# Explore Consumer's Attitudes and Consumption of Norwegian Salmon in Beijing

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#### **Abstract**

Over the past decade, China has developed to be the fastest growth market of consumption of Norwegian Salmon in Asia. In addition, Beijing that is the capital of China with over 15 million populations provides great demand in seafood consumption.

Understanding consumer's attitude is the first step to explain the consumption. Meanwhile, some factors (e.g. norms, availability, and knowledge) have been confirmed to influence on the consumption. Therefore, the study applies the theory of planed behavior (TPB) model to explain the consumption of Norwegian Salmon in Beijing. Moreover, the TPB model, which includes four components of consumer's attitude, subjective norms, perceived behavior control, and intention, has been successfully used in several contexts, including seafood consumption.

Norwegian Salmon has to compete with both imported and national seafood in Beijing, because it is suggested to be a high profiled imported product. The country of origin (COO) is confirmed to impact on both local consumer's attitude and behavioral intention. To more understand consumers' attitude and intention toward eating Norwegian Salmon as an imported food, the study adds three additional constructs of country image (Norway's image), consumer ethnocentrism (CE) and conspicuous consumption (CC) as three COO effects within classical TPB model.

The study found that the frequency of consumption of Norwegian Salmon is quite low that consumers taste Norwegian Salmon 2-3 times per year in general in Beijing. However, almost consumers evaluate Norwegian Salmon with very positive attitudes. The investigation reveals that the consumption of Norwegian Salmon are not simply influenced by some traditional factors, like quality, availability and knowledge, but

also by family's and business partners/colleagues' expectation and pressure (SNs),

country image. Moreover, the study found that both of CE and CC impact on country

image as a mediator between the two constructs of CE and CC, and attitude.

In academic aspects, the extended TPB model (with country image, CE and CC) is the

first time to be used in explanation the consumption of Norwegian Salmon in Beijing.

The initial model explains 16.0% of variance of eating Norwegian Salmon. The study

also bases on two-step approach to add some paths in the modified extended TPB

model, and successfully predict the frequency of eating Norwegian Salmon. The

modified extended TPB model presents that the frequency of eating Norwegian

Salmon is significantly influenced by Subjective norms in addition to behavioral

intention. Finally, 16.9 % of variance of behavior is explained by the modified extend

TPB model.

Key words: Norwegian Salmon, attitude, TPB, COO effects, Beijing

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#### 1. Introduction

#### 1.1 Background

Beijing, which is the capital of China, has developed to be a very important market for seafood consumption in China, since over 15 million population in Beijing can provide great demand for seafood industry. According to the statistics of China Seafood Industry Report (2007), seafood consumption in China was 25 kilos per capita in 2004 and is expected to reach 36 kilos per capita in 2020.

Norwegian salmon came into Beijing's market in 1998. Norwegian salmon, which is a very famous product as well as an outstanding brand in the world, has very nutritionally high value fish, such as Omega-3. China has been a fastest growth market of consumption of Norwegian salmon over the past decade in Asia. Moreover, China will be soon the largest export market for Norwegian salmon in the future (Scandinavian Air Cargo Trade Index, 2007). Norwegian salmon in Beijing are not only available in some high-end restaurants, but also from supermarket for eating at home. Almost consumers have known salmon which is from Norway. For example, if you ask a Chinese what products he or she knows from Norway, the person will quickly answer Norwegian salmon (NSEC, 2007). Furthermore, a number of Chinese have increasingly tasted Norwegian salmon as a lifestyle.

Nevertheless, Norwegian salmon in China also face several challenges. For example, Norwegian salmon has to compete with other products which are both imported and national seafood. Therefore, Norwegian salmon is suggested to be a high profiled imported product. No study I am aware of has tested how Chinese consumers perceive the quality of Norwegian salmon, the country-of-origin value of this salmon, or what aspects this value or disvalue may have on their evaluation and consumption of salmon. Several studies in the area of country or origin effects (Klein et al., 1998)

suggest that consumers in general prefer national products (ethnocentrism) (Hsu & Nien 2008; Wan & Chen, 2004), but that this can be different because of preferences, country image/branding (Han, 1989, 1990; Roth & Romeo, 1991; Skaggs et al.,1996), snob appeals/status/conspicuous consumption (Wang & Chen, 2004; Marcoux et al.,1997), price and other factors.

#### 1.2 Research questions and study issue

Human food choice is a quite complex phenomenon that is involved many factors, such as aspects with individuals (preferences, knowledge, age, gender, gender), families (number of member, number of child, and marital status), cultures (religion), countries (location, situation, and economic) (Olsen, 2004; Mahon et al, 2006; Chen, 2007; Shepherd, 1989; Furst et al, 1996; Craig et al, 2005).

Meanwhile, a number of researches have applied Theory of Planning Behavior (TPB) for better explaining the complex phenomenon in many kinds of food consumption (Fishbein & Ajzen, 1975, 1980; Ajzen, 1991), such as nutritional food (Patch et al., 2005), organic foods (Chen, 2007), ready meals (Mahon et al, 2006), and seafood (Olsen, 2004; Verbeke & Vackier, 2005). In addition, Ajzen (1991) asserts that TPB is able to explain the consumers' food choice behavior convincingly.

Because of complex factors, the frequency of fish consumption is in low level (Verbeke & Vackier, 2005), even if fish is recognized as a nutritious food and an important food for providing a good source of protein intake in worldwide. A recent research confirms that the attitude of the consumers is the most important determinant for predicting behavioral intention in fish consumption (Tuu et al, 2008). Namely, perceived quality, nutritious value and price will be more significant to explain the consumption of Norwegian salmon. In addition, other aspects should not be ignored, like several norms and perceived behaviour controls (Olsen, 2004).

Norwegian seafood or salmon are promoted by its origin in several international countries, included China. The effects of country of origin (COO) has been widely discussed by several researches (e.g. Ahmed & d' Astous, 2008), and involved in seafood context (Olsen & Olsson, 2002). In addition, COO effects are suggested as an interaction among country image, consumer ethnocentrism and conspicuous consumption in many literatures (Han, 1989, 1990; Lindquist et al. 2001; Wang & Chen, 2004).

The main objective of this study is to explore consumer's attitudes and consumption of Norwegian salmon in Beijing with an extended focus on country-of-origin aspects. More precisely, three research questions were formulated in order to capture the overall purpose of the thesis:

- 1. What are consumer's attitudes and consumption of Norwegian salmon in Beijing?
- 2. Which factors, within the TPB, is most important in explaining consumption of Norwegian salmon in this area?
- 3. Do country of origin, consumer ethnocentrism and conspicuous consumption influences consumer's attitudes and consumption of Norwegian salmon in Beijing?

The first questions are based on the previous and empirical researches (Verbeke et al, 2007; Olsen, 2004) to describe and explain general attitude and more specific aspects with attitudinal beliefs such as sensory toward perceived quality, nutritious value, convenience etc toward Norwegian salmon, as well as how often they consume in a given period. The second question deals with which antecedents or motivational factors explain consumer's consumption of Norwegian salmon. This is done by using the general framework of the Theory of Planned Behavior (Ajzen, 1991). Attitude, subjective norms, and perceived behavioral control, moreover, are suggested to drive the behavioral intention, which is suggested to be the main predictor of salmon consumption. The last question is to explain how different aspects with COO effects such as country image, ethnocentrism and conspicuousness are able to impact on consumer's attitudes and consumption (Lindquist et al. 2001; Wang & Chen, 2004).

Finally, this study will involve some important factors from demography, such as age, gender, and married status, that how to influence the differences in consumer's attitudes and consumption of salmon in Beijing. Thus this study is able to contribute the further representative research of salmon consumption, such as segmentation and brand image.

#### 1.3. Methods

Data used in this thesis is a survey that was carried out in Beijing, Capital of China. A sample of 208 questionnaires was collected in April of 2009. The first issues will be performed by exploratory factor analysis, reliability test, and descriptive analysis. The advanced analyses for issues 2 and 3 will be performed by structural equation modeling (SEM). The process of analysis will be run in SPSS 15.0 and Amos 7.0.

#### 1.4. Structure of thesis

Following the introduction is Chapter 2 as a discussion of theoretical and conceptual framework. Specifically, chapter 2 is to introduce the theory of planned behavior briefly, and then argue all of aspects of the constructs within TPB model, and additional structures. Data and method will be introduced in Chapter 3. Also Chapter 3 will focus on several measures and techniques for testing reliability and mean difference, factor analysis, and structural equation modeling. The Chapter 4 presents the results from data analysis and model establishments. The last part is to discuss issues related to the results, conclusion, and suggestions for future research.

### 2. Concept framework

The Theory of Planned Behavior (TPB) has been used to predict behavior in wide areas, (Ajzen, 1991, 2002; Armitage and Connor, 2001) included food consumption (e.g. Arvola et al., 2008; Vermeir & Verbeke, 2008). For example, in a previous research (Gummeson et al., 1997), the TPB was used to measure in Swedish schoolchildren's consumption of healthy versus unhealthy alternatives for breakfast, and 12 % of the variability of the choice of milk and 18% of the choice of bread were explained by intentions. Basing on the description by Verbeke and Vackier (2004), the TPB presumes that behavior is a function of salient information, or beliefs, relevant to the behavior. The TPB is presented in Figure 1.

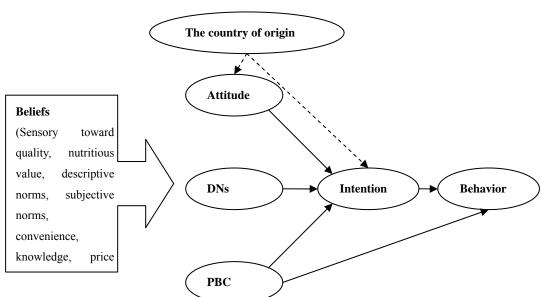


Figure 2.1 The theory of planned behavior (TPB) (Ajzen, 1991) with some extended variables

As showed by figure 2.1, four beliefs in TPB can be distinguished as intention, attitude toward behavior, subjective norms, and perceived behavioral control respectively, for driving behavior/consumption in TPB. Attitude toward behavior, subjective norms (SN) and perceived behavioral control (PBC) are in the same place to influence indirectly on individual behavior via intention. Meanwhile, intention and

perceived behavior control together influence on individual behavior directly. Note that when perceived behavior control influences directly on individual behavior, perceived behavioral controls could be seen as barriers to impact on behavior, such as price/cost.

According to Ajzen (1991), TPB has three kinds of salient beliefs, which could be described as follows: behavioral beliefs, which are assumed to influence attitudes towards behavior; normative beliefs, which constitute the underlying determinants of subjective norms; and control beliefs, which provide the basis for perceptions of behavioral control. In seafood, several beliefs, which probably influence on attitude, SN, and PBC, are often paid attention, as such sensory (taste, negative effect), appearance (texture), nutrition, quality evaluation, health involvement, price/cost, convenience/availability, knowledge etc (Olsen, 2004, 2002, 2001; Verbeke et al., 2007; Verbeke & Vackier, 2005; Sveinsdóttir, 2009; Rødbotten, 2009).

Ajzen (1991) explicitly addresses "the TPB is, in principle, opened to the inclusion of additional predictors if it can be shown that they capture a significant proportion of the variance in intention or behavior after the theory's current variables have been taken into account. (p. 199)". Therefore, this study will not simply use subjective norms, but also involve the term of group norms, and will clearly explain and distinguish among subjective norms and group norms (Borsari & Carey, 2001).

In addition, the study employs three additional beliefs of country image (Han, 1989, 1990), ethnocentrism (CE) (e.g. Chryssochoidis et al., 2007), and conspicuous consumption (CC) (e.g. Wang & Chen, 2004), which will build up a structure of COO effects (e.g. Olsen & Olsson, 2004). COO effects can affect on attitude via product evaluation and behavior intention (Chryssochoidis et al, 2007).

Thus, in my study, attitude toward eating salmon from Norway, different norms, PBC, and COO effects all could be significant influences on willingness to consume

Norwegian salmon, meanwhile intention together with perceived behavioral control will influence on frequency of the consumption of Norwegian salmon significantly. Additionally, COO effects might be important determinants on attitude in order to identify the evaluation of Norwegian salmon. Therefore, this study assumes that all of involved beliefs/factors are significant determinants for influencing on the consumption of Norwegian salmon.

#### 2.1. Consumption and attitude

#### 2.1.1 Consumption of salmon

Understanding the fundamental determinants of behavior has been a principal goal to many theorists in the social sciences (Chen, 2007). However, the definitions and measurement of behaviors are not simple and straightforward (Ajzen & Fishbein, 1977). Jaccard and Blanton (2005) define behavior as "any denotable overt action that an individual, a group of individuals, or some living system (e.g. a business, a town, and a nation) performs".

In the research literatures, it is possible to discuss behavior as choice (Berg et al, 2000), use or frequency of use (Beale et al, 1991), buying frequency (see Conner & Armitage, 1998 for a review), loyalty (Olsen, 2002; Olsen, 2007) or habit (Brug et al., 2006). Most studies in the area of food choice and behavior define and measure behavior as the frequency of consumption in a given period of time (Bagozzi & Kimmel, 1995). This period can be defined as regency (e.g., within the last tow or three weeks) of general frequency over the last year (Olsen, 2007). One problem with assessing frequency is to remember exactly how many times over a period they have consumed a given product (Bradburn et al., 1987). However, since frequency of past behavior is an indicator of habit strength, and it can be used as an independent predictor of later action (Ouellette & Wood, 1998), this study will define frequency as

consumers' a self report of their subjective evaluation of past consumption of Norwegian salmon. A self-report of past consumption frequency is common in social psychology (see Conner & Armitage, 1998 for a review) and also in the area of food and seafood consumption (Raats *et al*, 1995; Shepherd & Raats, 1996; Myrland *at al*, 2000; Olsen 2001, 2005; Verbeke & Vackier, 2005).

Besides, what consumers perceive as important and salient product beliefs will be influenced across products and situations (Furst et al., 1996). The consumption of food could be depended on the situation, as Meiselman (2000) states that when the same food is served in different environments, acceptance of the food can be very different. In Beijing, food is often eaten at home, including fish and seafood. According to a report of NSEC (2007), Norwegian salmon, however, is most often eaten in restaurant, the second is in home. Thus, this study will investigate the consumption of Norwegian salmon in different situations, such as restaurant, household, and supermarket, as well as some kind of aggregates of situations.

#### 2.1.2 Attitude as a global evaluation

Attitude has been widely definite as a psychological tendency that is classified by evaluating a specific object (e.g. a food product) with series degree of favour–disfavour, liking–disliking, satisfaction–dissatisfaction or good–bad polarity (Eagly and Chaiken, 1993). According to the description by Fazio (1995), attitude is an interaction in memory between a given object (e.g. food, pasta or salmon) and a summary evaluation of this object.

Attitudes are held, and behaviors are performed with respect to certain entities (Ajzen and Fishbein, 1977). A person holds a favorable attitude toward an object, and then s/he will perform favorable behavior with respect to the object, and not to perform unfavorable behaviors (Ajzen and Fishbein, 1977). Even though a few behaviors

maybe have no evaluative implications for a given object, a negative evaluation will be an important predictor for implicating attitude toward the object (Ajzen and Fishbein, 1977). For example, a person dislikes the smell and bones of fish so much that the person will reject fish. Therefore, Tuu et al. (2008) conclude that attitude is the most important determinant in explanation the fish consumption of Vietnam. I intend to define attitude both as a global and general evaluation, as well as an evaluation of different attributes or beliefs of Norwegian salmon, when consumers are consuming Norwegian salmon in different situations, such as restaurants and supermarket.

#### 2.1.3 Attitudes toward food and seafood

It is possible to define and measure attitudes as belief associations to different objects or actions so that forms of assessment often focus on different associations with the objects or actions (Fazio, 1995). Aikman et al. (2006) concludes five informational bases of food attitudes were identified: general sensory information (e.g., taste, smell), specific sensory information (e.g., oily, greasy), abstract cognitive qualities (health, safety), and positive and negative affects associated with eating foods (e.g., guilt, nauseated, comforted, relaxed). In this part, I am going to concentrate on sensory (taste and texture) (Olsen, 2004), perceived risk (safety and risk) (Verbeke et al., 2006; Olsen, 2002; Verbeke et al. 2007), nutritional value, convenience and price/cost (Olsen, 2004; Verbeke & Vackier, 2005) for introducing the attitudes toward food/seafood.

#### Sensory aspects and quality evaluation

Sensory quality is a complex set of sensory characteristics, including appearance, aroma, taste, and texture, that is maximally acceptable to a specific audience of consumers, those who are regular users of a product category, or those who, by some clear definition, comprise the target market (Grunert et al., 2003; Zeithaml, 1988). Quality of fish is

evaluated by means of various instrumental and chemical analysis (Rødbotten et al., 2009), however, more often by sensory descriptive analysis, such as taste and texture (Farmer et al., 2000; Fandos et al., 2005).

Researches confirm that taste in food consumption has seem to be an important evaluation (positive or negative) and predictor at the individual level, because of taste appeal, likes or dislikes, and sheer habit are all relevant (Aikman et al, 2006; Olsen, 2004).

Several studies prove that taste is among the most important factors in explaining general attitudes and motivation for buying and eating seafood (Bredahl and Grunert, 1997; Gempesaw et al., 1995; Olsen, 2001, 2004). Verbeke and Vackier (2005) describes that 'Fish has a good taste' has the highest score (17.05). Taste has been found to be one of the main motives for food choice among children and teenagers (Honkanen et al., 2004). In addition, Olsen (2002) and, Verbeke and Vackier (2005) argue that consumers with experience toward fish have a more positive and satisfied attitude towards fish healthiness and taste.

However, some individuals maybe averse to eat fish because of several the unpleasant physical properties of some varieties of fish such as the bones and bed smell (Leek et al., 2000). Subsequently, some researches evidenced that negative effect is an important reason for explaining the influences in consumer's attitude and the consumption of seafood via across different countries (Bredahl and Grunert, 1997; Leek et al., 2000; Marshall, 1993; Olsen, 1989, 2001). In a study of Norwegian households, the negative effect explained 13% of the variance in motivation to consume seafood (Olsen, 2001). In addition, the smell from fish could be an important determinant, since almost consumers prepare fish at home in China.

On the other hand, texture is significant cues that make consumers to evaluate quality of food for avoiding the risk in safety, especially when evaluating the freshness of the product (Olsen, 2002; Verbeke & Vackier, 2005), because lower experience and lower confidence are likely to associate with the perceived risk of buying low quality or making a wrong choice (Verbekeet al., 2007). As consumers prefer to buy fish fillet, and state their reasons for evaluating quality of fish by texture and other appearances (Rødbotten et al, 2009).

The study defines sensory evaluations of Norwegian salmon as the evaluation of quality attributes made by human senses (e.g. smell, taste and texture). Although Norwegian salmon is often consumed without skin and bones (e.g. fillet) in restaurant and supermarket, this study assumes that negative effects (e.g. bed small and bones) influence consumer's attitudes probably, when consuming salmon from Norway.

#### Convenience/availability

Convenience (availability) is a complex concept in explaining consumer's attitudes, and consumption of food has also been explored in several recent studies (Candel, 2001; Jaeger & Meiselman, 2004; Mahon, Cowan, & McCarthy, 2006; Scholderer & Grunert, 2005). According to Olsen (2004), convenience is defined as saving time and effort in theoretically, also an outcome of product use relates to employ a particular resource (e.g. easy and fast to buy/prepare).

Several researches in seafood context evidence that seafood/fish is evaluated as inconvenience for all of steps of preparing or cooking (Olsen, 2007; Gofton and Marshall, 1992). Consumers need many facilities and much time to cook fish (Olsen, 2007). Thus, the study defines convenience as an evaluation of affective on the costs of taking resource (e.g. time, effort) for eating Norwegian salmon.

#### Nutritious value

In several studies, the value of nutritional food has been considered as the second most important product feature after sensory aspects and taste (Letarte et al., 1997; Roininen et al., 1999). The health benefits of eating fish are well known and have been

verified that consuming fish at least 1–2 times per week has a positive effect on health (Deckere et al., 1998; Thorsdottir et al., 2004). Even though almost people perceive seafood as the most nutritious food they can eat as a dinner, it is hardly to find a relationship between perceived nutritional value and seafood consumption (Bredahl and Grunert, 1997). Since Chicken or other nutritional meals are possible to substitute for seafood, the chances of having seafood on the menu during the rest of the week are considerably lower.

On the other hand, nutritional value is given to be credence quality attribute (Peter & Hans, 1995). In this study, since we consider that fish/seafood is always evaluated as nutritious food, so I intend to define nutrition as an evaluation of nutritious value and credence quality toward Norwegian salmon, and a deriver for improving consumption of Norwegian salmon as nutritious meal.

Although it is hard to find the relationship between perceived nutritional value and seafood consumption, nutrition is significant in combination with involvement in health and healthy eating (Olsen, 2003).

#### Price/cost

Price/cost is a one of obvious influences on food choice (Steptoe et al, 1995). In the marketing literature, price is often mentioned as relative to evaluate quality and termed value or value for money (Verbeke, 2007; Peter & Hans, 1995; Zeithaml, 1988).

The price/cost is used as a cue to evaluate quality of product, especially when on information is not available and one has to judge the quality of two similar food products (Peter & Hans, 1995), or consumers, who feel hard to evaluate the seafood/fish quality because of lack of relative knowledge (Verbeke et al, 2007).

Norwegian salmon is a famous fish product so that Norwegian salmon is evaluated as

an excellent food as well as an expensive product. Meanwhile, consumers are usually to use price to evaluate the fish quality.

Thus we define price/cost as evaluation of "satisfaction" and "value for money" when considering value of Norwegian salmon, such as quality and nutritious value.

Sum up, the study defines the consumer's attitudes toward Norwegian salmon as an evaluation (e.g. like or dislike, fresh or not fresh, nutritious or innutritious, convenience or inconvenience, and expensive or cheap). Also the study will assume that consumer's attitudes toward salmon are influenced by sensory (quality, taste, texture, negative affects), perceived risk (safety and risk), price/cost, nutritious and convenience respectively as salient seafood attributes forming a general attitude of food (see Olsen 2004 for a review).

#### 2.2 Intention

Intention is the best predictor of planned behavior, also an unbiased predictor of action (Bagozzi, Baumgartner, & Yi, 1989). Fredricks and Dossett (1983) describe behavioral intention as the immediate determinant of overt volitional behavior. Intention can be viewed as the conscious plan to carry out a particular behavior and the motivation to perform it (Patch et al. 2005). Intention is proposed as the closest cognitive antecedent of actual behavioral performance rather than attitude (Fishbein & Ajzen 1975; Gollwitzer, 1993; Triandis, 1977).

Intention plays an important role in determining the frequency of seafood/fish consumption (Verbeke & Vackier, 2005). As some studies reported a high positive correlation between intention and fish consumption frequency of around 0.65 (Olsen, 2001; Verbeke & Vackier, 2005). Intention is measured as likelihood that a person is willing to act in seafood consumption (Fishbein & Ajzen, 1975: Ajzen, 1991). Thus,

this study defines intention as motivation of individuals toward consuming Norwegian salmon. Also the study assumes that intention is associated a positive and significant correlation to the consumption of salmon.

#### 2.3 Different norms

In classical TPB, subjective norms (SNs) are able to directly increase the predicted power of intentions. However, Armitage and Conner's (1998, 2001) meta-analysis show that the subjective norm-intention correlation is significantly weaker than the attitude-intention and perceived behavioral control-intention relationships. Therefore, the study will discuss two additional structures of descriptive norms (Tuu et al., 2008; Rivis &Heeran, 2003; Louis et al., 2007; Larimer & Neighbors, 2003), and group norms (Rimal & Real, 2003; Borsari & Carey, 2001).

Several studies have successfully used the additional terms of descriptive norms and subjective norms within the TPB (Tuu et al., 2008; Rhodes & Courneya, 2004). The study defines these three norms within TPB as several salient beliefs to construct, understand, and disseminate items among group members through communication (Rimal & Real, 2003).

The two constructs of descriptive norms and group norms are often measure the influence of norms on behavior (Tuu et al., 2008; Rhodes & Courneya, 2004; Rimal & Real, 2003). However, the two constructs are probably confused with subjective norms. The lack of distinction among subjective, descriptive, and group norms has led to both theoretical and pragmatic difficulties in evaluating normative influences on behavior (Berkowitz, 1997; Reno et al., 1993). Thus the study is responsibility to distinguish them clearly by following.

#### 2.3.1 Subjective norms

Subjective norms (SNs) in several researches are called as injunctive norms (e.g. Tuu et al., 2008; Rivis & Sheeran, 2003; Louis et al., 2007; Larimer & Neighbors, 2003). SNs are defined by Conner and Armitage (1998) as a function of normative beliefs, which represent perceptions of specific significant others' preferences about whether one should or should not engage in the behavior. Also SNs in other literatures are often defined and measured as perceived social pressure or expectations from groups or individuals (Ajzen and Fishbein, 1980).

Within TPB, the individual's SNs are usual to be assessed by perceived expectations (e.g., "My friends think that I should engage in a binge drinking session"), pressures of specific referent individuals or groups (e.g., "I generally want to do what my friends think I should do"), and his motivation to comply with those expectations or pressures (Rivis & Sheeran, 2003).

A study provided evidence that family pressure has a significant influence on food choice (Olsen, 2001) as a statement by Olsen (2004) that "children's dislike of seafood, or their strong preferences for hedonic consumption, is a barrier to seafood consumption in many modern households". Meanwhile, an earlier review by Rolls (1988), peers, like friends, are major determinants for children's' and teenagers' food preferences. Also business partners and colleagues are often discussed in norms, especially when investigating the conspicuous consumption (Marcoux et al., 1997).

The study defines subjective or injunctive norms as perceived expectations or pressures from important others that include individuals and group, such as family, friends, and business partners (colleagues).

#### 2.3.2 Descriptive norms

There is an important distinction on social influences between subjective norms (i.e., what significant others think the person ought to do) and descriptive norms (i.e., what significant others themselves do) based on different sources of motivation (Tuu et al., 2008). According to Rivis and Sheeran (2003), descriptive norms can refer to perceptions of significant others' own attitudes and behaviors in the domain. The opinions and actions of significant others provide information that people may use in deciding what to do themselves (e.g., "If everyone's doing it, then it must be a sensible thing to do" cf. Cialdini, Kallgren & Reno, 1991).

Descriptive norm reflects growing empirical support for its predictive validity upon behavioral intention and theoretical support by extend ding normative pressure to include social pressure of belonging to a group who may or may not perform the behavior (Rhodes & Courneya, 2004).

Several researches show that descriptive norms have a larger regression coefficient in the prediction of intention than did subjective norm suggests that observing the behavior of others may be of greater importance in health-related decision making than social pressure from others, particularly in the case of health-risk behaviors, such as drug (Rivis & Sheeran, 2003) and alcohol drinking (Rimal & Real, 2003). Tuu et al (2008) mention two cases to specifically explain the influences of descriptive norms of parents and peers in food choice of children. Moreover, Tuu's et al (2007) result has identified the role of descriptive norms in seafood context. Therefore, Rivis and Sheeran (2003) mention that the addition of descriptive norms is primarily for increased variability in the subjective norm measure.

Although descriptive norms could be stronger than subjective norms, research has suggested that, depending on the behavior in question and the circumstances under which the norm is evoked, either subjective or descriptive norms may be more

influential in predicting behavior (Larimer & Turner, 2004). Cialdini and his colleagues (1990) have suggested that when relevant norms are made salient through focusing attention on the norm, subjective norms have a much broader and more enduring range of effects on behavior than do descriptive norms. According to the conclusion by Rimal and Real (2003), descriptive norms provide information about group members' noncompliance, whereas subjective norms provide sanctions for group members' noncompliance. Therefore subjective and descriptive are both significant constructs.

The descriptive norms in the study are defined as learning provided information from the opinions and actions of significant others that people may use in deciding what to do themselves in consumption of Norwegian salmon. The significant others include individuals and groups, such as family, friends and business partners (colleagues).

#### 2.3.3 Group norms

Numerous studies have documented that group norms is in a given individuals' social networks to initiate and reinforce both positive and negative behaviors (Rimal & Real, 2003). Influences of group norms usually use "Pressure to conform" and the attraction of "being part of a group identity" to describe (Borsari & Carey, 2001).

Rimal and Real (2003) suggests that that communication patterns play significant role in group norms among members of social group, because communication patterns is not just guided by their perceived expectations and pressures (subjective norms) to express their identity and their alignment with perceived group norms, but also described as "attending a mass, a situation in which noting new is learned (descriptive norms) but in which a particular view of the world is portrayed and confirmed" (Rimal & Real. 2003). Therefore group norms are included in subjective norms and descriptive

norms.

In particular, Chinese consumers tend to be more susceptible by group influences than consumers from other countries, because decisions of Chinese consumers are made under heavy influence from the group with which they are interacting, such as the extended family, friends, co-workers, and the people in the same social circle, given their cultural orientation (Cheng & Lam, 2008).

In the study, we intend to define group norms as influence norms of individual's social networks through expectations or pressures of groups, and the perception of group member's quantity and frequency of consumption of Norwegian salmon.

#### 2.4 Perceived behavioral control (PBC)

Some conceptions of behavioral control are included in our more general models of human behavior, concluded in the form of "facilitating factors", "the context of opportunity", "resources", or "action control" (Verbeke et al, 2007). Ajzen (1991) defines perceived behavioral control as an integrated measure of internal and external resources, and contextual factors which make it difficult to perform the subject's motivation to consume the product under investigation.

Within TPB, PBC is added to the theory of reasoned action for helping to predict behavior (Ajzen, 1991). The inclusion of PBC increases information about the potential constraints on action as perceived by the actor, and is held to explain why intentions do not always predict behavior. Olsen et al. (2008) mention that perceived behavioral control explained an additional 14% of the variance in intention and 4% in behavior.

Similar to norms, factor analysis of PBC is possible to distinguish two components of

self efficacy (e.g. ease/difficulty, confidence) and controllability (e.g. personal control over behavior, appraisal of whether the behavior is completely up to the actor) (Rhodes & Courneya, 2004; Ajzen, 2002). Self-efficacy provides prediction on both intentions and behavior (Trafimow et al., 2002), whereas the contribution of controllability is merely on behavior (Rhodes & Courneya, 2004). Therefore, a researcher asserts that the 'self-efficacy' concept is a stronger correlation with intention than 'controllability' (Conner & Armitage, 1999a), because the intention concept itself is hypothesized to capture the motivation of an individual to perform a behavior (Ajzen, 1991).

On the other hand, in seafood context, people may be averse to consuming seafood/fish because of not only perceived difficulty as inconvenience/unavailability or lack of knowledge in buying, preparing and cooking (Rødbotten et al., 2009, Olsen, 2007), but also controllability, such as price/cost (Honkanen & Frewerand, 2008). Therefore, the study needs to use these two items to replace the construct of PBC in TPB.

In this study, I will define Perceived Behavior Control as beliefs of combination between self efficacy and controllability that access to the resources and opportunities to perform the consumption of Norwegian salmon. In particular, this study will focus on convenience/availability, knowledge and price/cost (Olsen, 2004). The following is to specifically introduce the influences of these determinants on food/seafood consumption.

#### 2.4.1 Convenience/Availability

The above has introduced convenience (availability) as several evaluations in attitude, also the convenience (availability) as ability is to get the resources (e.g. time, efforts) for engaging the consumption (Furst et al., 1996). The following is to specifically

argue the influences of convenience (availability) on every stage of consumption of Norwegian salmon.

Convenience/availability in food context is possible to relate to individual ability of preparation of food, such as the use of household resources (e.g., microwave ovens), special skills and experience (e.g., cooking), or their combination with other ingredients (e.g., potatoes) (Furst et al., 1996). Specifically, meal convenience (availability) is related to planning, acquisition or purchasing, preparation, cooking, consumption/eating, and disposal. Olsen (2007) also states convenience is possible to play important role at each stage.

In seafood context, Olsen et al. (2007) mention that an investigation of food consumption habits in the UK found that consumers regarded fish as inconvenient because of a perceived need to invest large amounts of time and effort at different stages of the provisioning process, and because fish meals were perceived to require unusual vegetable side-dishes. However, Olsen (2003) did not confirm as significant (P>0.05) relationship between convenience and seafood consumption. Maybe because of different kinds of fish product, Olsen (2003) mentions that some fish products such as fish fingers or fish cakes are not regarded as inconvenient food.

The study assumes that consumers perceive the consumption of salmon from Norway as inconvenience. The study defines convenience/availability as perceived easy and fast to accessing the resource, such as time, facilities, and skill for buying, preparing and eating salmon.

#### 2.4.2 Knowledge

In general, consumers buy a product before that they have hold the knowledge of product. In addition, the luck of knowledge could be a barrier to influence on making

decision of consumption. Knowledge is described as an internal resource or self efficacy that can be linked to several aspects, such as country of origin (Dosen & Krupka, 2007) (e.g. the high quality salmon is from Norway), nutritious value, evaluating the quality of the raw material in the shop, preparing and serving the final meal and its ingredients (Olsen, 2003).

Thus, the study more concentrates knowledge on that where salmon is from, and what nutrition salmon can provide, and how salmon is prepared. Here assumes that knowledge toward salmon and Norwegian will be a significant determinant for improving the consumption of Norwegian salmon.

#### 2.4.3 Perceived price/cost

Price can be distinguished between objective price (actual price of a product) and perceived price (price is encoded by consumer) (Jacoby & Olson, 1977). When the price is within TPB, almost researchers will focus on the front one (e.g. Olsen, 2004). Price/cost in general is often considered as a barrier or limitation on making decision of consumption by consumers. Also, consumers indicate that the price level affects their intention to buy seafood/fish (Olsen, 2003).

Nevertheless, Leek et al. (2000) found price to be a weak factor in explaining variation in purchasing seafood/fish in the UK, and the same results are found in Finland (Honkanen et al. 1998) and Norway (Olsen, 2003). Maybe the reason is that some of these respondents, who may not find price to be a barrier to consumption, do not purchase their seafood, but get fish as gifts, or buying cheaper alternatives of frozen and processed products and no brand, or other reasons (see Olsen, 2004 as a review).

But almost seafood/fish products are perceived as expensive by consumers in China.

Thus, in this study, price/cost in PBC is defined as a barrier on the consumption of Norwegian salmon, because of an obvious difference, when comparing the differences between Norwegian salmon and other fish products.

#### 2.5 Country of Origin (COO)

According to Ahmed and d' Astous (2008), global companies that are operating in highly competitive domestic and foreign markets need to understand consumers' perceptions and evaluations of foreign-made products. The Country of Origin (COO) phenomenon mirrors the global marketplace's increasing complexity. In academic research, Hugstad and Duur (1986) suggest that a significant proportion of consumers will interest in COO information before making a purchase. The COO can be described as one of many attributes in a product (Wang & Chen, 2004).

The COO is considered as an extrinsic cue, and often used by consumers in the process of evaluation (Bilkey and Nes, 1982; Cordell, 1992; Elliott and Camoron, 1994). When information lacks or it is ambiguous, almost consumers prefer to rely on country of origin to infer the quality of the product (Chryssochoidis et al, 2007).

Samiee (1994) defined the COO effects as the influences of evaluation, positive or negative, on the consumer's choice processes or subsequent behaviors. According to the conclusion of Vida & Reardon (2008), three dimensions of COO effects are described as cognitive (quality evaluation through country image), normative (social and personal norms related to COO, such as consumer ethnocentrism) and affective (i.e. symbolic and emotional value of COO, such as conspicuous consumption) dimensions. Therefore, Ahmed and d'Astous 2008 conclude that COO is possible to influence consumer preferences (attitude) (Knight and Calantone, 2000) and purchase intentions (Kim and Pysarchik, 2000). For example, consumers show their willingness to buy or reject the foreign products, because of quality evaluation and conspicuous consumption, or consumer ethnocentrism.

Besides, the COO effects depend on the product categories (product-specific) (Balabanis and Diamantopoulos, 2004; Sharma et al., 1995, in Piron, 2000; Cordell, 1992). In food context, Luomala (2007) asserts that COO is one product attribute that affects the meanings consumers associate with food. Japanese sushi, Scottish haggish, Turkish kebab, and Savo kalakukko (the famous fish pasty made in Eastern Finland) serve as illustrative examples (Luomala, 2007). However, in our knowledge, COO-effect is lees involved in the study of food context, especially of seafood context (Olsen & Olsson, 2002).

The study assumes that COO effects are determined by three constructs of country image, consumer ethnocentrism, and conspicuous consumption. The following is to specifically introduce these three determinants.

#### 2.5.1 Country image

Olsen and Olsson (2002) have used the COO to correlate to the term attitude-evaluation consistency as a construct definition of the relationship between belief-based evaluation of country-image and a global evaluation of country-image. In addition, a number of studies have been argued country image (e.g. Roth & Romeo, 1992; Skaggs et al., 1996; Han, 1989 & 1990). Roth & Romeo (1991) conclude that the determinants of country image include such variables as representative products, national characteristics, economic and political background, history, and tradition. One of the earliest studies on country image by Nagashima's (1970) definition as: "the picture, the reputation, the stereotype that businessmen and consumers attach to products of a specific country".

In examining the role of country image, Han (1989 and 1990) argues country image as a "halo" that consumers use to infer the quality of an unknown foreign brand (Han, 1989). Especially consumers' inability to detect true quality, they will turn to country

image to infer the quality of unknown products (Huber and McCann, 1982). As a latter definition of country image is described as consumers' general perceptions of quality for products made in a given country (Bilkey and Nes, 1982).

Some researches have involved the country image as quality evaluation in food (Skaggs et al., 1996; Knight et al., 2005) and seafood (Olsen & Olsson, 2002) context. As an example of Skaggs and his colleagues (1996), consumers may infer from their knowledge of a particular Swiss cheese that all Swiss food products are high quality, thereby supplying all Swiss food exporters a positive externality of the image achieved by cheese manufacturers.

In addition, Han (1989) asserts that a definition of country image is not only needed to relate specific country, but also to more specific product perceptions from a marketing perspective. Also the evaluations of country image are based on the developed level of the country, as an example that people in developing countries evaluates the products of developed countries as high quality. Therefore, the study attempts to define Norway's image as Chinese consumers' perceptions of all attributes for salmon made in Norway (Bilkey and Nes 1982; Han 1989).

#### 2.5.2 Consumer Ethnocentrism

To consuming products form other countries, a lot of researches argue that ethnocentrism as a personality trait is a heavy affect on COO effects when comparing imported versus domestic product and service choices in several countries (Vida & Fairhurst, 1999). For example, ethnocentric consumers prefer domestic goods because they believe that products from their own country are the best (Klein et al., 1998). Shrimp and Sharma (1987) state that, "People who are highly consumer ethnocentric feel that purchasing foreign products is wrong because it hurts the domestic economy, results in loss of jobs, and is unpatriotic". Ethnocentrism has been suggested as the

strongest motivating factors in the contemporary global marketplace (Forbes, 1985). Especially, since all of countries are having to facing on the influences of finance crisis, consumers will hold stronger ethnocentric attitudes on product choices.

Therefore, consumer ethnocentrism (CE) plays a role as an individual-level construct in understanding the role that country-of-origin plays in the marketplace of economic environment (Chryssochoidis et al., 2007), and can provide an explanation as to why consumers prefer domestic over foreign products even when there is no obvious reason for such a preference (e.g. when the foreign products are of fashioner or cheaper) (Shimp and Sharma, 1987). Chryssochoidis et al (2007) defines "ethnocentrism is based on the formation of "we-group" feelings, whereby the in-group is the focal point and all out-groups are judged in relation to it". Similarly, Levinson (1950) linked ethnocentrism to cultural narrowness in explaining behavioral tendencies of accepting those with similar culture and rejecting others with dissimilar culture.

Consumer ethnocentrism is possible to be measured through the appropriateness of purchasing foreign-made products or using foreign-origin services, that way is also called the Consumer Ethnocentrism Test-Scale (CETSCALE) (Shimp and Sharma, 1987). CETSCALE is a 17-item measure of consumer ethnocentrism (Lindquist et al. 2001). Some authors have asserted that CETSCALE is superior to demographic measures when attempting to understand the way markets are segmented and in the positioning of products and services (Herche, 1992; Shimp & Sharma, 1987). In general, some researchers depend on their aims to use their modified CETSCALE for focusing on employment impact, patriotism, economic impact in studies (e.g. Lindquist et al. 2001, Cleveland et al. 2009).

The influence of ethnocentrism will also be affected by the developed levels of the different regions (Lindquist et al., 2001). As some researches show that consumers in developed countries tend to perceive domestic products as being of higher quality

than imported products (Damanpour, 1993; Dickerson, 1982; Eliott and Cameron, 1994; Herche, 1992; Morganosky and Lazarde, 1987) whereas the reverse is true for consumers in developing countries (Agbonifoh and Elimimian, 1999; Bow and Ford, 1993; Sklair, 1994; Wang et al., 2000).

Besides, the impact of ethnocentrism on COO effects could be influenced by product categories (Orth & Firbasova, 2003). Sharma et al. (1995) indicated that the less important product categories will be showed the greater ethnocentric tendencies and behavior by consumers. In food researches, ethnocentric consumers prefer to buy domestic food products (e.g. yogurt by Orth & Firbasova, 2003; Chocolate by Dosen & Krupka 2007) versus foreign products, but the condition is that the two foods are same quality. However, the ethnocentrism of seafood context has not been measured in my knowledge.

The study defines ethnocentrism (CE) as an individual's tendency to prefer to purchase products of other fish from China as superior compare to Norwegian salmon, and the belief that it is inappropriate to purchase imported products, such as Norwegian salmon, due to adverse effects such purchases may have on domestic employment and the national economy. In addition, the financial crisis heavily impacts on every country, including China so that Chinese consumers prefer to buy seafood or fish products for supporting the development of Chinese fishery industry. Therefore the study assumes that CE has a significant effect on COO effects.

#### 2.5.3 Conspicuous consumption

Although consumers of Mainland China were more ethnocentric than of Indian and Taiwan (Hsu & Nien 2008), China is a developing country so that consumers could be influenced on choosing products between foreign countries and domestic country by the other factor-conspicuousness.

Motivated by a desire to impress others with their ability to pay particularly high price for prestige products, conspicuous consumers (CC) may be inspired by the social rather than the economic or physiological utility of merchandise (Wang & Chen, 2004). Therefore several researches call the behavior of this motivation as Conspicuous consumption (e.g. Corneo & Jeanne, 1997; Bagwell & Bernheim, 1996). Conspicuous consumption can be defined as a motivation that consumer are willing to purchase a luxury good in order to advertise their wealth and thereby achieve greater social stares (Veblen, 1922).

Besides, Wang and Chen (2004) found that conspicuousness is possible to affect on COO through perceived wealth of products, also reduce the influences of consumer ethnocentrism toward imported products. For example in developing country a conspicuous consumer desires to buy imported products as perceived luxury, and rejects domestic products for invidious comparison refers to situations in which a member of a higher class consumes conspicuously to distinguish himself from members of a lower class (Bagwell & Bernheim, 1996; Wang & Chen, 2004).

Anecdotal evidence suggests that conspicuous consumption may be empirically significant in markets for luxury goods. Therefore, the influence of conspicuousness is depended on product categories, namely specific products. Bagwell and Bernheim (1996) give an example of conspicuousness in car context that BMW is successful to adapt the conspicuousness in advertisement as "a BMW in every driveway might thrill investors in the short run but ultimately could dissipate the prestige that lures buyers to these luxury cars." However, in food/seafood, there is little research to study the influence of conspicuous consumption, because almost food can not be perceived as luxury. But Norwegian salmon has obvious difference on price when comparing to domestic fish.

Some the researches of conspicuous consumption in China found that the "face" is extremely important to Chinese consumers in social life. For the reason, consumers in China whose CC values are very strong may have a stronger intention to buy imports from developed countries than other countries, even if they are also ethnocentric consumers.

Thus the study defines conspicuous consumption as perceived wealth from Norwegian salmon and willingness to pay a higher price to purchase it for promoting or showing their signal wealth (e.g. luxury and social status). Moreover, the conspicuous consumption is suggested to be a significant determinant on the COO effects.

#### 2.6 The applied model and hypotheses

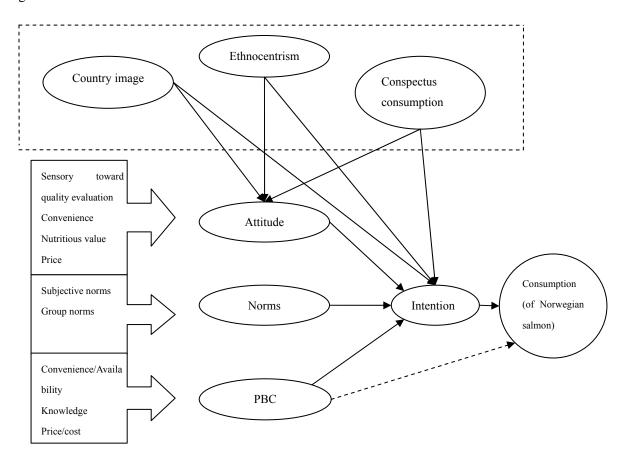
The theory of planned behavior is possible to apply in many areas like consumer behavior, marketing research, and social psychology. TPB is supported by several evidences from meta-analyses to explain and predict consumer behavior (e.g. Ajzen, 1991; Godin & Kok, 1996; Sutton, 1998; Conner & Armitage, 1998; Armitage & Conner, 2001). For example in seafood/fish context, the TPB explains for around of 40% variance of behavior and 52-63% of intention in researches of Olsen (2001; 2003; 2005; 2007) and Verbeke and Vackier (2005). Therefore, TPB is able to explain the consumers' food/seafood choice behavior convincingly (Ajzen, 1991; Patch et al., 2005; Chen, 2007; Mahon et al, 2006; Olsen, 2004; Verbeke & Vackier, 2005).

The study involves the COO effects as the three constructs of country image, consumer ethnocentrism and conspicuous consumption based on some empirical researches (Ahmed & d' Astous, 2008; Chryssochoidis et al, 2007; Trondsen et al, 2004; Wang and Chen, 2004). These COO effects are possible to influence on consumers' attitude and intention toward eating Norwegian salmon. In addition, consumer ethnocentrism has negative influence on attitude and intention toward imported products (Klein et al., 1998), whereas country image and conspicuous

consumption might improve the consumption of imported product, which are from developed countries or luxury (Wang & Chen, 2004).

Thus, the present study uses the classical TPB and assumed COO-effect model for its causal relationship test, and the framework is presented in Figure 2.

Figure 2.2 The extended TPB model



According to the expanded TPB, the PBC is suggested to have double influences on both the intention and consumption of Norwegian salmon.

H1: The consumption (of Norwegian salmon) is significant determined by intention, perceived behavior control.

H2: Intention is significantly determined by attitude, subjective norms, perceived behavioral control, country image, consumer ethnocentrism, and conspicuous

consumption.

This study wants to present some descriptive results of some of the main constructs like perceived quality, convenience/availability, and price/cost on consumers' attitudes toward the consumption salmon. Besides, the COO effects are important determinants on consumers' attitudes and intention toward the consumption of salmon.

H3: Sensory evaluation (perceived quality), nutritious value, perceived value, convenience/availability, and price/cost significantly form consumers' global evaluation / attitude (toward eating Norwegian salmon).

H4: Country image, consumer ethnocentrism, and conspicuous consumption significantly influence consumers' global attitude.

The study will also discuss which factors are most important in explaining how norms and PBC are to impact on intention and the consumption of salmon. Therefore, the study bases on some empirical findings to assume the followings:

H5: The expectations and pressure from family member, friends, and business partners (colleagues) significantly will increase the predictive power of general norms (important others).

H6: Availability/convenience, knowledge, and price/cost will significantly influence perceived behavioral control.

# 3. Methodology

This part is to present the process of data collection, questionnaire, and analysis methods separately. Several methods are mainly employed in the section of analysis, such as factor analysis, structural equation modeling, and testing for the reliability of constructs and mean difference.

### 3.1 Data collection

Survey data was collected through questionnaires in Beijing during April 2009. The final questionnaire was completed by 208 respondents, who are selected randomly. Moreover, since the objective of this study is to explain the consumption of Norwegian salmon using the modified TPB, all of respondents are familiar with Norwegian salmon, and have been eaten Norwegian salmon at least once during the last two years.

Table 3.1 Socio-demographic characteristics of the sample (% of respondents, n = 208)

			50105 01 0110 50	imple (70 of respondents) if	,	
Gender:	Male	48.6	Children in h	nousehold Yes	32.7	
	Female	51.4		No	67.3	
Marital status	Single	38.5	Area	Rural	7.2	
	Married	61.5		Urban	92.8	
Age	17 and below	4.8	Education	PhD	2.9	
	20~39	60.6		Master's degree	19.7	
	40~59	33.6		Bachelor Degree	34.1	
	60 and more	1.0		Certificate	29.8	
				Technical School	1.9	
				High School	7.7	
				Middle School	3.4	
				Primary	0.5	
				No schooling	0	
Income of resp	oondent (RMB)		Income of fam	nily (RMB)		
Under 2000 R	MB	14.4	Under 4000 RMB		11.1	
RMB 2000~33	300	30.8	RMB 4000~6600			
Over RMB 33	300	57.2	Over RMB 6	6600	57.2	

The respondents were personally interviewed at home or in the restaurants and completed a questionnaire requiring 15-25 minutes of their time. The ratio of female and male is very close to 1:1; the age of the respondents ranged from 17 to 80 years; the samples were almost taken from urban (92.8); the married respondents account for 61%; 32.7% of respondents have children. There are also some important groups to be show in Table 3.1, such as education, personal and family income.

### 3.2 Measurements of the constructs

## 3.2.1. Consumption and behaviors

In our general model, this study defines behavior as an individual's self report of frequency on eating Norwegian salmon without concerning all aspects of context. However, we will ask the respondents some questions about what kind of meals they usually eat, and where they eat Norwegian salmon.

First, the consumption of Norwegian salmon is needed to measure through an individual's self report of past consumption frequency of fresh, frozen, smoked salmon from Norway during a given period (Twice a week or more often, Appr. once a week, 2-3 times a month, etc), because the differences of taste will be significantly different influences on food/seafood consumption (Honkanen, 2003; Berg et al., 2000; Gummenson et al., 1996; Koivisto & Sjoden, 1996). Using similar frequency (over the last two year and recently over the last two weeks) has been used by Olsen (2001) in the seafood context. Respondents will need to answer the question as "How many times you think you have eaten Norwegian salmon during the last period of time."

	Twice a	Appr.	2-3	Appr.	Appr.	Appr.	2-3	More	Never
	week or	once a	times	once a	every	every	times	seldom	
	more	week	a	month	second	third	a year		
	often		month		month	month			
	8	7	6	5	4	3	2	1	0
Fresh									
Frozen									
Smoked									
Totally salmon									

Second, the situation is significant related to food consumption (Meiselman, 2000). The item has been used in previous researches (e.g. Furst et al., 1996; Marshall, 1988). In this question, respondents will base on four situations to indicate separately that how many times in average during last year you have consumed Norwegian salmon as a meal. The measurement has been used in marketing and social science, as well as in the area of food consumption behavior (Raats et al, 1995; Myrland at al, 2000; Olsen 2001, 2005; Verbeke & Vackier, 2005). Theses situations (at home, at restaurant, Sushi/sashimi outlet etc) have been used in Report 2009 by NSEC.

	Twice a	Appr.	2-3	Appr.	Appr.	Appr.	2-3	More	Never
	week	once a	times	once a	every	every	times	seldo	
	or more	week	a	month	second	third	a year	m	
	often		month		month	month			
	8	7	6	5	4	4	2	1	0
At home									
At restaurant									
Sushi/sashimi outlet									
As a ready to eat									
meal									

### 3.2.2 Attitude

The study defines attitude both as a global evaluation, as well as an evaluation of different attributes or beliefs of Norwegian salmon. Attitude toward the consumption

of salmon from Norway is assessed as the evaluations of consuming Norwegian salmon as a meal. The attitude question was framed by the following introduction. "When you eat Norwegian salmon, how would you evaluate (express your feelings toward) this product?" They were then advised to evaluate Norwegian salmon from 1 (negative feeling) to 7 (positive feeling)" by 7 items (e.g. bad / good, unsatisfied / satisfied, unpleasant / pleasant, dull / exiting, negative/positive, foolish/wise, and outdated/trendy) of semantic differential, and these items are frequently used to measure general attitude in both marketing (Stayman & Batra, 1991) and seafood consumption behavior (Olsen, 2001; 2007; Olsen et al., 2008; Verbeke & Vackier, 2005).

	1	2	3	4	5	6	7	
Bad								Good
Unsatisfied								Satisfied
Unpleasant								Pleasant
Dull								Exiting
Negative								Positive
Foolish		<u> </u>			<u> </u>			Wise
Outdated								Trendy

This study also measures salient beliefs of Norwegian salmon about sensory (perceived quality,), negative affects, perceived risk, perceived nutritious value, price/cost and which are mainly for measuring salient food attributes forming a general attitude of food (Olsen, 2004; Olsen et al., 2008; Aikman, 2006).

The perceived quality is measured by four items of variable/stable quality, taste, texture, appearance, color, attractive, risk for healthy, and safe (Olsen, 2004; Olsen et al, 2007; Verbeke et al., 2007; NSEC, 2009). Perceived nutrition will be assessed by several items (e.g. healthy, fatty, nutritious, and natural) (Olsen et al., 2008; NSEC, 2009). Two items of "value for money" and "satisfied with price" will be applied to

access the perceived value from Norwegian salmon (Olsen et al., 2007; 2008). These items are presented in semantic differential formats with 7-points scale, as from "bad/low evaluation" to "good/high evaluation".

	1	2	3	4	5	6	7	
Variable quality								Stable quality
Bad taste								Good taste
Bad texture								Good texture
Poor appearance								Nice appearance
Bad color								Excellent colour
Unattractive								Attractive
Unsafe								Safe
Risky for health								Without health risk
Fatty								lean
Unhealthy								Healthy
Not Nutritious								Nutritious
Unnatural								Natural
Low value for money								Good value for money
Unsatisfied with price								Satisfied with price

Negative effects (unpleasant smell, unpleasant bones) will be in Likert scale with 7-point from "totally disagree" to "totally agree" to measure, and have been applied by Olsen, 2001 and Verbeke and Vackier, 2005. In addition, the study will measure that the eating Norwegian salmon could be leaded to disappointment (Aikman & Crites, 2007; Desmet & Schifferstein, 2008).

	Totally disagre e	Disagre e	Disagre e a little	Neither agree nor disagree	Agree a little	Agree	Totally agree
	-3	-2	-1	0	+1	+2	+3
Norwegian salmon has bad smell							
Bones in Norwegian salmon is a problem for me							
Eating Norwegian salmon is discusting							
Eating Norwegian salmon is a disappointment to eat							

### 3.2.3 Intention

Intention is often measured by "will", "expect", "plan", and "want" with the probability estimates such as "unlikely and likely" in empirical researches in social science and seafood consumption studies (Armitage & Conner, 2001; 1995; Verbeke & Vackier, 2005). The respondents need to answer their probability of intention of eating Norwegian salmon in the near future.

Very unlikely									
In the near future	1	2	3	4	5	6	7		
I will to eat Norwegian salmon									
I plan to eat Norwegian salmon									
I want to eat Norwegian salmon									
I desire to eat Norwegian salmon									

### 3.2.4. Different norms

### Subjective norms

In the study, subjective norms will be assessed by using three items about expectation and pressure from important people and then specified as normative beliefs about important groups (family, friends, and business partners/colleagues). These items

apply Likert scale with 7-points from "totally disagree" to "totally agree" (Olsen, 2001; Verbeke & Vackier, 2005; Rivis & Sheeran, 2003).

	Totally disagree	Disagree	Disagree a little	Neither agree nor disagree	Agree a	Agree	Totally agree
-	-3	-2	-1	0	+1	+2	+3
People who are important to me							
want me to eat Norwegian							
salmon							
People who are important to me							
expect me to eat Norwegian							
salmon							
People who are important to me							
encourage me to eat Norwegian							
salmon							
My family wants me to eat							
Norwegian salmon			ч	_	u	u	u
My family expects me to eat			П		П	П	
Norwegian salmon							
My family encourages me to eat							
Norwegian salmon		_			J	u	u
My friends want me to eat			П		П	П	
Norwegian salmon							
My friends expect me to eat							
Norwegian salmon							
My friends encourage me to eat							
Norwegian salmon							
Business partners/ colleagues							
want me to eat Norwegian							
Salmon							
Business partners/ colleagues			П		П		П
expect me to eat Norwegian							
salmon							
Business partners/ colleagues	П						
encourage me to eat Norwegian							
salmon							

### Descriptive norms

According to Ajzen (2002), descriptive norms is an additional construct in addition to subjective norms within TPB, and described as "what significant others themselves do". The respondents need to answer "how often you believe which kind of person to eat Norwegian salmon" (Tuu et al., 2008). The study measures descriptive norms through five items of "People you know", "people who are important for you", "your family", "your friends", and "business partners". The items are measured on a 7-point frequency analysis with endpoints from "Never-1" to "Everyday-7". The measures are adapted from previous research (Tuu et al., 2008).

	Never						Everyday
	1	2	3	4	5	6	7
People you know							
People who are important for you							
Your family							
Your friends							
Business partners (colleagues)							

#### 3.2.5 Perceived behavior control

Three items are used to assess the general construct of perceived behavioral control by Likert scale; "How much personal control do you have over choosing Norwegian salmon as a meal", scaling from 1 (not control) to 7 (complete control); "How easy or difficult is it for you to choose Norwegian salmon as a meal", scaling from 1 (very difficult) to 7 (very easy); and "if I wanted to, I could easily eat Norwegian salmon as a meal at least once a one month", ranging from 1 (very unlikely) to 7 (very likely). The measurement of these items is found in several studies of social psychology (Fishbein & Ajzen, 1980; Armitage & Conner, 2001) and food consumption (Kassem & Lee, 2003).

	No contro	ol				Fu	ll control
How much personal control do you							
have over choosing Norwegian salmon							
as a meal?							
Very difficult Very easy							
How easy or difficult is it for you to choose Norwegian salmon as a meal?							
	Very unli	kely				V	ery likely
If I want, I could easily choose							
Norwegian salmon as a meal at least							
once a one month							

### Self efficacy

In this study, self efficacy is described as internal resources, like convenience/availability, and knowledge, these beliefs are assumed to inhibit or facilitate the performance of behavioral intention to eat Norwegian salmon. Two items of "I am confident that I can eat Norwegian salmon if I want" and "For me, eating Norwegian salmon in near future will be easy" are used to measure self efficacy in Ajzen (2002) and Francis et al (2004).

	Totally disagree	Disagre e	Disagre e a little	Neither agree nor disagree	Agree a little	Agree	Totally agree
	-3	-2	-1	0	+1	+2	+3
I am confident that I can eat Norwegian salmon if I want							
For me, eating Norwegian salmon in the near future, will be easy							

### Convenience (availability)

Olsen et al. (2007) argue that convenience/availability is related to every stage for preparing the food. Therefore, the convenience characteristics in the consumption of fish are related to buying, preparing time, storage, cooking ways, and cooking time (Gofton, 1995). The convenience/availability is measured by several items of "time", and "effort" (Olsen, et al, 2008;). The items are framed on a Likert scale, as "Totally

disagree =-3" and "Totally agree =+3".

	Totally disagree	Disagree	Disagree a little	Neither agree nor disagree	Agree a little	Agree	Totally agree
	-3	-2	-1	0	+1	+2	+3
Norwegian salmon is very available in Beijing							
It is fast and easy to buy Norwegian salmon							
It is fast and easy to prepare Norwegian salmon							
It is fast and easy to cook Norwegian salmon as a meal							
Norwegian sSalmon is a fast and easy product to have as a meal in my home							

## Knowledge

Knowledge is not only linked to information of products (e.g. salmon), also related to Country of origin (COO). Therefore, the construct is measured by six items of "I am familiar with salmon/Norwegian salmon", "My friends consider me as an expert on salmon/Norwegian salmon" and "Compared to an average person, I know a lot about salmon/Norwegian salmon" (Olsen et al., 2008). These items are applied Likert scale with 7-points from "Totally disagree=-3" to "Totally agree=+3".

	Totally disagree	Disagre e	Disagre e a little	Neither agree nor disagree	Agree a little	Agree	Totally agree
	-3	-2	-1	0	+1	+2	+3
I am familiar with salmon							
Compared to an average person, I know a lot about salmon							<u> </u>
My friends consider me as an expert on salmon				0			
I am familiar with Norwegian salmon							
Compared to an average person, I							

know a lot about Norwegian salmon				
My friends consider me as an expert on Norwegian salmon	0	٥		

### Controllability

Since the controllability as personal control merely impacts on behavior (Rhodes & Courneya, 2004), it could be a determinant on that the behavior is completely up to the actor. Two items of "It is mostly up to me if I eat Norwegian salmon" and "The decision to refer for eating Norwegian salmon is beyond my control" will be used in this study (Ajzen, 2002; Francis et al, 2004). The respondents need to indicate these two questions by Likert scale with 7-points from "Totally disagree=-3" to "Totally agree=+3".

	Totally disagree	Disagre e	Disagree a little	Neither agree nor disagree	Agree a little	Agree	Totally agree
	-3	-2	-1	0	+1	+2	+3
It is mostly up to me if I eat  Norwegian salmon or not							
The decision to eat or not to eat  Norwegian salmon is beyond my  control							

### 3.2.6 Country-of-origin

In the study, the COO effects are assumed to impact on consumers' attitude and intention. The COO effects are constructed and reflected by the three constructs of country image, consumer ethnocentrism, and conspicuous consumption. Thus the following is specifically to describe the questionnaire of COO effects through country (country image), people (Ethnocentrism), and product (conspicuous consumption).

### Country image

Many different methods for the measurement of country images have been described in the current marketing literature (Han, 1990; Kaynak & Kara, 2000). Han (1989, 1990) describes country image as "halo", which is measured by quality, technically, and serviceability. A seven-point likert scale will be used by several items, for example, "salmon made in Norway are carefully produced" and "salmon from Norway is environmentally friendly" (Roth & Romeo, 1991; White, 1979; Narayana, 1981; Johansson & Nebenzhal, 1986; Han & Terpstra). Note that country image is measured at the level of specific product categories (e.g. Norway's image as a salmon producer).

	Totally disagree	Disagre e	Disagre e a little	Neither agree nor disagree	Agree a little	Agree	Totally agree
	-3	-2	-1	0	+1	+2	+3
salmon made in Norway are carefully produced							
salmon from Norway is environmentally friendly							
Norway salmon is cultured by advanced technically.							<u> </u>
salmon from Norway are produced by people with high expertise							<u> </u>
salmon from Norway have a high quality							
Norwegian salmon are sold in many countries							
Norwegian salmon has a good reputation							

#### **Ethnocentrism**

Consumer ethnocentrism is often accessed by the modified-CETSCALE (Hsu & Nien 2008; Lindquist et al. 2001; Klein et al, 1998; Klein et al 2006). In this study, I select five items form the CETSCALE to measure the construct of CE. These items are mainly from the point of employment impact, patriotism, and economic impact to

measure the CE (Klein et al 2006; Lindquist et al. 2001, Cleveland et al. 2009). Respondents will need to ask in Likert scale with 7-points from "Totally disagree=-3" to "Totally agree=+3" with statements regarding consumer ethnocentrism.

	Totally disagre e	Disagre e	Disagre e a little	Neither agree nor disagree	Agree a little	Agre e	Totally agree
CETSCALE	-3	-2	-1	0	+1	+2	+3
A real Chinese should always buy Chinese-produced seafood products.							
Chinese should not buy foreign seafood products, because this hurts Chinese business and causes unemployment.			0				
Only those seafood products that are unavailable in the China should be imported							
Chinese seafood products, first, last, and foremost							
Chinese who purchase seafood products made in other countries are responsible for putting their fellow Chinese out of work.							

### Conspicuousness (Luxury)

The conspicuous consumption scale is based on items from Marcoux et al. (1997). These items are based on works (Woods et al., 1985), purposes for buying (Woods et al., 1985), the meanings of consumption (Tharp and Scott, 1990), and consumption value (Sheth, Newman and Gross, 1991). The complete scale is consisted by 29 items. However, the study will choose some of the 29 items depended on the characteristics of Norwegian salmon, such as fashion and showing off self (NSCE, 2007). Respondents will need to ask in likert scale with 7-points from "Totally disagree=-3" to "Totally agree=+3" with statements regarding conspicuous consumption.

	Totally disagre e	Disagre e	Disagre e a little	Neither agree nor disagree	Agree a little	Agree	Totally agree
	-3	-2	-1	0	+1	+2	+3
Eating Norwegian salmon is fashionable.							
Eating Norwegian salmon might be							

showing off .				
Norwegian salmon means wealth.				
Eating Norwegian salmon is social status symbol.				
Eating Norwegian salmon is a symbol of success and prestige				

In the end of questionnaire, the study bases on NSEC's report (2009) to show some information of relative demographic characteristics, such as gender, age, marital status, income, education, and living area.

## 3.3. Analytical methods and procedures

The purpose of this study is to explore the attitude and consumption of Norwegian salmon in Beijing; and a further understanding and testing of an extended Theory of Planned Behavior (Ajzen, 1991). Descriptive and factor analysis is used to explain and explore the data of involved factors. In addition, T-test and ANOVA are used to test the mean difference of some variables in this study. Constructs' reliability and validity is tested by using exploratory and confirmatory factor analysis (CFA), as well as reporting correlation between each two constructs. Finally, structural equation modeling in Amos is performed in order to test several models within our theoretical framework.

### 3.3.1. Exploratory factor analysis and test of reliability

Factor analysis is used widely to explain the underlying structure in a data matrix, and is able to achieve for two purposes of exploratory and confirmatory between two items. The principal component analysis (PCA) will be used in the thesis for these two purposes. In addition, for almost all data analysis situations, Johnson (1998) recommends PCA as a first step, because it can and should be performed on asset of data prior to performing any other kinds of multivariate analyses.

First, the study will use the factor loadings to inspect the convergent validity of proposed constructs, then to explore the latent constructs. If the items have high factor loadings of items, it indicates the convergent validity.

In addition, an overall test suitability of data is necessary before factor analysis is finished, and performed through two tests of Bartlett test of sphericity, and measure of sampling adequacy (MSA). Basing on Pallant's (2005) suggestions, Bartlett test of sphericity requires the p-value less than 5%. Also MSA index is larger than 0.6 as minimum value for significant of factor analysis (Pallant, 2005).

Furthermore, the inter-correlation of variables will be tested. Note that if we find the results that almost coefficients are less than 0.5, then factor analysis could be not appropriate here (Hair et al, 1995).

Latent root criterion (eigenvalues > 1) and orthogonal rotation method (Varimax) will be used for defining the number of factors and interpreting the factors. But only when the items have loading factors are greater than 0.5, these items will be extracted and run in subsequent analyses.

Reliability is defined as the degree to which the independent variable is "error-free" (Hair et al., 1995). In data analysis, the internal consistence of measures (reliability) is most often measured by Cronbach's alpha. The higher Cronbach's alpha will be better, because it implies the high reliability of measurements. Note that the minimum acceptable level for a high enough of reliability among a given group of measures is 0.7 (Pallant, 2005). Even though Cronbach's alpha of items is greater than 0.7, the reliability of measures can not ensure validity of constructs (Hair et al, 1995). Therefore, two tests of convergent and discriminant validity of constructs will have to be tested by confirmatory factor analysis (in Amos).

### 3.3.2. Descriptive analysis

In order to give some practical suggestions, the study is not simply to understand causal relationships among concepts, but also to explain several important constructs (consumption, attitude, perceived quality, COO effects, etc) for describing the consumption of Norwegian salmon, and local consumer's attitude in Beijing. The frequency analysis is used in description part mainly. Meanwhile the study will show the correlation of two frequencies of kind and situation consumptions. The high correlation between two frequencies of consumption indicates that the two items are suitable to describe the consumption construct, and are possible within testing model. Procedures of factor analysis, reliability test, and descriptive analysis are performed by SPSS 15.0.

### 3.3.3. Confirmatory factor analysis

Confirmatory factor analysis (CFA) is a statistical technique used to verify the factor structure of a set of observed variables. CFA allows the researcher to test the hypothesis that a relationship between observed variables and their latent constructs exists. The researcher uses the relative theory and empirical research postulates the relationship pattern a priori and then tests the hypothesis statistically.

CFA is frequently used as the first step to assess the proposed measurement model in a Structural Equation Model (Bollen, 1989). Structural equation modeling (SEM) is described as a robust technique for test causal relationships.

On the other hand, the study will use two aspects of convergence and discriminates to confirm the measurement modeling analysis. Convergent validity is the degree to which an operation is similar to (converges on) other operations that it theoretically should also be similar to (Hair et al., 1995). When estimating Convergent validity of structures, we need to take look the individual item loading (standard factor loadings),

composite reliability and variance extracted. According to the recommendation by Hair et al (1995), the values of composite reliability and variance extracted need to exceed 0.6 and 0.5 respectively. They can be calculated by two following equations.

Composite reliability =  $(\sum std. \ loading)^2/((\sum std. \ loading)^2 + \sum 2)$ . Variance extracted =  $\sum std. \ loading^2/(\sum std. \ loading^2 + \sum 2)$ .

Besides, discriminant validity is to explain that how distinct a construct from the other one. discriminant validity of constructs will be evaluated though inter-correlations among latent constructs. If the inter-correlations are significant high, the two constructs are not discriminant validity. Put differently, a construct need to be distinct from the other one. When measuring discriminant validity, we will use the approach of Fornell and Arcker (1981). The approach will be specifically introduced in SEM section of Chapter 4.

### 3.3.4 Structural equation modeling (SEM)

If the convergent and discriminant validity are confirmed by measurement models, the method of two-step approach will be applied in SEM for the main purpose of this study. Namely, the structural models are estimated to test the causal relations based on figure 2.2.

The model fit needs to look at Chi-square ( $\chi$ 2), p-value, and RMSEA. If Chi-square ( $\chi$ 2) and RMSEA are high, but GFI (goodness-of-fit index) is low, the study will try to remove some insignificant items for a good fit. According the suggestions of Hair et al (1995), the acceptable model fit are indicated by GFI values exceeding 0.90, and RMSEA values below 0.08.

Note that confirmatory factor analysis and structural models will be operated in Amos

## 7.0 packages.

To sum up, the study will use the exploratory factor analysis in order to choose the high factor loadings in the following analyses, since high factor loadings indicate a good convergent reliability, and are suitable to describe same construct. Also the selected items should belong to same construct, namely discriminant validity. But the low factor loadings are leaved out. Also the study analyzes and discusses the items that are suitable and significant to describe the constructs in following analyses.

## 4. Results

The main objective of this chapter is to show that how the consumption of Norwegian salmon is influenced by several constructs, and is explained by the extended TPB model. Firstly, the study needs to show the exploratory factor analysis and reliability test to choose which items are suitable to describe the constructs. According to Hair et al (1995), if the factor loadings of items are low (<0.5), or cross loadings with other factors, these items should not be considered as suitable indicator for the factor in question. In addition, the Cronbach's alpha of constructs should exceed the recommended level (0.7).

When the latent constructs can be defined and their reliabilities are confirmed by first step, I am going to move the second step for showing the descriptive analysis based on defined constructs. The distributions and means of several important constructs will be measured in description analysis.

The third process is to estimate confirmatory factor analysis (CFA) based on two-step approach (CFA) (Olsen, 2001 and 2007). The study will select some salient from the above measures, then to confirm that every latent psychological measure tips convergent validity and discriminant validity. In addition, the correlations between each two constructs will be measured in order to indicate the relationship between them.

When convergent and discriminant validity of constructs are confirmed, the last process is to measure the structural model evaluation (SEM). The SEM will be based on some suggested indexes by Hair et al (1995).

## 4.1 Exploratory factor analysis and reliability test

The exploratory factor analysis (EFA) and reliability test (Cronbach's alpha) will be carried out in the extended TPB model and attributes beliefs model. In this section, some indexes need to be explained, such as factor loadings and Cronbach's alpha. The EFA, moreover, is measured by visual inspection of inter-correlation in matrix, Bartlett test for presence of nonzero correlations, or Measure of Sampling Adequacy (MSA) (Hair et al, 1995). According to the recommendation of Hair and his colleagues (1995), Bartlett tests are significant at 0.001; all of MSA indexes are above 0.7.

#### 4.1.1. Constructs within extended TPB model

There are seven constructs, which includes 36 items (7 items for attitude, 3 items for subjective norms, 3 items for PBC, 4 items for intention, 5 items for consumer ethnocentrism (CE), 5 items for conspicuous consumption (CC), 9 items for country image), to be involved in the extended TPB model. Factor loadings of items, explained variance and Cronbach's alpha of constructs are showed in the following table 4.1.

Table 4.1: Factor loadings, explained variance and Cronbach's alpha of for extended TPB model

			Con	ponent			
	Attitude	Intention	SNs	PBC	CI	CE	CC
Bad/Good	.69	<u>.32</u>					
Unsatisfied/satisfied	.77						
Unpleasant/ Pleasant	.77						
Dull/ Exiting	.78						
Negative/ Positive	.85						
Foolish/ Wise	.79						
Outdated/ Trendy	.78						
I will eat in near future		.73					
I plan to eat		.82					
I want to eat		.84					

I desire to eat		.68	.36				
Important want			.86				
Important expect			.87				
Important encourage			.87				
Personal control over eating				.81			
For me eating is easy/difficult		.39		.68			
If I want, I could easily eat		<u>.43</u>		.64			
Carefully produced					.82		
Environmentally friendly					.83		
Cultured by advanced technically.					.78		
from cold and clear waters.					.84		
A pure and natural product					.81		
Produced by people with high expertise					.70		
Have a high quality					.85		
Sold in many countries					.73		
A good reputation					.78		
Always buy Chinese seafood						.67	
Chinese should not buy foreign						.87	
Only unavailable should be imported						.87	
Chinese seafood first						.82	
Purchase other countries are						.72	
responsible						.12	
Fashionable							.68
showing off							.72
wealth.							.79
social status symbol.							.86
A symbol of success and prestige							.88
Cronbach's alpha	0.90	0.87	0.94	0.74	0.94	0.88	085
Explained variance %	13.53	8.95	7.57	5.17	18.29	9.70	9.41
Cumulative explained variance %	13.53	22.47	30.05	35.22	53.50	63.20	72.61
MSA=0.87; Bartlett test = 0.000							

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

The results show that the MSA (0.87) and Bartlett test (0.000) can be within the recommended levels (Hair et al., 1995). All of factor loadings of items are within the recommended level (0.6). However, the study selects some items with high factor loadings, since these items are more important to describe the constructs. Meanwhile we should look at Correlations between items. The Correlations between items indicate the discriminant validity of items.

As table 4.1 showed, the study has chosen 24 items that are convergent validity and discriminant validity. The Cronbach's alphas of the constructs of attitude, intention, subjective norms, CE, CC, and country image are greater than 0.8, except the construct of PBC (0.74) that exceeds the recommended level (0.7) (Hair et al, 1995). Therefore, all of constructs are confirmed in reliability analysis.

In sum, the selected items can be accepted, and are appropriate to describe their constructs respectively. Moreover, all of reliability tests in the seven constructs of attitude, intention, subjective norms, PBC, CC, CE, and country image are within recommended level (Hair et al, 1995). Finally, the seven factors explain for 72.61 % of the variance in the data.

#### 4.1.2 Attribute beliefs model for explaining attitude and PBC

Totally, 34 items of eight constructs were performed in exploratory factor analysis (8 items for perceived quality, 4 items for perceived nutrition, 2 items for perceived value, 3 items for family norms, 3 items for business partners/colleagues norms, 4 items for negative effects, 5 items for convenience, and 6 items for knowledge). The results have been presented in table 4.2.

Although two attributes of perceived quality and perceived nutrition are distinguished in theoretical chapter, the results of EFA show that all of items from these two attributes describe the same construct. The study uses the perceived quality to measure the model in CFA and SEM, because the factor loadings of perceived quality are higher than of perceived nutrition. Furthermore, the perceived quality is frequently discussed in previous researches in fish context (e.g. Olsen, 2001 and 2004; Verbeke et al, 2007; Verbeke & Vackier, 2005).

The results of EFA show that there are two sub-components in convenience. The first

latent construct includes "Available in Beijing" and "Fast and easy to buy", and is defined as "availability to buy" in this study. Secondly, the other construct is described by three items of "Fast and easy to prepare", "Fast and easy to cook", and "Fast and easy product to have in my home", and is defined as convenience in the study. Therefore, the two constructs should be within the CFA and SEM respectively.

Table 4.2: Factor loadings, explained variance, & Cronbach alpha of Attribute beliefs model

				(	Component			
	Quality	Value	Family	Coworker	Negative	Availability	Convenience	Knowledge
Variable/stable quality	0.84							
Bad/good taste	0.81							
Bad/good texture	0.86							
Poor/nice appearance	0.76							
Bad/excellent colour	0.75							
Un/attractive	0.79							
Un/healthy	0.80							
Un/safe	0.81							
Fatty/lean	<u>0.80</u>							
Risky for health/without	<u>0.75</u>							
Not/high Nutrition	<u>0.80</u>							
Un/natural	<u>0.52</u>	<u>0.38</u>						
Dis/satisfied with price		0.88						
Low/high value for money	<u>0.33</u>	0.83						
Family wants			0.82					
Family expects			0.80	<u>0.35</u>				
Family encourages			0.80	<u>0.33</u>				
Colleagues want				0.86				
Colleagues expect				0.89				
Colleagues encourage				0.90				
Bad smell					0.87			
Bones					0.86			
Disgusting					0.82			
Disappointment to eat	<u>-0.37</u>				0.77			
Available in Beijing						0.90		
Fast and easy to buy						0.86		
Fast and easy to prepare						0.32	0.74	0.37
Fast and easy to cook							0.85	0.32
Fast and easy product to have							0.74	<u>0.43</u>
Familiar with Salmon								0.81
I know a lot about Salmon								0.89
Consider me as an expert on Salmon								0.88
Familiar with Norwegian Salmon								0.85

I know a lot about Norwegian Salmon								0.86
Consider me as an expert on Norwegian Salmon							<u>0.31</u>	0.82
Cronbach's alpha	0.93	0.89	0.95	0.97	0.91	0.93	0.88	0.95
Explained variance %	24.00	5.44	6.96	8.30	8.92	5.36	6.43	15.02
Cumulative explained variance %	24.00	29.44	36.40	44.71	53.62	58.98	65.41	80.43
MSA=0.89; Bartlett test = $0.000$								

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normaliza

Eight factors are explained specifically as the follows.

### (1) Perceived quality

8 items toward perceived quality were measured by EFA. The results have shown that the factor loadings are all greater than 0.75. The study employed choose five items of "Variable/stable quality" (0.84), "Bad/good taste" (0.80), "Bad/good texture (0.86)", "Un/safe" (0.80), "Un/healthy" (0.81) to test the attribute beliefs model. These five items are important in explaining the factor of perceived quality. The Cronbach's alpha of these three items is 0.93, which is within accepted level (0.7).

#### (2)Perceived value

The construct includes two items related to "Dis/satisfied with price" and "Low/high value for money". The two items are high factor loading (0.88, 0.83), and its Cronbach's alpha is 0.89, that exceeds the level of recommendation (0.7). Therefore these two items are appropriate to describe the construct. In addition, these two items were all selected within CFA and SEM.

### (3) Family norms

Family as a significant group belongs to global subjective norms (important others). The family norms are described as "family wants", "family expects", and "family encourages". The factor loadings of these item are all high, and greater then the recommended level. Also the Cronbach's alpha of construct (0.95) is much higher than recommended level.

### (4) Business partners/colleagues norms

Similarly, the group of business partners/colleagues is also one of the global subjective norms (important others). The group norms are described by three items of "colleagues want", "colleagues expect", and "colleagues encourage". The results show that the three factor loadings are 0.86, 0.89, and 0.90 respectively. The Crobach's alpha is 0.97. Thus the three items are suitable to be used in CFA and SEM.

### (5) Negative effects

Negative effects are increasingly discussed in researches (e.g. Olsen, 2004). There are 4 items to describe the construct of negative effects. The three factor loadings of "bad smell", "bones", and "disgusting" are greater than 0.8, whereas the factor loadings of "disappointment to eat" (0.77) are lower 0.8. The study decided to leave out the item of "disappointment to eat". The Cronbach's alpha of construct is 0.91, and much higher than the recommended level (0.7).

### (6) Availability to buy

Two items of "Available in Beijing" and "Fast and easy to buy" are involved within the attribute beliefs model. The results are all within recommended level, and confirm that these two items are suitable to describe the construct.

### (7) Convenience

The construct is described by three items of "fast and easy to prepare" (0.74), "fast and easy to cook" (0.85), and "fast and easy to have in my home" (0.74). These factor loadings are greater than the recommended level (0.5). The reliability test shows that the Cronbach's alpha of construct (0.88) is much higher than recommended level of 0.7.

#### (8) Knowledge

Totally, six items are to describe the construct of knowledge. Although knowledge can be divided into two constructs of knowledge toward general salmon and knowledge toward Norwegian salmon, the results present that the six-item is suitable for describing the construct of knowledge (Cronbach's alpha=0.95) that exceeds the recommended level (0.7).

In sum, almost attribute beliefs are suitable to be within the attribute beliefs model except the perceived nutrition. The study leaved out the perceived nutrition, since this construct is not discriminant validity. Finally, the eight factors explain for 80.43 % of the variance in the data.

## 4.2 Descriptive analysis

The section describes a part of constructs in order to give practical suggestions about consumption and attitudes to the industry by mean and distribution of frequency, mean difference of T-test and ANOVA.

### 4.2.1 The consumption of different kinds

The consumption of different kinds of Norwegian salmon was measured by the self-reported frequency of past behavior. The respondents need to answer the frequency of eating Norwegian salmon over past two years. Moreover, respondents will try to distinguish among fresh, frozen and smoked. For respondents who can not indentify different kinds of Norwegian salmon, they will answer on "Totally salmon" directly. The results of the frequency with 9-point are showed in the table 4.3.

Table 4.3 Assessment of consumption frequency of different kind of salmon products

1 4010 4.5 715	DEBBILLET	10 01 0011	bumpuo	n neque	oney or a	inited citie	minu or	Junion I	ou de co	
	Never	More seldo	2-3 times	Appr.	Appr.	Appr.	2-3 times	Appr.	Twice a week	
				every	every	once a		once a		
		m	a year	third	second	month	a	week	or	
				month	month		month		more	
									often	
	0	1	2	3	4	5	6	7	8	Avg.
					%					(0-8)
Fresh	18.3	25.0	21.6	16.3	9.1	6.7	2.4	0.5	0	2.05
Frozen	35.1	33.2	12.5	9.1	3.4	6.3	0.5	0	0	1.47
Smoked	44.2	30.8	12.0	4.8	3.8	2.9	1.4	0	0	1.39
Salmon in general	92.3	4.3	1.9	0	1.4	0	0	0	0	0.58

The study found that respondents most often eat fresh Norwegian salmon (Avg.=2.05) among these three kinds of Norwegian salmon. The frequencies of eating frozen (Avg. =1.47) and smoked (Avg. =1.39) Norwegian salmon are similar.

The distribution of respondents for eating fresh Norwegian salmon products centers in categories between 0 and 3. Most respondents (account for 25.0%) are more seldom (score of 1) in last two years to eat fresh Norwegian salmon. Secondly, there are 21.6% of respondents to eat fresh Norwegian salmon 2-3 times per year.

The distributions of respondents for eating frozen and smoked Norwegian salmon are

similar, and centers in categories from 0 to 2. In addition, most respondents (35.1% and 44.2% respectively) in data have not eaten these two kinds of Norwegian salmon in last two years.

The table 4.3 also shows the frequency of some respondents who can not distinguish different kinds of Norwegian salmon. The results present that the frequency of eating Norwegian in general is quite low, and less than 1.0. The distribution, moreover, centers on score "0" heavily. In other words, the group of respondents who can not distinguish different kinds of Norwegian salmon basically did not consume the Norwegian salmon in the last two years.

## Difference in consumption between groups of consumers

The study uses the T-test and ANOVA to show the mean differences in order to understand more differences in consumption, between groups of consumers. Several important groups are compared in the two analytical processes, such as gender groups, family member groups, marital groups, area groups, age groups, and income groups. In general, the study assumes that the mean difference is significant when the difference is found at 5% of significant level.

Table 4.4 T-test of mean difference between groups for the frequency of consumption of different kinds of salmon

uniter thit Kii	different kinds of Sannon											
	Gender (female-male)		Children (without-with	)	Marital Area (rural-urba							
	Mean Difference	Sig.	Mean Difference	Sig.	Mean Difference	Sig.	Mean Difference	Sig.				
Fresh	0.10	0.51	-0.07	0.60	-0.18	0.34	-0.63	0.12				
Frozen	0.01	0.97	-0.10	0.42	-0.05	0.77	0.07	0.84				
Smoked	-0.10	0.44	-0.06	0.58	0.25	0.15	0.21	0.62				
Salmon in general	-0.02	0.70	0.01	0.79	0.10	0.22	-0.08	0.23				

The T-test for the frequency of consumption of different kinds of Norwegian salmon is showed in the table 4.4. The results present that there is not any significant difference in all of frequencies of consumption of different kinds of Norwegian salmon between female-male, without children-with children, single-married, and consumers in rural and urban.

The following table 4.5 is to present the results of ANOVA test for the frequency of

consumption of different kind of Norwegian salmon products in different age groups.

Table 4.5 ANOVA of mean difference between age groups

Table 4.5 ANOVA of mean unference between age groups												
Eating fresh		Mean	p-		Mean	p-						
Norwegian salmon	Age Group	Difference	value	Age Group	Difference	value						
(F=.406, p=.749)												
	<19-20~39	-0.30	0.58	20~39-40~59	-0.19	0.45						
	<19-40~59	-0.49	0.38	20~39->60	-0.50	0.67						
	<19->60	-0.80	0.53	40~59->60	-0.31	0.79						
Eating frozen		Mean	p-		Mean	p-						
Norwegian salmon	Age Group	Difference	value	Age Group	Difference	value						
(F=.036, p=.991)	<19-20~39	-0.01	0.98	20~39-40~59	-0.06	0.78						
	<19-40~59	-0.07	0.89	20~39->60	-0.19	0.86						
	<19->60	-0.20	0.86	40~59->60	-0.13	0.90						
Eating smoked		Mean	p-		Mean	p-						
Norwegian salmon	Age Group	Difference	value	Age Group	Difference	value						
(F=.1.366, p=.254)	<19-20~39	0.21	0.65	20~39-40~59	<u>0.38</u>	<u>0.07</u>						
	<19-40~59	0.59	0.21	20~39->60	-0.31	0.75						
	<19->60	-0.10	0.93	40~59->60	-0.69	0.49						
Eating Norwegian		Mean	p-		Mean	p-						
salmon in general	Age Group	Difference	value	Age Group	Difference	value						
(F=.495, p=.686)	<19-20~39	-0.18	0.36	20~39-40~59	0.08	0.39						
	<19-40~59	-0.10	0.61	20~39->60	0.18	0.67						
	<19->60	0.00	1.00	40~59->60	0.10	0.81						

The results do not present any significant difference for the frequency of consumption of different kind of Norwegian salmon products in different age groups, and are significant at 5% level. However, the study found a difference between two groups of "20~39" and "40~49" for eating smoked Norwegian salmon, when at significant of 7% level. That means that people who are between 20~39 years old consume smoked Norwegian salmon more frequency than those of people who are between 40~59 years old. The F-value are 1.37 (p=0.25).

### 4.2.2 The consumption of salmon in different situation

The consumption of Norwegian salmon in different situation in Beijing is also measured by the self-reported frequency of past behavior. The respondents were asked as "how frequent you were on eating Norwegian salmon in given four eating situations over past two years?" The results of the frequency with 9-point are showed in the table 4.6.

The results present that people are more often to eat at restaurant and Sushi/sashimi outlet. Eating Norwegian salmon at home is the third choice of people. The frequency

of "as a ready to eat meal" is less than other three situations. However, the average values of frequencies are all between 1.0 and 2.0, and not found much different among four situations.

Table 4.6 Assessment of frequency of consumption of salmon products in different situations

	Never	More seldom	2-3 times a year	Appr. every third month	Appr. every second month	Appr. once a month	2-3 times a month	Appr. once a week	Twice a week or more often	
	0	1	2	3	4	5	6	7	8	Avg
					%					(0-8)
At home	39.9	28.8	11.5	7.2	5.3	5.3	0.5	2.4	0	1.36
At restaurant	18.3	30.8	27.4	10.6	5.8	3.8	3.4	0	0	1.8
Sushi/sashimi outlet	24.5	24.5	24	11.1	8.2	4.3	2.9	0.5	0	1.81
As a ready to eat meal	62	19.2	7.2	3.4	4.3	1.9	1.9	0	0	1.06

The two frequencies of consumption were measured by the same method, as frequency of self-report. The study intends to test the sum correlation between the kind's consumption and situations consumption, since it could be used as a latent construct of consumption in the CFA and structural model. The results are presented in table 4.7.

Table 4.7 The sum correlation between the product consumption and situation consumption

	Product consumption	Situation consumption
Product consumption	1	0.68(**)
Situation consumption	0.68(**)	1

<sup>\*\*</sup> Correlation is significant at the 0.01 level (2-tailed).

As showed in table 4.7, the correlation between the kinds consumption and situations consumption is high (0.68) at 1% significant level. Therefore the study is possible to use the two kinds of frequencies in the CFA and structural model.

### 4.2.3 Attitude toward the consumption of salmon

Attitude is described as global evaluation by 7 items, which are bad/good, unsatisfied/satisfied, unpleasant/ Pleasant, dull/ exiting, negative/ positive, foolish/ wise, and outdated/ trendy separately. However, the study does not need to report

frequencies for all items, because the results are very close. The respondents were asked their evaluation or your feelings toward Norwegian salmon. The table 4.8 describes consumers' attitude toward the consumption of Norwegian salmon.

Table 4.8 Assessment of attitude toward the consumption of salmon

	1	2	3	4	5	6	7	Avg.
				%				(1-7)
Negative/Positive	0.5	2.4	4.8	21.2	26.0	26.0	19.2	5.25

The results show that people in Beijing have very positive attitude toward eating Norwegian salmon. The average value is 5.25. The distributions also reflect the high positive attitude in the table. The most respondents presented eating Norwegian salmon as positive (score 6.0). Also there is a little respondent to evaluate attitude as negative or wise, accounting for around less than 10%.

### 4.2.4 Perceived behavior control to the consumption of salmon

Perceived behavior control is defined as accessing to the resources and opportunities to perform for eating Norwegian salmon. There are two items to describe the construct. The results are showed in table 4.9.

Table 4.9 Assessment of perceived behavior control on the consumption of Norwegian salmon

	Very diff	Very difficult Very easy								
How easy or difficult is it for you to choose Norwegian salmon as a meal?	9.1	9.1 11.1 13.9 13.9 15.4 15.4 21						4.46		
	Very unlikely Very likely						likely			
If I want, I could easily choose Norwegian salmon as a meal at least once a one month		16.8	9.1	14.9	16.8	13.9	12.0	3.89		

As the showing in table 4.9, the item of "How easy or difficult it is for you to choose Norwegian salmon" received a highest average score of 4.46. The other one item receives score of 3.89. It means that more respondents are likely to consume Norwegian salmon as the item of "How easy or difficult it is for you to choose Norwegian salmon", but respondents are not likely to eat it frequently, as at least once per month.

Table 4.10 T-test of mean difference between groups for the consumption of salmon

	Gender (female-male)		Children (without-with)		Marital (single-married)		Area (rural-urban)	
	Sig.	Mean Difference	Sig.	Mean Difference	Sig.	Mean Difference	Sig.	Mean Difference
How easy or difficult is it for you to choose Norwegian salmon as a meal?	.80	05	.27	.18	.02	.47	.29	50
If I want, I could easily choose Norwegian salmon as a meal at least once a one month	.86	.04	.65	08	.27	.24	.21	.69

The above table 4.10 is to show the results of T-test of mean difference on perceived behavior control. There is only one significant differences between singe and married on the item of "For me eating Norwegian salmon is easy/difficult". The results are significant at 5 % level.

### 4.2.5 Perceived quality and nutrition toward salmon

Perceived quality is described as an attribute belief of attitude. There are the two items of "variable/stable quality", and "un/safe" to be used in CFA and structure model. The specific results are showed in table 4.11.

Table 4.11 Assessment of quality and nutrition toward salmon

	1	2	3	4	5	6	7	Avg
				%				(1-7)
Variable/stable quality	.5	2.9	4.3	11.5	20.2	33.2	27.4	5.57
Un/safe	0	1.0	6.7	9.1	18.3	31.7	33.2	5.73

The results show that the quality was evaluated as very positive evaluation. Also the two items are all high in a range from 5.7 to 5.8. The distribution of each item is mainly centered at very positive (score 6.0) and extreme positive (score 7.0). In addition, just few people evaluate these items to be negative (less than 10%).

Table 4.12 T-test of mean difference between groups for quality and nutrition toward salmon

	Gender (female-male)				Marital (single-	married)	Area (rural-urban)		
	Sig.	Mean ifference	Sig.	Mean Difference	Sig.	Mean Difference	Sig.	Mean Difference	
Variable/stable quality	0.88	-0.02	0.45	-0.09	0.47	-0.12	0.28	-0.40	
Un/safe	0.94	0.01	0.05	0.20	0.90	-0.02	0.17	-0.49	

The results found a significant difference in "Un/safe" between without children and with children in table 4.12 at 5% of significant level.

#### 4.2.6 Perceived value toward salmon

The perceived value is to focuses on the value for money toward eating Norwegian salmon. There are two items to estimate the construct, and the results are showed in table 4.13.

Table 4.13 Assessment of evaluation of price toward salmon

	Totally disagre						Avg (1-7)	
	1	2	3	4 %	5	6	7	
Dis/satisfied with price	6.3	8.2	17.8	22.6	22.1	13.0	10.1	4.25
Low/high value for money	2.4	6.7	9.6	26.4	25.5	18.8	10.6	4.64

The results present that almost respondents perceive that the price of Norwegian salmon is moderate comparing its value. In addition, the distributions of the two items are all centered at score 4.0 and 5.0. However, we also find that around 30% of respondents do not satisfy the price, and there are around 20% of respondents to evaluate Norwegian salmon as low value for money.

### 4.2.7 Negative effects toward salmon

Negative effects are mentioned by pervious researches (e.g. Olsen 2001, 2004). In this study, there are two items to describe the negative effects, and the results are showed in table 4.14.

Table 4.14 Assessment of negative effects toward eating salmon

	Totally			<u> </u>			Totally	Avg
	disagree			%			agree	(1-7)
	1	2	3	4	5	6	7	
Bad smell	22.1	25.5	19.7	23.6	6.3	2.4	.5	2.75
Bones	18.8	24.5	24.0	19.7	9.1	2.9	1.0	2.88

As listed in table 4.14, almost respondents disagree with negative effects when eating Norwegian salmon. The distributions of these items are similar and centered at score 2.0. Additionally, there are just around ten percent to evaluate Norwegian salmon with negative effects. Meanwhile, we also find around 20% of respondents expressed the score 4.0 of "neither agree nor disagree".

#### 4.2.8 Convenience toward salmon

Convenience is defined as fast and easy to consume Norwegian salmon or not. There are five items to estimate the convenience, and the results are showed in table 4.15.

Table 4.15 Assessment of convenience toward consumption of salmon

	Totally disagree			%			Totally agree	Avg (1-7)
	1	2	3	4	5	6	7	
Available in Beijing	2.9	5.8	17.3	24.5	21.2	18.3	10.1	4.50
Fast and easy to buy	3.4	11.5	15.4	24.0	22.6	13.9	9.1	4.29
Fast and easy to prepare	7.7	16.3	19.2	23.1	19.2	10.6	3.8	3.77
Fast and easy to cook	9.6	19.2	16.3	21.6	18.8	12.0	2.4	3.66
Fast and easy product to have in my home	17.3	14.4	13.9	22.1	14.4	13.5	4.3	3.60

The results are separated two groups by average values. The first two items are different from the last three items obviously. It is also confirmed the results of EFA that these items can be separated as two sub-constructs. The first two items belong to availability for buying. Last three items are included in construct of convenience. The averages of first two items (4.50 and 4.29) are higher than other three items (3.77, 3.66, and 3.60). The distributions are different between two constructs. The distribution of construct of availability is more centered in positive area (from 4 to 6), but the distribution of construct of convenience is mainly centered in a range from 3 to 5. Additionally, just around 20% of respondents perceive as not available to buy, whereas about 50% of respondents perceive that Norwegian Salmon is fast and easy to prepare, cook, and have at home.

Table 4.16 T-test of mean difference between groups for convenience toward the consumption of salmon

	Gende (fema	er le-male)	Childi (witho	ren out-with)	Marita (singl	al e-married)	Area (rural-urban)		
	Sig.	Mean Difference	Sig.	Mean Difference	Sig.	Mean Difference	Sig.	Mean Difference	
Fast and easy to prepare	0.00	<u>-0.49</u>	0.64	-0.06	0.77	-0.05	0.47	0.32	
Fast and easy to cook	0.03	-0.35	0.77	-0.04	0.27	-0.20	0.69	0.15	
Fast and easy product to have	0.00	<u>-0.51</u>	0.51	-0.10	0.45	-0.16	0.32	0.51	

The results of T-test of mean difference between groups for convenience toward eating Norwegian salmon are showed in table 4.16 It presents that there are three significant differences between female and male in "Fast and easy to prepare", "Fast and easy to cook", and "Fast and easy product to have in my home" at 5% level.

### 4.2.9 Knowledge

Knowledge is described as an internal factor to promote or not the consumption of Norwegian salmon. There are three items to estimate the knowledge, and the results are showed in table 4.17.

Table 4.17 Assessment of knowledge toward salmon in general and Norwegian salmon

	Totally disagree			%		7	Totally agree	Avg (1-7)
	1	2	3	4	5	6	7	
I know a lot about salmon	7.7	17.3	19.2	17.3	23.6	10.6	4.3	3.81
Consider me as an expert on salmon	20.7	16.8	21.6	18.8	12.0	7.2	2.9	3.18
I know a lot about Norwegian salmon	14.4	15.9	18.8	22.1	18.8	8.7	1.4	3.47

The results present that respondents lack knowledge about salmon in general. In addition, almost respondents disagree the item of "consider me as an expert on salmon" that is perceived the lowest score at 3.18. In the other hand, the distribution of the first item is distributed widely in a range from 2.0 to 6.0. However, the distribution of the later item is found to center in range from 1.0 to 4.0. In sum, even though many respondents have a little the knowledge of salmon in general, almost respondents lack the knowledge of salmon.

### 4.2.10 Country image

The study attempts to define Norway's image, as Chinese consumers' perceptions of all attributes for salmon made in Norway. There are three items to describe Norway's image. Also the results are showed in the table 4.18.

Table 4.18 Assessment of Norway's image toward Norwegian salmon

Salmon from Norway is	Totally disagree			%			Totally agree	Avg (1-7)
	1	2	3	4	5	6	7	
Environmentally friendly	1.0	0	4.8	19.2	28.8	25.5	20.7	5.34
from cold and clear waters.	.5	1.0	3.4	19.7	26.4	27.4	21.6	5.39
Have a high quality	.5	0	2.4	21.2	24.0	28.8	23.1	5.47

The results express that almost responses agree with these three assertions, especially in the item of "have a high quality". Also the average values are in a range from score 5 to 6. The distributions are centered in score 5 and 6. Additionally, over 20% of respondents totally agree these assertions as extreme positive evaluation toward salmon from Norway.

### **4.2.11 Consumer Ethnocentrism (CE)**

Consumer ethnocentrism (CE) is defined as an individual's tendency to prefer to purchase products of other fish from China as superior compare to Norwegian Salmon. Six items of CETSCALE are used to measure the ethnocentrism. The results are showed in table 4.19.

Table 4.19 Assessment of CETSCALE toward consumption of Norwegian salmon

	Totally disagree	e		%			ally igree	Avg (1-7)
	1	2	3	4	5	6	7	
Chinese should not buy foreign seafood products	10.6	13.0	20.2	31.7	14.4	6.7	3.4	3.60
Only those seafood products that are unavailable in the China should be imported	10.1	14.9	18.8	28.8	17.3	5.3	4.8	3.63

Almost respondents don't agree a little the two assertions. The average values of two items are not different, and in a range from score 3 to 4. The results present that Beijing's consumers can accept seafood products form foreign countries, even if they are patriotic, and intend to support Chinese seafood products and industry.

### 4.2.12 Conspicuous consumption (CC)

The study defines conspicuous consumption as perceived wealth from Norwegian salmon and willingness to pay a higher price to purchase it for promoting or showing their signal wealth. The CC is described by 2 items, and is presented in table 4.20.

Table 4.20 Assessment of conspicuous consumption toward Norwegian salmon

	_	Totally disagree		%			Totally agree	
	1	2	3	4	5	6	7	
Social status symbol.	3.4	10.1	6.3	26.9	23.1	21.6	5.3	4.62
A symbol of success and prestige	3.4	8.7	7.2	26.9	25.0	21.2	4.8	4.59

The table 4.20 shows that all of items are over score 4.0. Most respondents agree the items of "social status symbol" (4.62) and "a symbol of success and prestige" (4.59). The distributions of items are mainly centered in a range from score 4.0 to 6.0. The almost respondents perceive Norwegian salmon as expensive seafood product, also that consuming Norwegian salmon means the symbols of social status, success and prestige. But almost respondents don't totally agree Norwegian salmon as a luxury product, since just around 5% of respondents chose the score 7 (totally agree).

## 4.3 Test of the conceptual model

The section will use the selected items from the exploratory factor analysis, then to test the extended TPB model, the attribute beliefs model, and normative beliefs model by SEM. These three models are showed in Fig 2.2.

### 4.3.1 Confirmatory factor analysis (CFA) of extended TPB model

According to Ajzen (1991), TPB model is composed by four beliefs or constructs of consumer's attitude, subjective norms (SNs), perceived behavior control (PBC), and intention. We intend to add three additional constructs of consumer ethnocentrism (CE), conspicuous consumption (CC), and country image (IC) to the classical TPB model as showed in Fig 2.2. This section is to confirm the factors of extended TPB model by CFA.

The study will only choose two or three most important items within CFA in order to satisfy the recommended index, since the study has too few cases to run complex models with many variables. Thus study needs to reduce some items in CFA and SEM.

We have selected at least two salient items for describing each construct. Specifically, the two constructs of behavior (frequency of consumption of Norwegian salmon), attitude, PBC, CE and CC include two items respectively; the other three constructs of SNs, intention, and CI are described by three items. Thus, there are 19 items to be within the extended TPB model. The results of extended TPB model show a good fit, and are accepted by recommended level (Hair et al, 1995). Specifically, Chi-square is 198.3 with 124 degree of freedom (p=0.000); GFI is 0.91 (>0.9); RMSEA is 0.054 (<0.08). The results of composite reliability and extracted-variance score of constructs are showed in table 4.21.

Table 4.21 Standardized CFA coefficient and reliability of expected TPB construct

	Standardized		Composite	Variance
Constructs and indicators	Factor loading	t-value	Reliability	Extracted
Attitude	0.01 (.000)*		0.82	0.70
Negative/ Positive Foolish/ Wise	0,91 (,000)*	7.5		
	0,76	7.5	0.04	0.02
SNs	0.01 (.000)*		0,94	0,83
Important want_	0,91 (,000)*	21.02		
Important expect	0,94	21,83		
Important encourage	0,89	19,43		
PBC			0,74	0,59
For me eating is easy/difficult	0,81(000)*			
If I want, I could easily eat	0,72	8,16		
Intention			0,89	0,73
I will eat	0,81 (,000)*			
I want to eat	0,90	14,77		
I plan to eat	0,85	13,93		
•				
CE			0,89	0,73
Chinese should not buy foreign	1,04(,000)*			
seafood products	, , ,			
Only those seafood products that	0.76	6,16		
are unavailable in the China	.,	, ,		
should be imported				
CC CC			0,91	0,83
Social status symbol	1,10(,000)*		0,21	0,05
A symbol of success and prestige	0.81	6,16		
A symbol of success and prestige	0,61	0,10		
Country image			0,91	0,83
Country image	0.00(.000)*		0,91	0,83
Environmentally friendly	0.90(,000)*	10.26		
From cold and clear waters	0.91	19,36		
Have a high quality	0.87	17,56		
Behavior			0,82	0,70
Frequency for different kinds	1,08(,000)*		0,02	0,70
		5.12		
Frequency for situations	0,63	5,12		

Chi-square: 198.3;df=124;p< 0,000; RMSEA= 0,54; GFI=0.91

As listed in table 4.21, all of factor loadings are much higher than the recommended level (0.5). In addition, the t-value of each factor loadings are significant (p=.000), and in a range from 5.12 to 21.83. Moreover all of the composite reliability and the variance-extracted are greater than the recommended levels (0.6 and 0.5) respectively (Hair et al, 1995). Therefore, the convergent validity of constructs is confirmed in the extended TPB model.

Table 4.22 Means, standard, and inter-correlation among expected TPB constructs

Constructs	Means	Standard	Attitu	SNs	PBC	Intenti	CE	CC	CI	Behav
		Deviation	de			on				ior
Attitude	5.17	1.33	1							
SNs	4.58	1.67	.28	1						
PBC	4.18	1.99	.31	.40	1					
Intention	4.60	1.78	.42	.54	.69	1				
CE	3.62	1.52	09	07	14	23	1			
CC	4.60	1.61	.14	.13	01	.10	01	1		
Country image	5.40	1.21	.44	.39	.39	.41	29	.21	1	
Behavior	1.08	0.95	.17	.32	.25	.39	01	.02	.23	1

All significant at 1% level

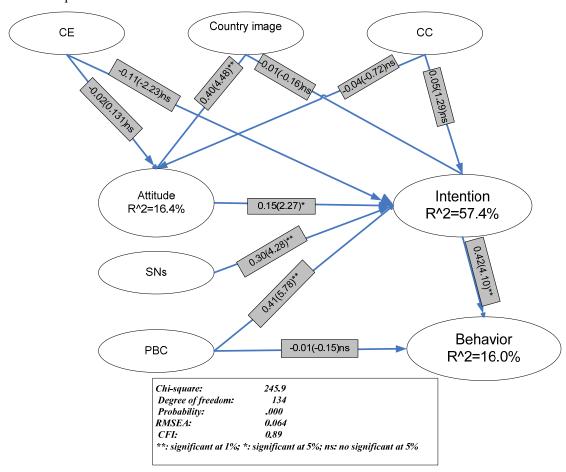
The results of inter-correlation of each two constructs are showed in table 4.22. Also we found the high correlation between intention and PBC that high correlation between two latent constructs means that these two constructs has strong relationship, also indicates that the discriminate validity of construct could be violated. The study was based on the approach of recommended by Fornell and Lacker (1981) in discriminant analysis. Specifically, we need to compare between the average variance extracted scores from two constructs and square of correlation between associated constructs. If all of average variance extracted scores from two constructs are all greater than square of correlation between associated them, the discriminant validity is confirmed in model. For example, average variance extracted for Intention and PBC is 0.66 (calculated by (0.73+0.59)/2), which is greater than the square of their correlation of 0.48 (calculated by 0.69^2). Therefore, the discriminant validity of the constructs is also confirmed in extended model.

<sup>\*</sup>The value is not calculated because the parameter is fixed to 1.0

### 4.3.2 Structural analysis and model testing of extended TPB model

The extended TPB model is tested by eight constructs based on the CFA of extended TPB model and Fig 2.1, where intention is influenced by attitude, subjective norms, PBC, country image, CE, and CC; behavior is predicted by intention and PBC; Country image, CE and CC impact on attitude. The results of structural model present a moderate Goodness of fit with present data, and are almost satisfied by recommended level by Hair et al (1995). Chi-square of model is 245.9 with 134 degrees of freedom (p=0.000); RMSEA (0.064) is within the recommended level of 0.08. But GFI of the model is 0.89 (<0.9). The problem could be solved by increasing the size of sample. In addition, the ratio of variables and observers in the model is only 1/2.5, but the recommended ratio is below 1/5 (Hair et al, 1995). The Fig 4.1a shows all of results of standardized regression coefficient with t-value.

Figure 4.1a Standardized regression coefficient of extended TPB model without country image, t-value in parentheses



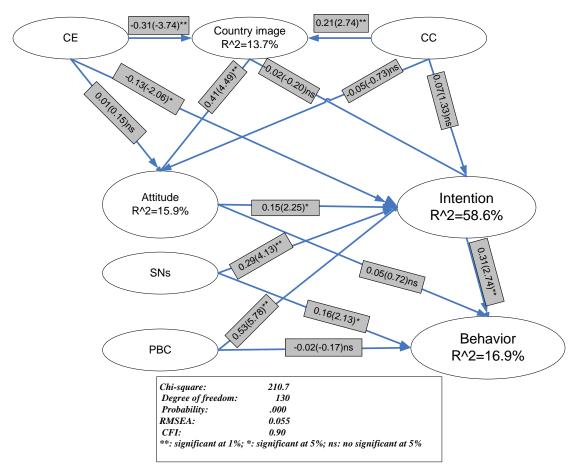
The results of standard regression coefficient present that CE and CC as two instinct factors not significantly impact on the attitude. The results could be explained that the evaluations of respondents are not influenced by ethnocentrism and conspicuousness, even though the respondents perceive Norwegian Salmon as imported seafood and more expensive product. However, country image significantly influence s on attitude. The coefficient is 0.4 (t-value=4.48, p<0.01). The model explains 16.4 of variance of attitude.

Intention is significantly and positively influenced by three constructs of attitude (0.15; t-value=2.27; p<0.05), subjective norms (0.30; t-value=4.28, and p<0.00), PBC (0.51; t-value=5.78; p<0.00). In the extended model, we found that the construct of PBC is the most important to influence intention (to eat Norwegian salmon) among these three constructs. The finding not supports that attitude is the best predictor to intention (e.g. Tuu et al, 2008), and will be discussed in last chapter. The extended TPB model explains 57.4% of variance of intention.

The frequency of eating Norwegian salmon is significantly predicted by intention (0.42; t-value=4.10; p<0.00). But, PBC has not been found any significant contrition to the explanation of frequency of eating Norwegian salmon. Finally, 16.0% of variance of behavior is explained by the extended TPB model.

The study added some paths in initial extended TPB model, where country image is influenced by CE as well as CC. Behavior is not merely predicted by intention and PBC, but also by attitude and SNs. The results of modified extended TPB model show a better goodness fit with present data than the initial TPB model. For example, Chi-square is 210.7 with 130 degrees of freedom (p<0.00); GFI (0.9) is greater than 0.9; RMSEA is 0.055. All of results of standardized regression coefficient with t-value are showed in figure 4.1b.

Figure 4.1b Standardized regression coefficient of modified extended TPB model with country image, t-value in parentheses



As presented in Fig 4.1b, country image also significantly influences on attitude. The coefficient is 0.41 (t-value=4.49, p<0.01). Similarly, the model found no other influence on attitude. Also the explanation of variance of attitude is decreased to 15.9%. However, the results present that country image is significantly influenced by both of CE and CC. As expected, CC has positive influence on country image, whereas the effect of CE is negative on country image. The variance of country image is explained 13.7% by the modified model.

Intention is also significantly predicted by three constructs of attitude, subjective norms, and PBC. Their coefficients are 0.15 (t-value=2.25, p<0.05), 0.29 (t-value=4.13, p<0.01), and 0.53 (t-value=5.78, p<0.01). However, the variance of intention is enhanced from 57.4% to 58.6% by the modified extended TPB model.

Finally, the study in figure 4.1b found that SNs (0.16 (t-value=2.13), p<0.05) is an

important determinant in addition to intention on explaining the behavior. The coefficient between intention and behavior is 0.31 (2.74) at 1% significant level. The explanation of variance in the frequency of consumption of Norwegian salmon was increased to 16.0% (from 16.9%) by the modified extended TPB model.

To sum up, the modified extended TPB model is not only possible to enhance the explanation of frequency of eating Norwegian salmon, but also contributes to predicting attitude and intention. Besides, the modified extended TPB model found that CC and CE are possible to impact on behavior in opposite ways.

### 4.3.3 Confirmatory factor analysis of attribute beliefs model

Similarly, the study selected the two or three most suitable items to measure the attribute beliefs. Some attribute beliefs (perceived quality, perceived value, negative effect, convenience etc) are confirmed to predict attitude and PBC in fish context (e.g. Olsen, 2001, 2002, 2004).

The results of attribute beliefs model can not be satisfied within recommended level, such as GFI (0.89). Therefore we decided to leave out three insignificant items for getting a good fit. The three items are "safe/unsafe" of perceived quality, "easy and fast to cook" of convenience, and "I know a lot about Norwegian salmon" of knowledge respectively. Finally, 16 items are involved in the attribute beliefs model.

The model consisted has been promoted, also it can be totally satisfied within the recommended levels (Chi-square=138.8, df =76, RMSEA= 0.063, and GFI=0.92). The results of convergent validity of constructs are showed in table 4.23. The results show that all of factor loadings are all high, exceeding 7.0, except the item of "If I want, I could easily eat" (0.65). But all of factor loadings are greater than the recommended level (0.5) (Hair et al, 1995). The t-values are in a range from 7.54 to 15.37. Furthermore, the results of composite reliability and variance extracted are all satisfied in recommended levels (>0.6 and >0.5) respectively. Therefore, the convergent validity of constructs is confirmed in the attribute beliefs model.

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Table 4.23 Standardized CFA coefficient and reliability of attributes model

		Standardized		Composite	Variance
Constructs and inc	licators	Factor loading	t-value	Reliability	Extracted
Attitude	Negative/ Positive Foolish/ Wise	0,85 (,000)* 0,82	11,37	0.82	0,70
PBC:	For me eating is easy/difficult If I want, I could easily eat	0,90 (,000)* 0,65	7,54	0,76	0,62
Perceived quality	Variable/stable quality Bad/good texture	0,84(,000)* 0,90	13,16	0,82	0,76
Perceived value:	Dis/satisfied with price Low/high value for money	0,85 (,000)* 0,95	11,30	0,90	0,81
Negative	Bad smell Bones	1,01 (,000)* 0,83	10,87	0,92	0,85
Availability to buy	Available in Beijing Fast and easy to buy	0,88 (,000)* 0,98	15.37	0,93	0,87
Convenience	Fast and easy to prepare Fast and easy product to have	0,86(,000)* 0,87	12,59	0,86	0,75
Knowledge:	I know a lot about salmon Consider me as an expert on salmon	0,88(,000)* 0,84	11.84	0,85	0,74
Chi-square: 138,8	df=76; p < 0,000; RMSEA= 0,063; CF	I=0,92			

<sup>\*</sup>The value is not calculated because the parameter is fixed to 1.0

Table 4.24 Means, standard, and inter-correlation among attribute beliefs model

	Means	Standard Deviation	Attitude	PBC	Quality	Value	Negative	Availability	Convenience	Knowledge
Attitude	5.24	1.30	1							
PBC:	4.18	1.99	,34	1						
Perceived quality	5.47	1.33	,70	,54	1					
Perceived value:	4.45	1.55	,50	,44	,43	1				
Negative	2.82	1.38	-,40	-,20	-,43	-,32	1			
Availability to buy	4.40	1.54	,35	,34	,21	,23	-,21	1		
Convenience	3.68	1.68	,33	,34	,18	,28	,13	,63	1	
Knowledge	3.49	1.64	,33	,52	,29	,29	-,03	,42	,62	1

All significant at 1% level

The inter-correlations among constructs are listed in table 4.24. The highest correlation coefficient is found between attitude and perceived quality (0.70). The discriminant analysis was also based on the approach of recommended by Fornell and Lacker (1981). For example, the average variance extracted scores from attitude and perceived quality, which is 0.73 by (0.70+0.76)/2, is greater than square of correlation between associated them, which is 0.49 by (0.70^2). Therefore, the discriminant validity is confirmed in the attribute beliefs model.

#### 4.3.4 Structure model of attribute beliefs for attitude and PBC

We involved 16 items to test in the structure model of attribute beliefs. The all of results are showed in Fig. 4.2. The Goodness of Fit of the structure model is moderate within the recommended level. Specifically, Chi-square for the model is 158.8 with 80 degree of freedom (p<0.000); the RMSEA is (0.069) within the recommended level (<0.08), and the CFI is 0.91, exceeding the recommended level of 0.9.

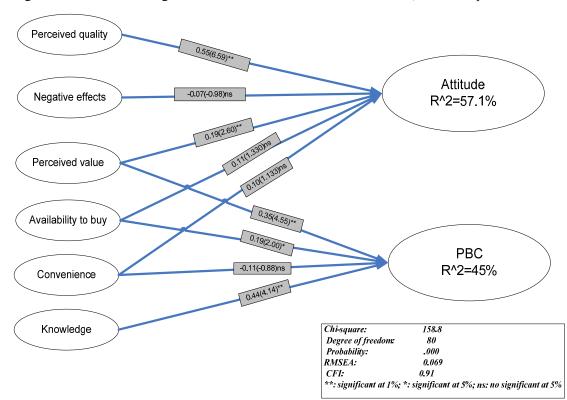


Figure 4.2 Standardized regression coefficient of attribute beliefs mode, t-value in parentheses

According to the results in figure 4.2, we found the perceived quality as the most important influence on attitude at 1% significant level (0.55; t-value=6.59). Also the perceived value (0.19, t-value=2.60) significantly impact on attitude at 1 % significant level in addition to the perceived quality. Although the study found no influence on other beliefs (e.g. negative effects, availability (to buy), convenience), the attribute beliefs model highly explains 57.1% variance of attitude toward Norwegian salmon.

Besides, the three structures of perceived value (0.35; t-value=4.55; p<0.01), and availability (to buy) (0.19, t-value=2.0; p<0.05), and knowledge (0.44; t-value=4.14; p<0.01) have significantly influences on PBC. The specific discussion will be presented in last chapter. The model moderately explains for 45% variance of PBC over eating Norwegian salmon.

### 4.3.5 Confirmatory factor analysis (CFA) of norm beliefs model

Several previous researches argue subjective norms (SNs) within TPB as unimportant factor on predicting behavior (e.g. Armitage and Conner 1998, 2001). However, the study, as showed in figure 4.1a and 4.1b, found that SNs are very important determinant on intention (to eat Norwegian salmon) and behavior. SNs are described as expectation and expression form important others that can be separated by some different groups (e.g. family, friend, business partners/colleagues). Therefore, we intend to understand more about that how group norms influence on SNs as global norms, which just includes important others.

But the results of exploratory factor analysis present that just the two constructs of family norms and business norms should be used in CFA and SEM. Moreover, each three items describe one construct in norm beliefs model. The results show a moderate goodness fit, and are almost accepted within recommended levels by Hair et al (1995). Specifically, Chi-square is 60.9 with 24 degrees of freedom (p=.000); GFI is 0.94

(>0.90). However, the RMSEA (0.086) of norm beliefs model is a little bit higher than the maximum recommended level of 0.08. According to Martin et al (2001), small sample size may be the reason for the relatively high RMSEA. In addition, Hair et al (1995) suggest that variables account for 20% of observers. But there are just 9 observers to measure 3 variables. The table 4.25 showed the Goodness of fit of measurement model, composite reliability and extracted-variance score for the constructs.

Table 4.25 Standardized CFA coefficient and reliability of Norm beliefs model

	Standardized		Composite	Variance
Constructs and indicators	Factor loading	t-value	Reliability	Extracted
SNs			0.94	0.83
Important people to me want	0.90 (,000)*			
Important people to me expect	0.94	21.51		
Important people to me encourage	0.90	19.72		
Family norms			0.95	0.86
Family wants	0.88 (,000)*			
Family expects	0.95	22.34		
Family encourages	0.95	21.97		
Business Partner/Colleagues norms			0.97	0.91
Colleagues want	0.94 (,000)*			
Colleagues expect	0.98	31.76		
Colleagues encourage	0.94	26.72		
Chi-square:60.9; df=24; p =.000; RMSEA= 0.0	086; CFI=0.94	•	•	•

<sup>\*</sup>The value is not calculated because the parameter is fixed to 1.0

The results in table 4.25 present that all of factor loadings are all high and over 0.80. The T-value of each factor loadings are significant (p=000), and in a range from 21.51 to 31.76. In addition, the results of composite reliability and variance-extracted are all satisfied by recommend level of 0.6 and 0.5 (Hair et al, 1995). Therefore, convergent validity of constructs is confirmed in this model.

In the other hand, table 4.26 shows that all correlations are high, such as the correlation between SNs and family norms (0.79). The study was also based on the approach of recommended by Fornell and Lacker (1981) in discriminant analysis. The

average variance extracted for family and SNs is 0.85 (calculated by (0.83+0.86/2), which is greater than the square of their correlation of 0.63 (calculated by 0.79<sup>2</sup>). Therefore, the discriminant validity of the constructs is confirmed in this model.

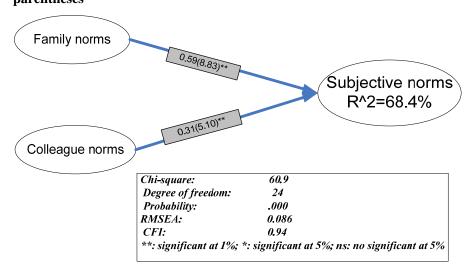
Table 4.26 Means, standard, and inter-correlation among norm beliefs model

Constructs	Means	Standard	1	2	3
		Deviation			
SNs	4.53	1.56	1		
Family norms	4.54	1.74	.79	1	
Business norms	4.57	1.64	.65	.70	1

#### 4.3.6 Structural analysis and model testing of normative beliefs model

The structure model appeared Goodness-Fit with data. Specifically, Chi-square for the model is 60.9 with 24 degree of freedom (p<0.000); the value of CFI that is 0.94 is also within recommended level (>0.9). But the value of RMSEA is 0.086, exceeding the recommended level of 0.08. The solutions have been presented in the above section. All of residuals of variables are all at 1% of significant level, and their estimators are in a range from 0.1 to 0.66. All of results of standardized regression coefficient with t-value are showed in Figure 4.1a.

Figure 4.3 Standardized regression coefficient of normative beliefs model, t-value in parentheses



The structure model confirmed hypotheses propose. Subjective norms are significant predicted by family norms and business partners/colleagues norms at 1% level. The coefficients are 0.59 (t-value=8.83) and 0.31 (t-value=5.10). Finally, two group norms of family norms and business partners/colleagues norms highly explain for 68.4% variance of SNs.

Sum up, the results of the extended TPB model confirm that the TPB model are suitable to describe the consumption of Norwegian salmon in Beijing of China. In addition, adding more paths is possible to contribute to predicting intention and consumption. Although eating Norwegian salmon behavior is merely influenced by intention and SNs, several constructs impact on consumption though intention, such as attitude and PBC. The both of two extended models present that country image significantly affects the consumers' attitude. Furthermore, CC (positive effect) and CE (negative effect) influence on the country image in opposite ways.

The Norwegian salmon's attributes of quality and value are important determinants on attitude toward Norwegian salmon; perceived value, availability (to eat), and knowledge significantly predict on PBC over eating Norwegian salmon. Besides, the study found that family and business partners/colleagues are two important indicators of SNs in general (important others).

The attribute beliefs model and the norm beliefs model explain a high variance of attitude as well as PBC, and SNs respectively. However the two extended TPB model explain a moderate variance of the frequency of eating Norwegian salmon.

### 5. Discussion

The objective of this study is to explore consumer's attitudes and consumption of Norwegian salmon in Beijing with effects of country-of-origin (COO effects). Attitude is frequently argued to be the best predictor on explaining the intention, and a significant influence on fish consumption (e.g. Tuu et al, 2008). The study also uses COO effects as three additional constructs for more specifically understanding the consumers' attitude toward Norwegian salmon. In academic aspects, the study mainly tests the extended TPB model in Beijing. Although the TPB model has been widely confirmed in Western countries by a lot of researches, the TPB model is less tested in Asian countries, especially in China. The survey was carried out by interview in Beijing. Several analysis methods are applied in the study, such as explore factor analysis, description analysis, confirmatory factor analysis, and SEM.

The results basically confirm that the extended TPB models are suitable to explain the consumption of Norwegian salmon in Beijing of China. In addition, almost hypotheses are also confirmed by the present data. The follows will explain and discuss these findings specifically.

# 5.1 The consumption of Norwegian salmon in Beijing.

The consumption of Norwegian salmon is measured by two frequency tests of "different kinds" and "different situations". Regardless of "different kinds" and "different situations", the frequencies of eating Norwegian salmon are quite low. This reflects that Beijing with around 15 million has great potential market on the consumption of salmon.

The study investigated three kinds of Norwegian salmon as fresh, frozen, and smoked, and found that fresh Norwegian salmon is most often consumed in Beijing. But frozen

and smoked Norwegian salmon are not very popular in Beijing. In addition, we found that there are some significant differences among age and income groups on choosing different kinds of Norwegian salmon.

Basing on NSEC's report, the study chooses the four situations of home, restaurant, Sushi/Sashimi outlets, and ready meal. Almost respondents most often eat Norwegian salmon in Sushi/Sashimi outlets and restaurant. The frequencies of eating at home and as a ready meal are relative low. The findings could be confirmed by the results of consumption of different kinds. Norwegian salmon is mainly sold by fresh style, especially in Sushi/Sashimi outlets as Japanese cooking ways.

### 5.2 Intention

Intention is able to directly impact on behavior in TPB. There are items to describe the construct of intention in this study. The Cronbach alpha is 0.87 exceeding the recommended level of 0.7 (Hair et al, 1995). The study confirms that intention (to eat Norwegian salmon) is the most important factor to influence on the frequency of eating Norwegian salmon in extended TPB model (Tuu et al., 2008).

However, the correlation between intention and behavior is not high (0.39). The finding could be explained by the method of measurement. When measuring the frequency of Norwegian salmon, the study uses the 9-point scale from "never" to "twice per week". But when measuring intention, the respondents were asked "I will/want/plan/desire to eat in near future". The "near future" is easy to be confused wording. Therefore, the respondents can not make a decision for eating Norwegian salmon in near future. It suggests that measuring intention better follows the scale of frequency of behavior in future studies.

#### 5.3 Consumers' attitude

The construct of attitude is described by five items, also the result of reliability test is confirmed (Cronbach's alpha=0.90). Almost respondents positively evaluated Norwegian as an excellent product. The study used two items to estimate the construct of attitude in CFA and SEM. In SEM, the results confirm that attitude is significant predictor to intention (to eat Norwegian salmon) (Ajzen, 1991; Olsen, 2001 and 2004; Verbeke & Vackier, 2005, Tuu et al, 2008 etc), but not the most important predictor. Nevertheless, the extended TPB model shows that perceived behavior control (PBC) is the most significant to influence on intention. The discussion of PBC will be described later.

Moreover, the study found that attitude has no direct influence on the frequency of eating Norwegian salmon in the extended two models. The findings support the TPB model, in which behavior is directly impacted by intention and PBC (Ajzen, 1991), and indirectly by attitude through intention. Intention is a mediator between attitude and behavior.

The correlation between attitude and intention (0.54) is high. Therefore, the attitude influences on the frequency of eating Norwegian salmon though intention.

### 5.4 The influences of attributes (beliefs) on attitude

The study used the construct of perceived quality to indicate the construct of sensory evaluation. Although there are five items to be suitable to describe perceived quality in EFA, only two items were used to measure the perceived quality in the study. The construct's Cronbach's alpha is 0.93 exceeding the recommended level. The results present that perceived value is the most important influence on attitude. This finding is reasonable, since attitude and perceived quality are consumers' evaluation toward

Norwegian salmon. For example, the items of "Bad/good texture" and "Variable/stable quality" in perceived quality might be also the determinants to the items of "Bad/good" and "Unsatisfied/satisfied" in attitude. Additionally, the correlation between attitude and perceived quality is very significant high (0.70).

On the other hand, perceived value also significantly impacts on attitude. The finding confirms that fish, especially Norwegian salmon, is perceived as a valuable food. In addition, almost respondents evaluate Norwegian salmon as good value for money. Therefore, the perceived value should be involved to explain consumers' attitude.

Unexpectedly, the study found no any influence of other attributes on attitude in beliefs model, even if some attributes are mentioned in pervious researches, such as negative effects (Olsen, 2001 and 2004) and convenience (Olsen et al, 2006; Steptoe et al, 1995). It could be explained by two reasons. First for negative effects, almost respondents prefer to choose fresh Norwegian salmon that is sold as salmon fillet without skin and bones. Second for convenience, almost respondents often eat in outside as Sushi/Sashimi outlets and restaurant, and don't care how to prepare and cook it, so the respondents perceived eating Norwegian salmon as a convenient food product.

# 5.5 Subjective norms (SNs) and normative beliefs

SNs are defined as expectation and pressure from important others. The study selected 3 items to describe the construct. The result of reliability test (Cronbach's alpha) is 0.94. Although subjective norms within TPB were argued as insignificant construct on explaining behavior by Armitage and Conner (1998, 2001), the study found SNs as an important predictor to intention as well as behavior in the two extended TPB models. Also the correlations between SNs and intention (0.54), and SNs and behavior (0.32) confirm that SNs as an important factor influence on intention as well as behavior.

The study also employs important others as global norms to measure SNs. The important others are usually divided into several group norms, such as family norms and business partners/colleagues norms. Therefore the group norms are necessary to be considered in explaining SNs.

Family is the most important others, and confirmed the significant impact on individual's behavior. The study uses the three items of "family wants", "family expects", and "family encourages" to measure the family norms. The Cronbach's alpha is 0.95. Additionally, almost respondents agree the above three assertions. The results of structural model shows family norms (0.59, t-value=8.83) as the most important determinant to predict the SNs. The result is significant at 1%

On the other hand, business partners/colleagues are also estimated by the items of "business partners/colleagues want", "business partners/colleagues expect", and "business partners/colleagues encourage". The result of reliability test (0.97) is within the recommended level of 0.7. As showed in figure 4.3, business partners/colleagues norms (0.31, t-value=5.10) have significant influences on SNs also at 1% level.

These results not merely confirm an earlier finding that Chinese are influenced easily by important others, especially family and business partners/colleagues (Cheng & Lam, 2008), but also present that Chinese consumers pay more attention to consider family's suggests as want, expectation, and pressure for choosing food than business partners/colleagues. In the other words, the family affection is seen as the first in China.

## 5.6 Perceived behavior control (PBC) and control beliefs

PBC not simply indirectly influences on behavior via intention, but also has direct influence on behavior in Classical TPB model (Ajzen, 1991). The study defined PBC

as getting the resources to perform for eating Norwegian salmon. There are two items to measure the construct of PBC. The Cronbach's alpha is 0.74 exceeding the recommended level of 0.7. Almost respondents perceived that eating Norwegian salmon is not difficult, whereas everyone is not likely to eat it once per month. PBC was found to be highly correlation with intention (0.69, p<0.001), but not found high correlation with behavior (0.25, p<0.001) in this study.

In the causal models, the study did not find any influence on behavior from PBC directly, however PBC is the most important determinant on predicting the intention. Therefore, the result confirms that intention is an important mediator between PBC and behavior.

On the other hand, the findings confirm that the PBC could be distinguished as the two different constructs of self-efficacy and controllability (Rhodes & Courneya, 2004; Ajzen, 2002). The construct of self-efficacy influences on intention as well as behavior, but the construct of controllability only impacts on behavior. Therefore the findings could be explained by self-efficacy that influences both on intention to eat Norwegian salmon and behavior (Trafimow et al., 2002).

According to TPB, PBC includes several control beliefs, such as availability (to buy), convenience, knowledge, and perceived value. The study found that availability, knowledge, and perceived value are significant indicators to influence on PBC. Moreover, these influences are positive on PBC. Specifically, availability that belongs to self-efficacy was found as having positive significantly influence on PBC (0.19, p<0.05). Almost respondents perceive that Norwegian salmon is available to buy easily and fast. Moreover, availability (to buy) is a determinant in explaining the freshness of fish, which is important factor to evaluate the quality of fish (Verbeke et al., 2007; Olsen, 2004). Therefore, this confirms that almost Chinese consumers consider Norwegian salmon as high quality seafood product, since they can be as soon as possible to buy in order to keep the freshness.

Secondly, knowledge that is also self-efficacy has important influence on PBC (0.44, p<0.01). The respondents are not experts about salmon, particularly about Norwegian salmon, however almost respondents know salmon from Norway as an excellent and nutritious product. Therefore this is a reason why knowledge is possible to promote the probability for choosing Norwegian salmon as a meal (Olsen, 2004).

Perceived value was also found as a significant determinant on PBC (0.35, p<0.01). When respondents are considering the value of Norwegian salmon, almost people perceived Norwegian salmon as not expensive and a good value for money. The finding confirms that the price is not important factor on explanation eating Norwegian salmon, even if Norwegian salmon is more expensive than salmon in general and other fish products (Olsen., 2003 and 2004; Leek et al., 2000; Honkanen et al., 1998). Therefore perceived value enhances that people want, and plan to eat Norwegian salmon, since respondents more focus on the value such as nutritious value, but not the price and cost (Olsen, 2004).

Many respondents express Norwegian salmon as easy and fast to prepare, cook, and have at home. However, the study did not find any significant influence on PBC from convenience. The result could be explained by a reason. As described about the consumption of Norwegian salmon in Beijing, almost respondents prefer to eat Norwegian Salmon at restaurant and Sushi/Sashimi outlets compared to eating at home, so convenience for preparing, cooking, and having at home are not possible to influence on perceived behavior control. However the study found the significant differences at 5% level that people who are female perceive Norwegian salmon as difficult and slow to prepare, cook, and have at home than other people who are male. These significant differences present the Chinese culture that women are responsible to cook the meal for family.

## 5.7 Country of Origin (COO)

The COO is built by the three independent constructs of ethnocentrism, conspicuous consumption, and country image in the study. The three constructs, as COO effects, are assumed to be significant influences on attitude as well as intention. The following is more specific to discuss the three constructs.

#### 5.7.1 Ethnocentrism (CE)

The study chose two items to describe the construct of CE from EFA. The result of reliability test is 0.88 exceeding the recommended level of 0.7. The study found that almost Chinese consumers are CE when choosing imported seafood products in Beijing. In other words, they prefer to buy seafood products from China. However, the respondents agree that the imported seafood products can be accepted, if the products are not available in China. The finding confirms an earlier finding that the effect of CE will could be changed depended on the different categories, even if consumers are CE (Wang and Chen, 2004).

Unexpectedly, the results present that CE is not possible to significantly influence on intention, also CE dose not impact on attitude. The finding confirms an earlier finding that the effect of CE will be decreased when respondents consider the developed levels of the different regions (e.g. China vs Norway) (Lindquist et al., 2001). However the modified extended TPB model found CE significantly impacts on country image. The finding presents that country image as is a mediator between CE and attitude. Additionally, the finding also confirms the hypothesis that CE as a barrier influences on country's attitude on buying the imported seafood products (Vida & Fairhurst, 1999; Klein et al., 1998).

### **5.7.2** Conspicuous consumers (CC)

Conspicuousness was assumed as an independent construct to impact on both attitude and intention. CC is willing to buy luxury goods for showing off, whereas they don't mind that where the products are from (Corneo & Jeanne, 1997; Bagwell & Bernheim, 1996). Therefore, it is an obvious difference between CC and CE. The construct of CC is described by the two most important items of "social status symbol" and "a symbol of success and prestige". The Cronbach's alpha is 0.85 and much greater the recommended level of 0.7. The results show that respondents just agree a little eating Norwegian salmon as social status and symbol of success and prestige.

The study did not find any significant influence on attitude and intention by CC. Also the correlations of CC are very low with attitude (0.14) and intention (0.10). The results are possible to be explained by two reasons. First, as mentioned in perceived value, almost respondents perceive Norwegian salmon as good value for money. Moreover, many respondents agree the assertion of "for me eating is easy". Therefore, Norwegian salmon could be not a luxury product in Beijing, even though it is more expensive than other seafood products. The second reason is that consumers are not necessary to consume Norwegian salmon for showing off, even if Norwegian salmon is luxury product, because there are many luxury seafood products, such as lobster and abalone, as Olsen's (2003) discussion that health involvement is not most important factor, even if fish is nutritious product.

The modified extended TPB model found that CC (0.21, t-value=2.74) has significantly positive influence on country image at 1% level. The finding presents that CC is possible to enhance the evaluation of Norway's image as good and positive image because of the developed levels of regions. In addition, country image is indicated as a mediator between CC and attitude.

### 5.7.3 Country image (Norway's image)

Respondents always use country image as a halo to infer the quality of product (Han, 1989). The study assumed that Norway's image as Chinese consumers' perceptions of all attributes of salmon from Norway is possible to influence on both attitude and intention. The three items of "environmentally friendly", "from cold and clear waters", and "have a high quality" were selected to describe the construct of country's image. The Cronbach's alpha of construct is 0.94 within the recommended level. Almost respondents evaluate salmon from Norway as excellent seafood.

As showed in figure 4.1a and 4.1b, country image has significantly positive influence on attitude, whereas not impacts on intention. The finding confirms the country image as quality evaluation in food (Skaggs et al., 1996; Knight et al., 2005), so the country image could be an attribute of attitude. For the reason, country image will not impact on intention directly, but indirectly. Also county image not simply contributes to explain more the variance of attitude 16.9%, but also the explanation of variance of intention is 58.6%.

On the other hand, country image is significantly influenced by CE and CC. The finding confirms that consumers in Beijing evaluate the imported products from developed countries (e.g. Norway) as good and high quality product, even though consumers are ethnocentrism (Wang & Chen, 2004). In addition, when consumers are conspicuous consumers, the effect CC will be obvious on country image, namely better evaluation for imported product from developed country (e.g. Norway) (Wang & Chen, 2004).

### 5.8 Implication

The frequency of eating Norwegian salmon in Beijing is very low as around 2 or 3 times per year, however almost consumers evaluate Norwegian salmon as extreme good and positive product. It means that Beijing as a great potential market should be paid more intention. Therefore some practical suggestions are stated in the following.

Many people expressed that they don't know a lot about salmon, especially Norwegian salmon. It suggests that advertisement and product promotion are necessary in Beijing. The advertisement should include several aspects, such as country image, nutritious value, and cooking ways. In addition, the advertisement needs to emphasize that there is little and simple bones, no bad smell, and no any negative effect in eating Norwegian salmon, because the characteristics as advantages are very different from other fish products. Furthermore, sales promoter who needs to know more information and knowledge about Norwegian salmon should be strictly selected.

Secondly, the safety issue has been frequently mentioned and paid more attention in a recent years. The study found that people who have children are more worry about the safety of Norwegian salmon than these people who have no children. In the other words, the respondents care their children very much. It suggests that industry should show Norwegian salmon as an extremely nutritious and safe product, especially for children.

In academic aspects, the results show that the extended TPB model is suitable to explain and predict the frequency of eating Norwegian salmon in Beijing of China. The behavior is able to be explained by intention and SNs directly. Moreover, adding some paths is possibly helpful to increase the explanation of variance of the behavior from 16.0% to 16.9%. In addition, the variance of intention is also improved. Therefore, the construct of country image is necessary to be more extended within the

future researches.

The COO effects as the three constructs of country image, CE, and CC may be interacted by each others, since the study found that the CE and CC impact on country image. It is required to consider their interaction in future researches. On the other hand, country image as a mediator between the two constructs of CE and CC, and attitude. Moreover, country image as the evaluation of quality significantly influences on attitude. The correlation between perceived quality and country image is high (0.54). In the future researches, it is required a model as COO-attitude that country image is a mediator between the three items of perceived quality, CC, and CE, and attitude.

The study involved almost of items that are used to test the constructs in western successfully. However, the two constructs of perceived quality and perceived nutrition are within the same construct. It suggests that the items of perceived attitude and perceived nutrition should be standard in Chinese questionnaire, or change the wordings. The future study will could be distinguished as the two constructs perceived quality and perceived nutrition.

# 5.9 Limitation and suggestion for future researches

As showed in results, intention is a strongest predictor toward eating Norwegian salmon in the study. However, the frequency of eating Norwegian salmon is still very low as 2 or 3 times per years. Therefore there could be several barriers to impact on eating Norwegian salmon. But the study found that only CE as barrier significantly influences on country image to eat Norwegian salmon. It is required an in-depth qualitative research to explore more factors in future research. TPB is often extended by several constructs, such as descriptive norms (Rivis & Sheeran, 2003; Rhodes & Courneya, 2004; Tuu et al., 2008). Also some beliefs should be involved in future

studies, such as health involvement (Olsen, 2001; 2007) and moral obligation (Olsen, 2001; Raats et al, 1995).

Descriptive norms as basing on different sources of motivation are suggested to enhance the explanation capacity of norms, and are necessary to be within the TPB mode in fish context (Tuu et al., 2008). In addition, descriptive norms have larger regression coefficient in the prediction of intention than subjective norm on explanation of health-related decision making (Rivis & Sheeran, 2003, Rimal & Real, 2003; Tuu et al, 2008). Therefore, descriptive norms should be considered as an additional construct in the future studies.

Almost respondents perceive Norwegian salmon as nutritious and healthy product. The future study is required to involve the construct of health involvement. Health involvement is defined as an individual's subjective sense of the concern her or his healthy attaches to an attitude (Boninger et al., 1995b). Involvement within TPB as a motivational construct is related to attitude and behavioral outcome as a mediator construct in the same way as other proposed mediators such as behavioral intention, desire, goals, planning, or intention to try (Bagozzi & Edwards,1998). Although Foxall, Leek, and Maddock (1998) proved that involvement in healthy eating is not always a main reason for purchasing fish when compared to taste, consumers who are more health-oriented are willing to give up some pleasantness, as they consider that food is "healthful-not pleasant". For this reason, health involvement could be an important factor in explaining eating Norwegian salmon (Olsen, 2004).

Moral obligation can be described as an individual's conviction that acting in a certain way is inherently right or wrong regardless of their personal or social consequences (Manstead (2000, p. 12). As showed in results, the respondents want to give nutritious and safe food for their family, and perhaps particularly for children (Shepherd and Raats, 1996). This result confirms earlier findings by Raats et al. (1995) that moral obligation is related to interpersonal responsibilities in family relationships. Moral

obligation has been provided a strong and independent contribution to explaining variation in seafood involvement (Olsen, 2001). In addition, moral obligation directly influences on behavioral intention, when within TPB (Kurland, 1995; Parker, Manstead & Stradling, 1995; Raats, Shepherd & Sparks, 1995; Randall & Gibson, 1991). Thus, these studies indicate that moral obligation is appropriate to be involved in explaining the consumption of nutritious and health seafood, such as Norwegian salmon.

The construct of PBC is possible to separate as the two constructs of self efficacy controllability within TPB model (Ajzen, 2002). The finding of this study also present that these two constructs are necessary to discuss and measure within TPB, since PBC merely impacts on intention, but not on behavior. Furthermore, the results of control beliefs model confirm that all of significant beliefs belong to the self efficacy, as the study mentioned.

To testing model, the study used two latent constructs as different kinds and different situations to estimate the construct of behavior. Although the correlation between different kinds and situations are high (0.68), they are not mostly likely. It suggests that the measurement of behavior should be simple for easier to remember the individual's self report of past consumption frequency in future studies.

On the other hand, the frequency of eating Norwegian salmon is quite low in Beijing. The frequent time intervals (e.g. twice a week or more often, appr. once a week) are not apposite to measure the consumption of Norwegian salmon. It suggests that the future studies should use longer time intervals (e.g. once per month, three times per two month) to measure the consumption of Norwegian Salmon. On the other hand, intention was measured by the items within near future as an elastic time interval. The time interval of near future could be confused by some respondents, so the study suggests that the fixed time interval should be used to measure the intention toward eating Norwegian salmon. Also the fixed time interval should be designed based on

the frequency of consumption, for example in next month.

Finally, the sample size is very small to get the Goodness of Fit of models. Some expected constructs were estimated as insignificant factor in the study. For same reason, the study did not involve the construct of descriptive norms. The future studies should follow the suggestion of Hair et al (1995) that the ratio between observers and latent constructs is within 10:1 to 5:1. The model can be extended more constructs to explain the behavior. Meanwhile, the cost of survey will be required more.

To sum up, the findings and suggestions are important to the seafood industry of Norwegian seafood export council and academic both. Meanwhile, there are many limitations in this study. However the limitations as energies are possible to promote us to understand and explore more unknown knowledge in future studies.

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Append	ix 1:	Pea	rson	Co	rrela	tion	s bet	weei	n ite	ms d	esigi	ned 1	to me	easu	re ex	cten	ded T	ГРВ	cons	truc	ts																	
	A1	A2	A3	A4	A5	A6	A7	I1	12	13	I4	SN 1	SN 2	SN 3	PB C1	PB C2	PB C3	C1	C2	C3	C4	C5	C6	C7	C8	С9	CE 1	CE 2	CE 3	CE 4	CE 6	CC 1	CC 2	CC 3	CC 4	CC 5	Kin ds	Sit uati ons
A1	1	.76	.73	.48	.57	.48	.61	.42	.30	.40	.45	.37	.30	.27	.23	.36	.24	.41	.43	.33	.42	.45	.39	.51	.43	.49	1 6	2 0	2 0	2 5	2 0	.28	.18	.11	.02	.05	.26	.02
A2	.76	1	.73	.61	.65	.53	.58	.32	.29	.38	.38	.27	.27	.20	.18	.39	.21	.36	.42	.35	.38	.37	.33	.45	.36	.43	1 7	2 1	2 0	2 4	2 4	.27	.16	.10	.04	.04	.22	.11
A3	.73	.73	1	.62	.63	.54	.59	.40	.35	.37	.33	.29	.24	.23	.13	.34	.23	.42	.39	.29	.32	.42	.33	.44	.36	.41	1 6	2 3	2 1	2 5	2 2	.24	.14	0 2	0 2	.03	.24	.10
A4	.48	.61	.62	1	.69	.69	.59	.31	.31	.33	.34	.22	.22	.21	.05	.25	.13	.36	.35	.28	.38	.28	.32	.38	.28	.33	0 3	0 9	0 7	1 6	1 3	.22	.25	.14	.19	.15	.14	.03
A5	.57	.65	.63	.69	1	.70	.67	.23	.32	.37	.41	.21	.25	.20	.03	.26	.18	.26	.24	.20	.32	.33	.31	.31	.22	.31	1 0	0 6	.00	0 6	0 2	.23	.21	.08	.04	.07	.20	.11
A6	.48	.53	.54	.69	.70	1	.66	.24	.24	.27	.28	.24	.24	.21	.16	.26	.18	.34	.31	.26	.32	.29	.31	.28	.25	.28	0 8	1 6	1 0	1 0	1 6	.19	.24	.05	.07	.06	.17	.13
A7	.61	.58	.59	.59	.67	.66	1	.28	.33	.30	.37	.30	.29	.31	.12	.26	.11	.38	.37	.28	.34	.35	.31	.34	.30	.38	.00	0 8	0 4	1 0	1 4	.31	.17	.12	.11	.08	.26	.20
I1	.42	.32	.40	.31	.23	.24	.28	1	.73	.66	.60	.43	.44	.42	.26	.44	.47	.30	.29	.19	.32	.35	.28	.40	.39	.37	2 0	2 2	1 8	2 1	1 3	.27	.22	.08	.07	.11	.43	.23
I2	.30	.29	.35	.31	.32	.24	.33	.73	1	.78	.62	.39	.44	.42	.21	.52	.42	.30	.29	.25	.30	.29	.24	.31	.28	.30	1 8	1 9	1 3	11	1 5	.25	.14	.09	.14	.13	.37	.26
I3	.40	.38	.37	.33	.37	.27	.30	.66	.78	1	.77	.41	.47	.43	.17	.46	.42	.26	.31	.24	.37	.31	.23	.32	.26	.30	2 2	2 1	1 5	1 2	1 5	.25	.18	.12	.14	.14	.32	.15
I4	.45	.38	.33	.34	.41	.28	.37	.60	.62	.77	1	.52	.52	.55	.26	.40	.35	.27	.30	.29	.36	.38	.32	.35	.26	.35	2 0	1 0	1 0	0 9	0 9	.32	.26	.18	.14	.15	.28	.13
SN1	.37	.27	.29	.22	.21	.24	.30	.43	.39	.41	.52	1	.85	.81	.22	.30	.29	.33	.31	.25	.32	.35	.22	.32	.28	.32	1 6	0 9	0 7	1 0	1 3	.26	.18	.16	.14	.11	.31	.17
SN2	.30	.27	.24	.22	.25	.24	.29	.44	.44	.47	.52	.85	1	.83	.16	.26	.32	.32	.29	.26	.35	.36	.25	.32	.22	.31	1 6	0 6	0 5	0 8	1 4	.28	.19	.17	.11	.08	.32	.19
SN3	.27	.20	.23	.21	.20	.21	.31	.42	.42	.43	.55	.81	.83	1	.18	.25	.26	.27	.29	.20	.34	.36	.22	.32	.21	.28	1 4	0 3	0 9	11	1 5	.27	.14	.16	.16	.13	.32	.20
PBC1	.23	.18	.13	.05	.03	.16	.12	.26	.21	.17	.26	.22	.16	.18	1	.43	.38	.16	.15	.19	.14	.17	.13	.23	.19	.21	0 3	0 2	0 4	1 4	0 3	.10	.07	.05	.02	.01	.12	.21
PBC2	.36	.39	.34	.25	.26	.26	.26	.44	.52	.46	.40	.30	.26	.25	.43	1	.58	.29	.31	.22	.30	.27	.19	.37	.31	.32	0 5	1 2	11	1 2	1 4	.17	.06	.04	.05	.07	.22	.19
PBC3	.24	.21	.23	.13	.18	.18	.11	.47	.42	.42	.35	.29	.32	.26	.38	.58	1	.15	.17	.15	.20	.21	.15	.23	.17	.23	0 8	0 9	0 2	1 0	0 6	.10	.08	.02	0 4	0 1	.24	.25
Cimage1	.41	.36	.42	.36	.26	.34	.38	.30	.30	.26	.27	.33	.32	.27	.16	.29	.15	1	.83	.72	.72	.69	.61	.74	.65	.67	11	2 5	2 6	2 3	2 8	.36	.25	.15	.29	.24	.25	.11
Cimage2	.43	.42	.39	.35	.24	.31	.37	.29	.29	.31	.30	.31	.29	.29	.15	.31	.17	.83	1	.70	.83	.72	.62	.77	.60	.67	1 5	2 9	2 7	3 3	3 4	.33	.19	.19	.27	.18	.20	.09
Cimage3	.33	.35	.29	.28	.20	.26	.28	.19	.25	.24	.29	.25	.26	.20	.19	.22	.15	.72	.70	1	.69	.59	.63	.68	.53	.58	1 3	1 8	1 5	1 6	2 1	.38	.31	.24	.22	.24	.20	.18
Cimage4	.42	.38	.32	.38	.32	.32	.34	.32	.30	.37	.36	.32	.35	.34	.14	.30	.20	.72	.83	.69	1	.79	.62	.79	.59	.68	1 6	2 6	1 8	2 5	2 8	.36	.24	.21	.17	.12	.21	.11

NOMA-F	AME	Mas	ter Tł	esis														Zho	u Xin																			
Cimage5	.45	.37	.42	.28	.33	.29	.35	.35	.29	.31	.38	.35	.36	.36	.17	.27	.21	.69	.72	.59	.79	1	.60	.80	.55	.70	2 0	2 2	2 1	2 9	3 2	.32	.14	.04	.05	.04	.28	.16
Cimage6	.39	.33	.33	.32	.31	.31	.31	.28	.24	.23	.32	.22	.25	.22	.13	.19	.15	.61	.62	.63	.62	.60	1	.65	.51	.53	1 4	1 9	2 1	2 5	2 9	.31	.26	.17	.14	.19	.22	.19
Cimage7	.51	.45	.44	.38	.31	.28	.34	.40	.31	.32	.35	.32	.32	.32	.23	.37	.23	.74	.77	.68	.79	.80	.65	1	.71	.80	1 4	2 7	2 6	3 3	3 0	.40	.23	.17	.18	.20	.24	.13
Cimage8	.43	.36	.36	.28	.22	.25	.30	.39	.28	.26	.26	.28	.22	.21	.19	.31	.17	.65	.60	.53	.59	.55	.51	.71	1	.78	2 1	2 8	2 9	3 0	2 4	.28	.18	.10	.08	.07	.20	.08
Cimage9	.49	.43	.41	.33	.31	.28	.38	.37	.30	.30	.35	.32	.31	.28	.21	.32	.23	.67	.67	.58	.68	.70	.53	.80	.78	1	1 8	2 5	2 4	3 4	2 5	.39	.21	.15	.16	.12	.21	.11
CE1	1 6	1 7	1 6	0 3	1 0	0 8	.00	2 0	1 8	2 2	2 0	1 6	1 6	1 4	0 3	0 5	0 8	11	1 5	1 3	1 6	2 0	1 4	1 4	2 1	1 8	1	.59	.50	.49	.40	.04	.05	.13	.14	.11	1 9	1 7
CE2	2 0	2 1	2 3	0 9	0 6	1 6	0 8	2 2	1 9	2 1	1 0	0 9	0 6	0 3	0 2	1 2	0 9	2 5	2 9	1 8	2 6	2 2	1 9	2 7	2 8	2 5	.59	1	.79	.66	.57	.02	.09	.14	.01	.01	0 1	0 1
CE3	2 0	2 0	2 1	0 7	.00	1 0	0 4	1 8	1 3	1 5	1 0	0 7	0 5	0 9	0 4	11	0 2	2 6	2 7	1 5	1 8	2 1	2 1	2 6	2 9	2 4	.50	.79	1	.68	.56	.05	.10	.19	0 2	0 3	0 5	.02
CE4	2 5	2 4	2 5	1 6	0 6	1 0	1 0	2 1	11	1 2	0 9	1 0	0 8	11	1 4	1 2	1 0	2 3	3 3	1 6	2 5	2 9	2 5	3 3	3 0	3 4	.49	.66	.68	1	.60	.08	.09	.09	.00	.05	0 4	.03
CE6	2 0	2 4	2 2	1 3	0 2	1 6	1 4	1 3	1 5	1 5	0 9	1 3	1 4	1 5	0 3	1 4	0 6	2 8	3 4	2 1	2 8	3 2	2 9	3 0	2 4	2 5	.40	.57	.56	.60	1	0 3	.06	.08	0 1	0 2	1 0	0 8
CC1	.28	.27	.24	.22	.23	.19	.31	.27	.25	.25	.32	.26	.28	.27	.10	.17	.10	.36	.33	.38	.36	.32	.31	.40	.28	.39	.04	.02	.05	.08	0 3	1	.68	.58	.46	.50	.21	.17
CC2	.18	.16	.14	.25	.21	.24	.17	.22	.14	.18	.26	.18	.19	.14	.07	.06	.08	.25	.19	.31	.24	.14	.26	.23	.18	.21	.05	.09	.10	.09	.06	.68	1	.66	.42	.48	.15	.13
CC3	.11	.10	0 2	.14	.08	.05	.12	.08	.09	.12	.18	.16	.17	.16	.05	.04	.02	.15	.19	.24	.21	.04	.17	.17	.10	.15	.13	.14	.19	.09	.08	.58	.66	1	.54	.54	.06	.07
CC4	.02	.04	0 2	.19	.04	.07	.11	.07	.14	.14	.14	.14	.11	.16	.02	.05	0 4	.29	.27	.22	.17	.05	.14	.18	.08	.16	.14	.01	0 2	.00	0 1	.46	.42	.54	1	.89	.04	0 3
CC5	.05	.04	.03	.15	.07	.06	.08	.11	.13	.14	.15	.11	.08	.13	.01	.07	0 1	.24	.18	.24	.12	.04	.19	.20	.07	.12	.11	.01	0 3	.05	0 2	.50	.48	.54	.89	1	.08	.02
Kinds	.26	.22	.24	.14	.20	.17	.26	.43	.37	.32	.28	.31	.32	.32	.12	.22	.24	.25	.20	.20	.21	.28	.22	.24	.20	.21	1 9	0 1	0 5	0 4	1 0	.21	.15	.06	.04	.08	1	.68
Situations	.02	.11	.10	.03	.11	.13	.20	.23	.26	.15	.13	.17	.19	.20	.21	.19	.25	.11	.09	.18	.11	.16	.19	.13	.08	.11	1 7	0 1	.02	.03	0 8	.17	.13	.07	0 3	.02	.68	1

NOMA-FAME Master Thesis

Appendix 2: Pearson Correlations between items designed to measure attribute beliefs model

	AQ 1	AQ 2	AQ 3	AQ 4	AQ 5	AQ 6	AQ 7	AQ 8	AN 1	AN 2	AN 3	AN 4	AP 1	AP 2	S4	S5	S6	S7	S8	S9	S10	S11	S12	N1	N2	N3	N4	C1	C2	СЗ	C4	C5	K1	K2	К3	K4	K5	K6
AQ 1	1	.73	.75	.70	.65	.72	.70	.72	.67	.58	.60	.52	.29	.35	.38	.33	.37	.39	.31	.32	.35	.29	.30	37	30	46	42	.21	.16	.07	.10	.16	.27	.25	.01	.11	.14	.04
AQ 2	.73	1	.77	.72	.63	.70	.67	.65	.69	.63	.61	.44	.39	.46	.35	.39	.38	.40	.33	.38	.41	.37	.35	32	30	38	42	.20	.16	.08	.06	.13	.25	.28	.07	.20	.19	.06
AQ 3	.75	.77	1	.72	.73	.73	.70	.70	.67	.65	.68	.48	.32	.36	.33	.34	.36	.41	.35	.32	.37	.35	.35	39	31	43	40	.24	.19	.12	.14	.17	.31	.33	.15	.21	.23	.13
AQ 4	.70	.72	.72	1	.76	.69	.64	.55	.59	.51	.60	.50	.33	.40	.32	.41	.40	.36	.37	.40	.39	.35	.35	39	35	43	46	.18	.12	.07	.14	.16	.28	.27	.08	.16	.18	.12
AQ 5	.65	.63	.73	.76	1	.71	.68	.60	.56	.57	.61	.47	.37	.42	.32	.34	.40	.37	.29	.33	.34	.36	.36	48	37	46	42	.20	.19	.09	.11	.10	.16	.16	.00	.11	.12	.06
AQ 6	.72	.70	.73	.69	.71	1	.71	.61	.61	.63	.63	.46	.37	.43	.39	.39	.42	.43	.36	.34	.39	.38	.38	39	31	38	37	.18	.15	.12	.11	.13	.24	.23	.10	.20	.26	.13
AQ 7	.70	.67	.70	.64	.68	.71	1	.73	.72	.59	.62	.48	.36	.47	.38	.37	.43	.44	.39	.35	.39	.37	.38	35	31	42	41	.30	.24	.15	.18	.20	.33	.26	.13	.23	.24	.14
AQ 8	.72	.65	.70	.55	.60	.61	.73	1	.80	.63	.68	.40	.30	.38	.39	.34	.38	.37	.28	.31	.32	.29	.27	39	33	44	42	.24	.24	.09	.15	.21	.26	.27	.12	.21	.19	.12
AN 1	.67	.69	.67	.59	.56	.61	.72	.80	1	.68	.67	.46	.34	.38	.36	.36	.41	.38	.29	.30	.34	.32	.34	37	34	41	37	.22	.20	.11	.15	.20	.27	.26	.09	.21	.21	.12
AN 2	.58	.63	.65	.51	.57	.63	.59	.63	.68	1	.67	.46	.26	.32	.39	.34	.40	.33	.27	.29	.29	.30	.29	39	38	36	30	.14	.13	.08	.11	.11	.23	.24	.04	.19	.18	.07
AN 3	.60	.61	.68	.60	.61	.63	.62	.68	.67	.67	1	.46	.21	.33	.30	.31	.29	.34	.28	.30	.33	.28	.26	36	32	42	39	.22	.20	.07	.10	.09	.26	.24	.06	.09	.10	.02
AN 4	.52	.44	.48	.50	.47	.46	.48	.40	.46	.46	.46	1	.39	.48	.28	.26	.29	.34	.33	.24	.28	.26	.28	33	30	34	38	.18	.09	.03	.04	.11	.19	.15	.01	.08	.11	.01
AP 1	.29	.39	.32	.33	.37	.37	.36	.30	.34	.26	.21	.39	1	.80	.21	.24	.30	.24	.25	.19	.24	.23	.21	30	27	23	22	.17	.18	.16	.05	.23	.16	.20	.22	.26	.28	.30
AP 2	.35	.46	.36	.40	.42	.43	.47	.38	.38	.32	.33	.48	.80	1	.30	.36	.38	.39	.38	.36	.35	.32	.27	30	25	25	23	.21	.22	.22	.13	.24	.21	.26	.21	.29	.28	.24
S4	.38	.35	.33	.32	.32	.39	.38	.39	.36	.39	.30	.28	.21	.30	1	.84	.83	.65	.66	.66	.57	.55	.51	21	20	20	17	.21	.23	.22	.20	.22	.34	.38	.26	.37	.41	.27
S5	.33	.39	.34	.41	.34	.39	.37	.34	.36	.34	.31	.26	.24	.36	.84	1	.91	.68	.75	.72	.63	.60	.55	20	21	16	17	.28	.26	.27	.24	.27	.37	.41	.30	.40	.41	.28
S6	.37	.38	.36	.40	.40	.42	.43	.38	.41	.40	.29	.29	.30	.38	.83	.91	1	.68	.70	.66	.59	.61	.57	25	25	23	20	.27	.25	.25	.26	.28	.35	.35	.24	.32	.40	.29
S7	.39	.40	.41	.36	.37	.43	.44	.37	.38	.33	.34	.34	.24	.39	.65	.68	.68	1	.87	.76	.78	.75	.72	18	12	17	18	.14	.14	.21	.14	.13	.26	.29	.22	.23	.27	.19
S8	.31	.33	.35	.37	.29	.36	.39	.28	.29	.27	.28	.33	.25	.38	.66	.75	.70	.87	1	.79	.77	.73	.67	14	13	13	17	.22	.21	.23	.14	.15	.28	.33	.28	.30	.29	.23
S9	.32	.38	.32	.40	.33	.34	.35	.31	.30	.29	.30	.24	.19	.36	.66	.72	.66	.76	.79	1	.80	.76	.71	11	12	11	09	.22	.20	.18	.19	.14	.33	.39	.25	.32	.33	.25
S10	.35	.41	.37	.39	.34	.39	.39	.32	.34	.29	.33	.28	.24	.35	.57	.63	.59	.78	.77	.80	1	.91	.88	19	14	17	15	.21	.20	.18	.15	.16	.30	.33	.24	.29	.26	.21
S11	.29	.37	.35	.35	.36	.38	.37	.29	.32	.30	.28	.26	.23	.32	.55	.60	.61	.75	.73	.76	.91	1	.92	18	10	15	11	.17	.18	.16	.18	.14	.26	.29	.20	.26	.25	.19
S12	.30	.35	.35	.35	.36	.38	.38	.27	.34	.29	.26	.28	.21	.27	.51	.55	.57	.72	.67	.71	.88	.92	1	15	08	16	09	.17	.16	.10	.14	.11	.25	.23	.14	.18	.20	.15
N1	37	32	39	39	48	39	35	39	37	39	36	33	30	30	21	20	25	18	14	11	19	18	15	1	.83	.78	.69	18	21	09	06	14	02	01	.06	04	06	.04
N2	30	30	31	35	37	31	31	33	34	38	32	30	27	25	20	21	25	12	13	12	14	10	08	.83	1	.70	.64	18	18	11	12	18	04	02	01	08	08	.00
N3	46	38	43	43	46	38	42	44	41	36	42	34	23	25	20	16	23	17	13	11	17	15	16	.78	.70	1	.75	13	12	.00	01	06	07	01	.11	.04	.04	.11
N4	42	42	40	46	42	37	41	42	37	30	39	38	22	23	17	17	20	18	17	09	15	11	09	.69	.64	.75	1	03	03	.11	.12	.07	04	01	.13	.11	.09	.14
C1	.21	.20	.24	.18	.20	.18	.30	.24	.22	.14	.22	.18	.17	.21	.21	.28	.27	.14	.22	.22	.21	.17	.17	18	18	13	03	1	.86	.48	.30	.44	.41	.35	.27	.39	.42	.31
C2	.16	.16	.19	.12	.19	.15	.24	.24	.20	.13	.20	.09	.18	.22	.23	.26	.25	.14	.21	.20	.20	.18	.16	21	18	12	03	.86	1	.55	.37	.51	.40	.36	.35	.45	.45	.37
C3	.07	.08	.12	.07	.09	.12	.15	.09	.11	.08	.07	.03	.16	.22	.22	.27	.25	.21	.23	.18	.18	.16	.10	09	11	.00	.11	.48	.55	1	.68	.75	.44	.42	.46	.52	.56	.51
C4	.10	.06	.14	.14	.11	.11	.18	.15	.15	.11	.10	.04	.05	.13	.20	.24	.26	.14	.14	.19	.15	.18	.14	06	12	01	.12	.30	.37	.68	1	.70	.39	.37	.46	.42	.47	.51

Zhou Xin

NOM	A-FA	ME I	Maste	r Thes	is													Zŀ	ou Xi	in																		
C5	.16	.13	.17	.16	.10	.13	.20	.21	.20	.11	.09	.11	.23	.24	.22	.27	.28	.13	.15	.14	.16	.14	.11	14	18	06	.07	.44	.51	.75	.70	1	.48	.46	.53	.56	.56	.57
K1	.27	.25	.31	.28	.16	.24	.33	.26	.27	.23	.26	.19	.16	.21	.34	.37	.35	.26	.28	.33	.30	.26	.25	02	04	07	04	.41	.40	.44	.39	.48	1	.83	.66	.68	.72	.63
K2	.25	.28	.33	.27	.16	.23	.26	.27	.26	.24	.24	.15	.20	.26	.38	.41	.35	.29	.33	.39	.33	.29	.23	01	02	01	01	.35	.36	.42	.37	.46	.83	1	.74	.81	.79	.67
K3	.01	.07	.15	.08	.00	.10	.13	.12	.09	.04	.06	.01	.22	.21	.26	.30	.24	.22	.28	.25	.24	.20	.14	.06	01	.11	.13	.27	.35	.46	.46	.53	.66	.74	1	.76	.78	.85
K4	.11	.20	.21	.16	.11	.20	.23	.21	.21	.19	.09	.08	.26	.29	.37	.40	.32	.23	.30	.32	.29	.26	.18	04	08	.04	.11	.39	.45	.52	.42	.56	.68	.81	.76	1	.87	.73
K5	.14	.19	.23	.18	.12	.26	.24	.19	.21	.18	.10	.11	.28	.28	.41	.41	.40	.27	.29	.33	.26	.25	.20	06	08	.04	.09	.42	.45	.56	.47	.56	.72	.79	.78	.87	1	.81
K6	.04	.06	.13	.12	.06	.13	.14	.12	.12	.07	.02	.01	.30	.24	.27	.28	.29	.19	.23	.25	.21	.19	.15	.04	.00	.11	.14	.31	.37	.51	.51	.57	.63	.67	.85	.73	.81	1

Appendix 3: Regression weight of extended TPB model

			Estimate	Standardized Estimate	S.E.	C.R.	P
attitude	<	CE	-0.01	-0.02	0.04	-0.34	0.73
attitude	<	CC	-0.02	-0.04	0.03	-0.66	0.51
attitude	<	Country image	0.38	0.40	0.08	4.73	***
Intention	<	CE	-0.10	-0.11	0.06	-1.49	0.14
Intention	<	CC	0.03	0.05	0.04	0.86	0.39
Intention	<	attitude	0.21	0.15	0.10	2.19	0.03
Intention	<	Subjective	0.29	0.30	0.07	4.31	***
Intention	<	PBC	0.53	0.53	0.09	5.75	***
Intention	<	Country image	-0.01	-0.01	0.10	-0.10	0.92
Behavior	<	Intention	0.26	0.41	0.06	4.04	***
Behavior	<	PBC	-0.01	-0.01	0.07	-0.12	0.90
Negative/ Positive	<	attitude	1.00	0.80			
Foolish/ Wise	<	attitude	1.09	0.87	0.17	6.50	***
Important want	<	Subjective	1.00	0.91			
Important expect	<	Subjective	0.99	0.94	0.05	21.77	***
Important encourage	<	Subjective	1.00	0.89	0.05	19.41	***
For me eating is easy/difficult	<	PBC	1.00	0.73			
If I want, I could easily eat	<	PBC	1.09	0.81	0.13	8.17	***
I will eat in near future	<	Intention	1.00	0.80			
I plan to eat	<	Intention	1.05	0.89	0.07	14.22	***
Frequency of kind	<	Behavior	1.00	1.06			
Frequency of situation	<	Behavior	0.72	0.64	0.15	4.75	***
Chinese should not buy foreign	<	CE	1.00	1.11			
Only unavailable should be imported	<	CE	0.66	0.71	0.27	2.47	0.01
social status symbol.	<	CC	1.00	1.21			
A symbol of success and prestige	<	CC	0.57	0.74	0.26	2.18	0.03
Environmentally friendly	<	Country image	1.00	0.89			
From cold and clear waters.	<	Country image	1.02	0.92	0.05	19.13	***
Have a high quality	<	Country image	0.93	0.87	0.05	17.31	***
I want to eat	<	Intention	0.97	0.84	0.07	13.45	***

Appendix 4: Regression weight of modified extended TPB model

			Estimate	Standardized Estimate	S.E.	C.R.	P
Country image	<	CC	0.13	0.21	0.05	2.74	0.01
Country image	<	CE	-0.23	-0.31	0.06	-3.74	***
attitude	<	CE	0.01	0.01	0.05	0.15	0.88
attitude	<	CC	-0.03	-0.05	0.04	-0.73	0.47
attitude	<	Country image	0.38	0.41	0.09	4.49	***
Intention	<	CE	-0.13	-0.13	0.06	-2.06	0.04
Intention	<	CC	0.06	0.07	0.04	1.33	0.18
Intention	<	attitude	0.22	0.15	0.10	2.25	0.03
Intention	<	Subjective	0.28	0.29	0.07	4.13	***
Intention	<	PBC	0.54	0.53	0.09	5.78	***
Intention	<	Country image	-0.02	-0.02	0.11	-0.20	0.85
Behavior	<	Intention	0.19	0.30	0.07	2.74	0.01
Behavior	<	PBC	-0.01	-0.02	0.07	-0.17	0.87
Behavior	<	attitude	0.04	0.05	0.06	0.72	0.47
Behavior	<	Subjective	0.10	0.16	0.05	2.13	0.03
Negative/ Positive	<	attitude	1.00	0.79			
Foolish/ Wise	<	attitude	1.10	0.88	0.17	6.44	***
Important want	<	Subjective	1.00	0.91			
Important expect	<	Subjective	0.99	0.94	0.05	21.82	***
Important encourage	<	Subjective	1.00	0.89	0.05	19.44	***
For me eating is easy/difficult	<	PBC	1.00	0.73			
If I want, I could easily eat	<	PBC	1.09	0.81	0.14	8.08	***
I will eat in near future	<	Intention	1.00	0.80			
I plan to eat	<	Intention	1.06	0.90	0.07	14.46	***
Frequency of kind	<	Behavior	1.00	1.07			
Frequency of situation	<	Behavior	0.71	0.64	0.14	4.93	***
Chinese should not buy foreign	<	CE	1.00	1.00			
Only unavailable should be imported	<	CE	0.81	0.79	0.13	6.28	***
social status symbol.	<	CC	1.00	1.09			
A symbol of success and prestige	<	CC	0.70	0.82	0.12	6.11	***
Environmentally friendly	<	Country image	1.00	0.90			
From cold and clear waters.	<	Country image	1.01	0.91	0.05	19.36	***
Have a high quality	<		0.92	0.86	0.05	17.52	***
I want to eat	<	Intention	0.98	0.85	0.07	13.66	***

Appendix 5: Regression weight of attribute beliefs model

			Estimate	Standardized Estimate	S. E.	C.R.	P
Attitude	<	Perceiced quality	0.55	0.55	0.08	6.60	***
Attitude	<	Negative effects	-0.05	-0.07	0.05	-0.98	0.33
Attitude	<	Perceived value	0.15	0.19	0.06	2.60	0.01
Attitude	<	Availability to buy	0.09	0.11	0.07	1.33	0.18
Attitude	<	convenience	0.08	0.10	0.07	1.13	0.26
PBC	<	Perceived value	0.41	0.35	0.09	4.55	***
PBC	<	Availability to buy	0.23	0.19	0.11	1.99	0.05
PBC	<	convenience	-0.13	-0.11	0.14	-0.88	0.38
PBC	<	Knowledge	0.48	0.44	0.12	4.14	***
Negative/ Positive	<	Attitude	1.00	0.85			
Foolish/ Wise	<	Attitude	0.97	0.82	0.09	11.20	***
For me eating is easy/difficult	<	PBC	1.00	0.81			
If I want, I could easily eat	<	PBC	0.90	0.72	0.12	7.69	***
Variable/stable quality	<	Perceiced quality	1.00	0.83			
Bad/good texture	<	Perceiced quality	1.00	0.91	0.08	12.33	***
Bad smell	<	Negative effects	1.00	1.01			
Bones	<	Negative effects	0.84	0.83	0.08	10.83	***
Dis/satisfied with price	<	Perceived value	1.00	0.85			
Low/high value for money	<	Perceived value	1.00	0.95	0.08	11.88	***
Available in Beijing	<	Availability to buy	1.00	0.88			
Fast and easy to buy	<	Availability to buy	1.15	0.98	0.07	15.63	***
I know a lot about Salmon	<	Knowledge	1.00	0.90			
Consider me as an expert on Salmon	<	Knowledge	0.94	0.82	0.08	11.70	***
Fast and easy to prepare	<	convenience	1.00	0.86			
Fast and easy product to have	<	convenience	1.15	0.87	0.09	12.55	***

Appendix 6: Regression weight of norm beliefs model

			Estimate	Standardized Estimate	S.E.	C.R.	P
SNs	<	Family norms	0.58	0.59	0.07	8.83	***
SNs	<	Colleagues norms	0.33	0.31	0.07	5.10	***
Family wants	<	Family norms	1.00	0.88			
Family expects	<	Family norms	1.08	0.95	0.05	22.34	***
Colleagues want	<	Colleagues norms	1.00	0.94			
Colleagues expect	<	Colleagues norms	1.07	0.98	0.03	31.76	***
Important want	<	SNs	1.00	0.90			
Important expect	<	SNs	1.00	0.94	0.05	21.51	***
Important encourage	<	SNs	1.03	0.90	0.05	19.72	***
Family encourages	<	Family norms	1.08	0.95	0.05	21.97	***
Colleagues encourage	<	Colleagues norms	1.07	0.94	0.04	26.72	***