hypothesis 3.

### 6.3 Correlation matrix and multiple regression analysis

The correlation and multiple regression results from SPSS are presented in the Appendix 5 and the following table 6.1 shows the correlation coefficients between all other constructs and customer satisfaction.

**Table 6.1 Correlation coefficient table**

Factor	Brand value	Brand characteristic	Brand association	Repurchase intention	WOM recommendation
Customer satisfaction	0.474	0.666	0.67	0.787	0.662

Cohen (1988) suggested the following guideline for the strength of Pearson correlation:

$r = 0.1$ to $0.29$ or $r = -0.10$ to $-0.29$	small
$r = 0.3$ to $0.49$ or $r = -0.30$ to $-0.49$	medium
$r = 0.5$ to $1.0$ or $r = -0.50$ to $-1.0$	large

According to his guideline, the strength of the correlation coefficient (0.474) between brand value and customer satisfaction is medium, suggesting a medium positive relationship between brand value and customer satisfaction. And for the rest coefficients which are larger than 0.6, suggest quite a strong positive relationship between them. Especially the coefficient between repurchase intention and customer satisfaction reaches 0.787, which is the largest coefficient and suggests the strongest positive relationship with customer satisfaction.

In the multiple regression, customer satisfaction as the dependent variable, brand value, brand characteristic and brand association as the independent variables. The results of multiple regression is in Appendix 5f and the table 6.2 lists some of the useful information. The tolerance and VIF item is used to exam multicollinearity. The VIF values are less than 10 and the tolerance values are above 0.1, which together mean that the multicollinearity assumptions



are not violated. The adjusted R square is 0.567 which means that the model can explain 56.7 percent of the variance in customer satisfaction. From the standardized coefficient item, total brand association has the largest beta value 0.402 and the brand value has the lowest beta value 0.147, which means that brand association makes the largest and positive contribution in explaining customer satisfaction and brand value makes the lowest contribution in explaining customer satisfaction. Meanwhile, brand characteristic can better explain customer satisfaction than brand value, but not so good as brand value. For the sig. Item, the significance level of the four independent variables are smaller than 0.05, which means that all of the variables make a unique contribution in predicting customer satisfaction.

**Table 6.2 Regression analysis results**

Linear Multiple Regression Model	Independent variables	Standardized coefficient (beta)	t-value	Sig.	Tolerance (VIF)
R Square =0.567, adjusted R Square= 0.561,F=86.063	b0 Constant		2.915	0.004	
	b1 TBVALUE	0.147	2.679	0.008	0.735 (1.361)
	b2 TBCHARA	0.343	5.326	0.000	0.530 (1.886)
	b3 TBASSOC	0.402	6.695	0.000	0.610 (1.640)

#### 6.4 Comparison of responses by demographic factors

For the demographic factors: gender, age, education background, occupation, monthly income in this thesis, their effects on the relationship between brand image and customer satisfaction are investigated by comparing the correlation coefficients for several different groups. The correlation coefficients for different groups are presented in Appendix 5g-5k. The way to compare the correlation coefficients is first raised by Fisher (1921). He transformed correlation coefficient ( $r_i$ ) and the group size to a standard score ( $z_i$ ), and then used an equation to calculate  $z_{obs}$ . If the  $z_{obs}$  obtained was between -1.96 and +1.96, then there is not a statistically significant difference between the two correlation coefficients. Besides if the

significance level is larger than 0.05, then there is no evidence to say a significant difference between the correlation coefficients. But here the groups are more than two in age, education background, occupation and monthly income. Then it is difficult to calculate by hand, so I find a calculate link online to help do the calculation (<https://home.ubalt.edu/ntsbarsh/Business-stat/otherapplets/MultiCorr.htm>). The significant level of the calculated  $Z_{obs}$  for brand value, brand characteristic, brand association on gender are in the table 3 below.

Table 6.3 the significance level for  $Z_{obs}$

Sig. (two tail)	Brand value	Brand characteristic	Brand association
Gender	0.3953	0.3125	<b>0.0375</b>
Age	0.543	0.417	0.258
Education background	0.956	0.319	0.431
Occupation	0.782	0.884	0.282
Monthly income	<b>0.006</b>	<b>0.00</b>	<b>0.02</b>

From the table 6.3, only the significance level in bold shows significant difference between the correlation coefficients. That is, gender makes a significant difference for the relationship between brand association and customer satisfaction, monthly income makes a significant difference for the relationship between brand image and customer satisfaction.

## 6.5 Hypothesis testing

Eight hypotheses are tested in the study.

**Hypothesis 1:** the correlation coefficient between brand value and customer satisfaction is 0.474 which is a moderate degree of positive relationship. Besides in the multiple regression,  $b_1$  TBVALUE is 0.147,  $t=2.679$ ,  $p=0.008<0.05$ , two tail, this confirms the positive

relationship between brand value and customer satisfaction.

**Hypothesis 2:** the correlation coefficient between brand characteristic and customer satisfaction is 0.666 which is a rather strong positive relationship sign. Besides in the multiple regression,  $b_2$  TBCHARA is 0.343,  $t=5.326$ ,  $p=0.00<0.05$ , two tail, this further confirms the positive relationship between brand value and customer satisfaction.

**Hypothesis 3:** the correlation coefficient between brand association and customer satisfaction is 0.67, a signal for a strong and positive relationship. Besides in the multiple regression,  $b_3$  TBASSOC is 0.402,  $t=6.695$ ,  $p=0.00<0.05$ , two tail, this concurs with the correlation analysis.

So the hypothesis 1, 2, 3 are tested to show there is a positive relationship between brand value and customer satisfaction, brand characteristic and customer satisfaction, brand association and customer satisfaction. That is to say there is positive relationship between brand image and customer satisfaction.

**Hypothesis 4:** from table 6.3, gender only affects the correlation coefficient between brand association and customer satisfaction, and does not show difference in the relationship between brand value and customer satisfaction, brand characteristic and customer satisfaction. So the hypothesis is partially agreed, which means the relativity of brand image and customer satisfaction will show some difference due to customer gender.

**Hypothesis 5,6,7:** according to table 6.3, age, education background and occupation do not affect the relationship between brand image and customer satisfaction. So the three hypotheses are not agreed. So the relativity of brand image and customer satisfaction will show no difference due to customer age, education background and occupation.

**Hypothesis 8:** from table 6.3, monthly income shows significant difference in the relationship between brand image because  $p<0.05$ . So the hypothesis is agreed and the relativity of brand image and customer satisfaction will show significant difference due to consumer monthly income.

## **6.6 Summary**

In chapter three, the eight hypotheses are listed and in this chapter the eight hypotheses are tested with SPSS and Fisher's method of comparing correlation coefficients in different groups. The findings show that the positive relationship between brand image and customer satisfaction is supported while most of the demographic hypotheses are not supported. The statistical results, consults, implications, limitation and further research will be discussed in the next chapter.

## **Chapter 7 Discussion and conclusion**

### **7.1 Introduction**

In the previous chapter, the empirical tests and the results found from the empirical tests were discussed. In this chapter, summary of findings, discussion of results, implication of the study, limitation and further research, conclusion are presented.

### **7.2 Summary of findings**

The main purpose of this study is to investigate whether it is meaningful to improve their brand image when exporting Norwegian salmon to China. So the study tries to find whether there is positive relationship between brand image and customer satisfaction. The model of the study is from Aaker's (1996) theory and inspired by Lin Chien-Hsiung (2011). In her study, she found there was positive relationship between brand value and customer satisfaction, brand characteristic and customer satisfaction but failed to show there was positive relationship between brand association and customer satisfaction in cater industry. In this study, the positive relationship between brand value and customer satisfaction, brand characteristic and customer satisfaction, brand association and customer satisfaction are proved in terms of Norwegian salmon selling in China mainland. Thus brand image is in positive relationship with customer satisfaction. Besides, through correlation test, repurchase intention has the highest correlation with customer satisfaction and WOM recommendation presentation also presents highly positive relationship with customer satisfaction. This is to say that satisfied customers tend to repurchase the Norwegian salmon again and would like to talk about and recommend it to others.

As for the demographic variables, she found that the relativity between brand image and customer satisfaction in cater industry will show great difference because of occupation, education background and monthly income and show no difference because of gender. The relativity between brand value and customer satisfaction, brand characteristic and customer satisfaction show great difference due to age but no difference between brand association and customer satisfaction because of age. Unluckily, in this study, the relativity of brand image

and customer satisfaction just show great difference because of monthly income. And the relativity of brand association and customer satisfaction show difference because of gender. And the rest parts are not influenced by the demographic factors.

## **7.3 Discussion of the results**

### **7.3.1 The relationship between brand image and customer satisfaction**

Brand value, brand characteristic and brand association are hypothesized to be positively related with customer satisfaction in hypothesis 1, hypothesis 2 and hypothesis 3. The result shows that if the customers think the Norwegian salmon worth the price, they would be satisfied; if the customers think highly of the “brand personality”, they would be satisfied more easily; if the customers have good brand associations about Norwegian salmon, they would be satisfied. That is to say that the brand image and customer satisfaction has positive relationship. Aaker (1991) and Rory (2000) pointed out that, with the construction of good brand image, customers were likely to increase the satisfaction of usage, and would like to recommend to others. The result from this study does in accordance with their results.

### **7.3.2 The effects of demographic variables**

From hypothesis 4 to hypothesis 8, gender, age, education background, occupation and monthly income are hypothesized to have significant effect on the relativity of brand image and customer satisfaction. Demographics have been cited in literature as influencers of customer satisfaction (Peris, 2014). And studies on customer satisfaction indicated that younger generations and customers with higher educational background and higher income tended to have higher customer satisfaction (Day and Landon, 1977). So the demographic variables are worth attention as well. In Lin Chien-Hsiung’s (2011) study, she got a fruitful result about the demographic variables’ effect on the relativity of brand image and customer satisfaction. But in this study, the effect of these demographic variables are not so observable.

## **7.4 Implication of the study**

### **7.4.1 Theoretical implication**

The relationship between brand image and customer satisfaction has got long-term attention

by researchers. This study follows their footprints and makes contribution to show the positive relationship between brand image and customer satisfaction in exporting Norwegian salmon to Chinese market. The thesis also found that customers tend to consume Norwegian salmon next time and talk positively about Norwegian salmon if they are satisfied. Meanwhile, monthly income seems to have the most influential power among the demographic variables because in the research only monthly income presented significant effect on the relativity of brand image and customer satisfaction. The thesis also helps to understand brand image and customer satisfaction better and attach importance to them. In the customer-oriented market nowadays, it is of great significance to know how to satisfy them. So the thesis gives one point to increase the brand image to help to satisfy the customers.

#### **7.4.2 Managerial implication**

Under the theoretical instruction, people can take relevant measures to improve their behaviors in business. Since there is positive relationship between brand image and customer satisfaction, so Norwegian salmon sellers can think up of ways to improve their brand image, thus increasing customer satisfaction. The image of a brand is ultimately a deciding factor for product sale (Hitesh Bhasin, 2016). For example, Norwegian salmon has been in the Seafood Products Fair in Qingdao, Guangzhou and Shanghai, which is a wise choice to make it heard and show people how Norwegian salmon is distinguished. They have done well in this part but that is not enough still because little information we can get about Norwegian seafood in China. Maybe more activities to show the Chinese people about their products. Besides, due to the monthly income factor, it is important to price to attract the largest group in the monthly income distribution.

#### **7.5 Limitation and further research**

Although the master thesis brings new information about the relationship between brand image and customer satisfaction in exporting Norwegian salmon to China, there are several limitations. First, the sample in this thesis consists of only 201 respondents from one southern city - Shenzhen, which is a coastal city with a high consumption of seafood. Although this city is representative, China is so big a country, so it is not enough to collect data just in one

city. And due to the time and cost limit, the sample size is just 201 which is far away from representative. Secondly, the data collected were not even. For example, for the age group, just one response was in “<18” group, and just five responses in “>45” group. And for the education background 78.6% of the total responses are bachelor and Master or higher. So this may have influence on testing the relativity between brand image and customer satisfaction due to the demographic differences.

For further research, it is necessary to expand the sample size and pay attention to the balance of the data to be able to better analyze the demographic factors effects. Besides this thesis has presented the positive relationship between brand image and customer satisfaction, which reminds us to think about how to promote brand image. So further research topic can focus how to increase the brand image of Norwegian salmon.

## **7.6 Conclusion**

The purpose of the study is to investigate whether there is positive relationship between brand image and customer satisfaction in exporting Norwegian salmon to China. Three hypotheses were formulated to test the relationship and the positive relation was achieved by correlation and multiple regression test. Repurchase intention is the most influential predictor of customer satisfaction and WOM has become a strong power among consumers. Brand image should have its specific and special characteristics and associations to be successful. For example, the brand safeguard whose name makes you think it can guard your safety and its advertisement positions in degerming and safeguarding for children, which give people the specific image about its products. But the demographic test was not so successful due to the limitation of the sample which needs to be improved for further research. From this research, monthly income seems to be the most influential demographic factor.



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## APPENDIX

### APPENDIX 1 DESCRIPTIVES OF SOCIO-DEMOGRAPHIC CHARACTERISTIC

#### 1a. Gender of the respondents

**gender**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	127	63,2	63,2	63,2
	Male	74	36,8	36,8	100,0
	Total	201	100,0	100,0	

#### 1b. Age of the respondents

**Age**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<18	1	,5	,5	,5
	18-24	106	52,7	53,3	53,8
	25-30	71	35,3	35,7	89,4
	31-45	16	8,0	8,0	97,5
	>45	5	2,5	2,5	100,0
	Total	199	99,0	100,0	
Missing	System	2	1,0		
Total		201	100,0		

#### 1c. Education background of the respondents

**education background**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Secondary school	13	6,5	6,5	6,5
	High school	30	14,9	14,9	21,4
	Bachelor	113	56,2	56,2	77,6
	Master or higher	45	22,4	22,4	100,0
	Total	201	100,0	100,0	

## 1d Occupation of the respondents

		occupation			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	75	37,3	37,3	37,3
	2	115	57,2	57,2	94,5
	3	1	,5	,5	95,0
	4	10	5,0	5,0	100,0
	Total	201	100,0	100,0	

## 1e Monthly income of the respondents

		Monthly income			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<2000	48	23,9	23,9	23,9
	2000-5000	78	38,8	38,8	62,7
	5000-10000	45	22,4	22,4	85,1
	>10000	30	14,9	14,9	100,0
	Total	201	100,0	100,0	

## APPENDIX 2 DESCRIPTIVE STATISTICS OUTPUT FROM SPSS

Descriptive Statistics										
	N	Range	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
BVALUE01	201	4	1	5	2,54	,741	,151	,172	,902	,341
BVALUE02	201	4	1	5	3,39	,623	-,005	,172	,556	,341
BVALUE03	201	4	1	5	3,29	,699	,235	,172	,504	,341
BVALUE04	201	4	1	5	2,86	,891	,031	,172	-,483	,341
BCHARA01	201	3	2	5	3,74	,619	-,280	,172	,218	,341
BCHARA02	201	2	3	5	3,91	,567	-,015	,172	,071	,341
BCHARA03	201	4	1	5	3,43	,668	,147	,172	,478	,341
BCHARA04	201	3	2	5	3,50	,672	,091	,172	-,199	,341
BCHARA05	201	3	2	5	3,63	,696	,284	,172	-,460	,341
BASSOC01	201	3	2	5	3,67	,694	,272	,172	-,536	,341
BASSOC02	201	3	2	5	3,66	,809	,236	,172	-,753	,341
BASSOC03	201	4	1	5	3,16	,863	,063	,172	-,535	,341

CSATIS01	201	4	1	5	3,72	,665	-,030	,172	,427	,341
CSATIS02	201	4	1	5	3,27	,741	,256	,172	,294	,341
CSATIS03.	201	4	1	5	3,63	,659	,033	,172	,418	,341
CSATIS04	201	4	1	5	3,76	,585	-,508	,172	1,721	,341
CSATIS05	201	4	1	5	3,62	,637	-,292	,172	,748	,341
REINTE01	201	4	1	5	3,63	,682	-,134	,172	,452	,341
REINTE02	201	4	1	5	3,60	,671	-,128	,172	,480	,341
REINTE03	201	4	1	5	2,76	,846	,639	,172	,317	,341
WOMREC01	201	4	1	5	3,23	,831	,384	,172	,226	,341
WOMREC02	201	3	2	5	3,22	,782	,544	,172	,137	,341
WOMREC03	201	4	1	5	3,44	,767	,262	,172	,078	,341
Valid N (listwise)	201									

### Appendix3 FACTOR ANALYSIS OUTPUT FORM SPSS

#### 3a Communalities of factors

Communalities		
	Initial	Extraction
BVALUE01	1,000	,327
BVALUE02	1,000	,726
BVALUE03	1,000	,738
BVALUE04	1,000	,557
BCHARA01	1,000	,485
BCHARA02	1,000	,494
BCHARA03	1,000	,544
BCHARA04	1,000	,597
BCHARA05	1,000	,616
BASSOC01	1,000	,666
BASSOC02	1,000	,564
BASSOC03	1,000	,671
CSATIS01	1,000	,706
CSATIS02	1,000	,611
CSATIS03	1,000	,714
CSATIS04	1,000	,696
CSATIS05	1,000	,665
REINTE01	1,000	,787
REINTE02	1,000	,755
REINTE03	1,000	,645



WOMREC01	1,000	,768
WOMREC02	1,000	,795
WOMREC03	1,000	,781

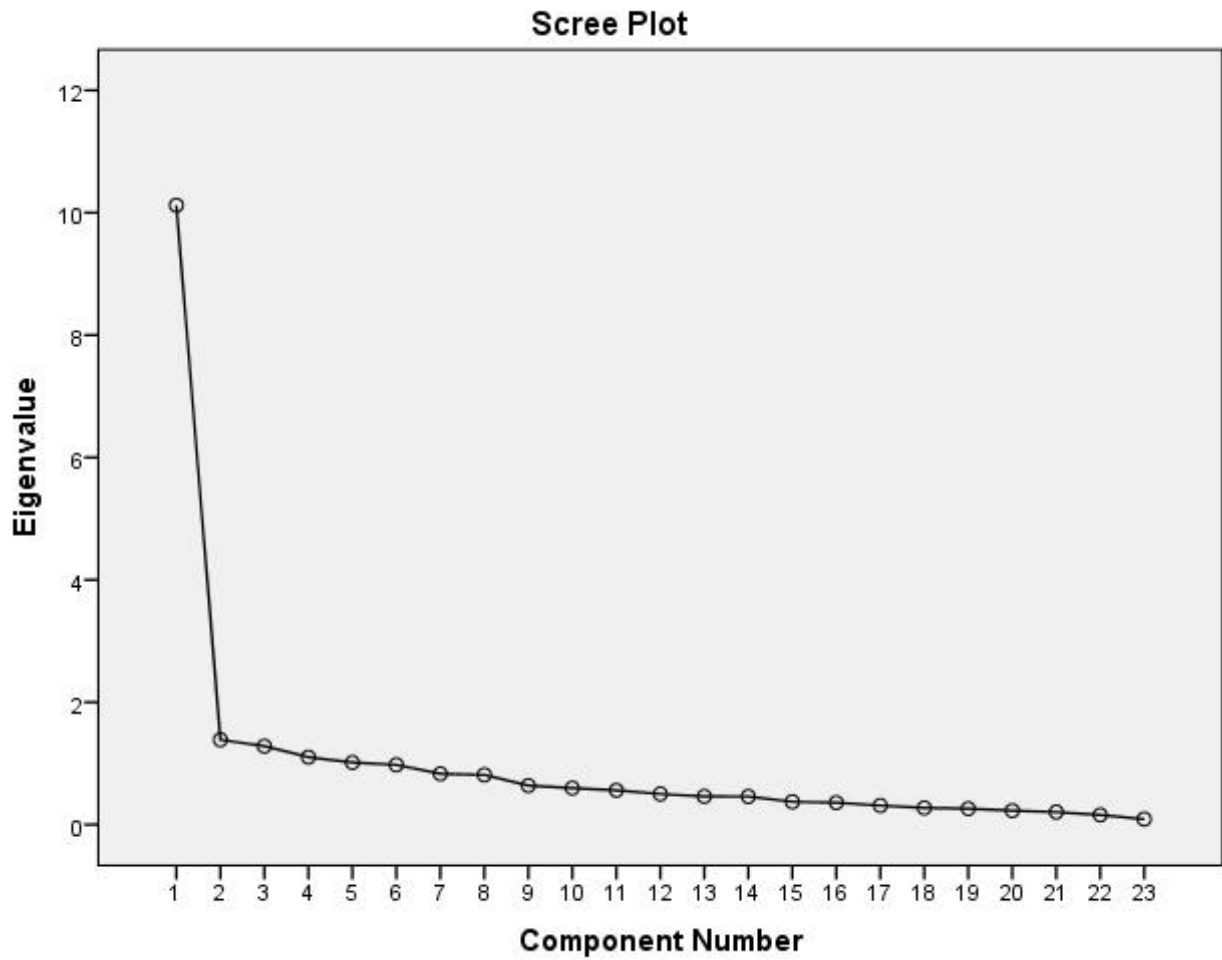
Extraction Method: Principal Component Analysis.

### 3b Total variance explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10,123	44,012	44,012	10,123	44,012	44,012
2	1,386	6,028	50,040	1,386	6,028	50,040
3	1,282	5,572	55,612	1,282	5,572	55,612
4	1,102	4,793	60,405	1,102	4,793	60,405
5	1,014	4,409	64,814	1,014	4,409	64,814
6	,977	4,246	69,060			
7	,830	3,608	72,668			
8	,813	3,533	76,201			
9	,638	2,774	78,975			
10	,597	2,594	81,569			
11	,560	2,436	84,006			
12	,501	2,176	86,182			
13	,460	2,001	88,182			
14	,459	1,998	90,180			
15	,373	1,622	91,802			
16	,359	1,561	93,363			
17	,312	1,356	94,718			
18	,273	1,187	95,906			
19	,261	1,133	97,039			
20	,228	,991	98,030			
21	,205	,889	98,919			
22	,159	,691	99,611			
23	,090	,389	100,000			

Extraction Method: Principal Component Analysis.

### 3c Scree Plot



## Appendix 4 RELIABILITY TEST RESULTS

### 4a Brand value

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.727	.730	2

#### 4b Brand characteristic

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,704	,702	4

#### 4c Brand association

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,689	,694	2

#### 4d Customer satisfaction

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,875	,876	4

#### 4e Repurchase intention

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,927	,927	2

#### 4f WOM recommendation

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,873	,874	3

## APPENDIX5 CORRELATION AND MULTIPLE REGRESSION

### 5a Correlation between brand value and customer satisfaction

**Correlations**

		Total brand value	Total customer satisfaction
Total brand value	Pearson Correlation	1	,474**
	Sig. (2-tailed)		,000
	N	201	201
Total customer satisfaction	Pearson Correlation	,474**	1
	Sig. (2-tailed)	,000	
	N	201	201

\*\* . Correlation is significant at the 0.01 level (2-tailed).

### 5b Correlation between brand characteristic and customer satisfaction

**Correlations**

		Total brand characteristic	Total customer satisfaction
Total brand characteristic	Pearson Correlation	1	,666**
	Sig. (2-tailed)		,000
	N	201	201
Total customer satisfaction	Pearson Correlation	,666**	1
	Sig. (2-tailed)	,000	
	N	201	201

\*\* . Correlation is significant at the 0.01 level (2-tailed).

### 5c Correlation between brand association and customer satisfaction

<b>Correlations</b>			
		Total customer satisfaction	Total brand association
Total customer satisfaction	Pearson Correlation	1	,670**
	Sig. (2-tailed)		,000
	N	201	201
Total brand association	Pearson Correlation	,670**	1
	Sig. (2-tailed)	,000	
	N	201	201

\*\* . Correlation is significant at the 0.01 level (2-tailed).

### 5d Correlation between repurchase intention and customer satisfaction

<b>Correlations</b>			
		Total customer satisfaction	Total repurchase intention
Total customer satisfaction	Pearson Correlation	1	,787**
	Sig. (2-tailed)		,000
	N	201	201
Total repurchase intention	Pearson Correlation	,787**	1
	Sig. (2-tailed)	,000	
	N	201	201

\*\* . Correlation is significant at the 0.01 level (2-tailed).

### 5e Correlation between WOM recommendation and customer satisfaction

<b>Correlations</b>			
		Total customer satisfaction	Total WOM recommendation
Total customer satisfaction	Pearson Correlation	1	,662**
	Sig. (2-tailed)		,000
	N	201	201
Total WOM recommendation	Pearson Correlation	,662**	1
	Sig. (2-tailed)	,000	
	N	201	201

\*\* Correlation is significant at the 0.01 level (2-tailed).

## 5f Multiple regression results

**Descriptive Statistics**

	Mean	Std. Deviation	N
Total customer satisfaction	14,7363	2,17374	201
Total brand value	6,6816	1,17393	201
Total brand characteristic	14,4776	1,90020	201
Total brand association	7,3333	1,31656	201

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,753 <sup>a</sup>	,567	,561	1,44087

a. Predictors: (Constant), Total brand association, Total brand value, Total brand characteristic

b. Dependent Variable: Total customer satisfaction

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	536,030	3	178,677	86,063	,000 <sup>b</sup>
	Residual	408,995	197	2,076		
	Total	945,025	200			

a. Dependent Variable: Total customer satisfaction

b. Predictors: (Constant), Total brand association, Total brand value, Total brand characteristic

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B		Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	2,381	,817		2,915	,004	,770	3,992					
Total brand value	,271	,101	,147	2,679	,008	,072	,471	,474	,187	,126	,735	1,361
Total brand characteristic	,392	,074	,343	5,326	,000	,247	,537	,666	,355	,250	,530	1,886
Total brand association	,663	,099	,402	6,695	,000	,468	,859	,670	,431	,314	,610	1,640

**5g Comparison of correlation coefficients between brand image and customer satisfaction by gender**

gender			Total brand value	Total brand characteristic	Total brand association
Female	Total customer satisfaction	Pearson Correlation	,436**	,703**	,736**
		Sig. (2-tailed)	,000	,000	,000
		N	127	127	127
Male	Total customer satisfaction	Pearson Correlation	,533**	,619**	,560**
		Sig. (2-tailed)	,000	,000	,000
		N	74	74	74

**5h Comparison of correlation coefficients between brand image and customer satisfaction by age**

Age			Total brand value	Total brand characteristic	Total brand association
<18	Total customer satisfaction	Pearson Correlation	. <sup>a</sup>	. <sup>a</sup>	. <sup>a</sup>
		Sig. (2-tailed)	.	.	.
		N	1	1	1
18-24	Total customer satisfaction	Pearson Correlation	,408**	,643**	,708**
		Sig. (2-tailed)	,000	,000	,000
		N	106	106	106
25-30	Total customer satisfaction	Pearson Correlation	,537**	,740**	,579**
		Sig. (2-tailed)	,000	,000	,000
		N	71	71	71

31-45	Total customer satisfaction	Pearson Correlation	,524*	,589*	,505*
		Sig. (2-tailed)	,037	,016	,046
		N	16	16	16
>45	Total customer satisfaction	Pearson Correlation	,924*	,732	,667
		Sig. (2-tailed)	,025	,160	,219
		N	5	5	5

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

a. Cannot be computed because at least one of the variables is constant.

### 5i Comparison of correlation coefficients between brand image and customer satisfaction by education background

\*\* . Correlation is significant at the 0.01 level (2-tailed).

education background			Total brand value	Total brand characteristic	Total brand association
Secondary school	Total customer satisfaction	Pearson Correlation	,589*	,567*	,855**
		Sig. (2-tailed)	,034	,043	,000
		N	13	13	13
High school	Total customer satisfaction	Pearson Correlation	,506**	,631**	,682**
		Sig. (2-tailed)	,004	,000	,000
		N	30	30	30
Bachelor	Total customer satisfaction	Pearson Correlation	,505**	,632**	,628**
		Sig. (2-tailed)	,000	,000	,000
		N	113	113	113
Master or higher	Total customer satisfaction	Pearson Correlation	,453**	,786**	,684**
		Sig. (2-tailed)	,002	,000	,000
		N	45	45	45

\* . Correlation is significant at the 0.05 level (2-tailed).

### 5j Comparison of correlation coefficients between brand image and customer satisfaction by occupation

occupation			Total brand value	Total brand characteristic	Total brand association
Student	Total customer satisfaction	Pearson Correlation	,431**	,657**	,716**
		Sig. (2-tailed)	,000	,000	,000
		N	75	75	75
Working	Total customer satisfaction	Pearson Correlation	,471**	,679**	,599**



		Sig. (2-tailed)	,000	,000	,000
		N	115	115	115
Retired	Total customer satisfaction	Pearson Correlation	. <sup>b</sup>	. <sup>b</sup>	. <sup>b</sup>
		Sig. (2-tailed)	.	.	.
		N	1	1	1
Other	Total customer satisfaction	Pearson Correlation	,606	,561	,780**
		Sig. (2-tailed)	,064	,092	,008
		N	10	10	10

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

b. Cannot be computed because at least one of the variables is constant.

### 5k Comparison of correlation coefficients between brand image and customer satisfaction by monthly income

Monthly income			Total brand value	Total brand characteristic	Total brand association
<2000	Total customer satisfaction	Pearson Correlation	,481**	,762**	,748**
		Sig. (2-tailed)	,001	,000	,000
		N	48	48	48
2000-5000	Total customer satisfaction	Pearson Correlation	,310**	,658**	,789**
		Sig. (2-tailed)	,006	,000	,000
		N	78	78	78
5000-10000	Total customer satisfaction	Pearson Correlation	,256	,177	,477**
		Sig. (2-tailed)	,089	,245	,001
		N	45	45	45
>10000	Total customer satisfaction	Pearson Correlation	,780**	,797**	,575**
		Sig. (2-tailed)	,000	,000	,001
		N	30	30	30

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).