

# **The role of attitude, preference conflict, norms, and family identity in explaining intention/behavior toward fish consumption in Vietnamese families**

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## **Cover pictures**

Above large pictures: **The meal in Vietnamese families**

(Source: <http://giadinh.net.vn> )

(Source: <http://www.baokhanhhoa.com.vn/Chinhtri-Xahoi/201004/Hanh-phuc-tu-nhung-bua-com-gia-dinh-1936805> )

Below small pictures: **Cuttlefish; Tiger shrimp; Facci swimming crab**

(Source: <http://www.nhatrangseafoods.com.vn/SeafoodsMix.aspx> )

## Abstract

The main objective of the thesis is to explore and test the roles of attitude, preference conflict, norms and family identity in explaining intention/behavior toward fish consumption in Vietnamese families. This study utilizes a theoretical framework based on the Theory of Planned Behavior, but more focused on some other variables (ambivalence, family conflict and identity) in an extended model.

This study uses model constructs and metrics adopted and adapted from Western countries. A convenience sample of 487 questionnaires was collected from three cities (Nha Trang, Ho Chi Minh, and Can Tho) in the South of Vietnam. Three techniques were used, including (1) the confirmatory factor analysis to test the reliability and validity of the measurement model; (2) the structural equation modeling to test the proposed relationships between the constructs; and (3) the group analyses to test the proposed moderating effect of family identity. All these techniques were conducted in Amos 16.0.

The study reveals that attitude, family conflict, and family identity influence intention, while family norms factor do not exhibit a direct relationship with the intention to consume fish in Vietnam. In addition, ambivalence was negatively correlated with attitude, while interpersonal conflict was unrelated to attitude. Moreover, although social variables seem to be of vital importance in predicting attitude, only family identity and attitude enjoy positive correlation with high statistical significance. Family norms have a low impact on attitude while family conflict has no significance in predicting attitude towards fish. Also, family norm and family conflicts were mutually related. Further, the result does not support the hypothesis that family identity represents a moderator in the family norm-intention relationship. Finally, intention to eat fish is highly positively correlated to behavior to consume. However, there is no direct relationship between family identity and fish consumption behavior.

The results of this study will shed some light on discovering the role of attitude, preference conflict, family norms, and family identity in explaining intention/behavior toward fish consumption in Vietnamese families. It will allow academics to better understand the complication of social variables and further develop future research in this area.

**Keywords:** Fish consumption; attitude; preference conflict; ambivalence; family norms; family identity.

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**Nha Trang, May 15th 2010**

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# 1. INTRODUCTION

## 1.1 Background

For many years, consumer behavior researchers have suggested that consumption will not only be influenced by individual phenomenon such as preferences/attitudes, values, perceived behavioral control, personality and knowledge (Ajzen, 1991; Armitage & Conner, 2001; Verbeke & Vackier, 2005; Smith et al., 2008; Tudoran et al., 2009), but also includes social aspects such as social norms, social identity or social groups (Terry & Hogg, 1996; Terry, Hogg & White 1999). In the area of food consumption behavior, social variables seem to be of vital importance in consumption of home meals (Miller, 1998; Olsen, 2001; Olsen & Ruiz, 2008) and in different cultures (Tuu et al., 2008).

Research on family decision making (Burns & Granbois, 1977; Qualls, 1988) showed that the family is the most important social group to influence behavior of individual members (childrens, adolescents and parents) including eating behaviour (Olsen & Ruiz, 2008). Horne et al (1998) argued that, if adults encourage and properly incentive children, they can begin enjoying food that they have rejected in the past. Moreover, parents are the most instrumental teacher of pre-adolescents consumption behavior (Feltham, 1998; Caruana and Vassallo, 2003; Turner et al., 2006). Tuu et al., (2008) proposed that children's feelings and behaviors are more affected by personal observations of their parents' preference, attitudes and eating patterns (descriptive norms) than by their parents' wishes, desires that children should eat healthy food or particular meals (social norms).

Family members often differ in their preferences and attitudes towards food/fish consumption resulting in family preference conflicts. Seafood, for example, is an issue of likes and dislikes: many families feel ambivalent and/or conflicted when seafood is planned as a family meal (Olsen, 2004). In practice, in western countries, in one end, children often have strong inclination not to like fish because of its smell and bones (Dopico et al., 2007 for a review). In the other end, middle-aged and late sexagenarian females (age sixty five years or older) often score higher in fish preference since fish is low in saturated fats but rich essential proteins for health (Dopico et al, 2007). According to Olsen (2003), several empirical studies suggest that in general, elderly people consume fish more often than

younger people. In addition, Norwegian teenagers differed in their preferences for common meals with respect to their like and dislike of fish (e.g., fish lovers vs. fish haters) (Honkanen et al., 2004) or adolescents and their parents have dissimilar preferences for fish (Andrews, 1996; Olsen, 2001; Olsen 2008).

In daily family interactions, individuals often shared social cognition and feelings of oneness with the family members (Ryan, 1982). Empirical research has proposed that the nature and frequency of everyday family interactions are significant for self, relational, and family identity (Cole et al. 1982; Davey and Paolucci 1980; Leigh 1982). For example, frequent interactions (consumption objects and activities) with family provide the most favorable conditions for adolescent growth, counterbalancing each other in positive and socially healthy ways (Larson 1983). According to Videon et al., (2003) parents may educate children on the significance of nutritious foods during family mealtimes. Grossbart et al., (1991) indicated that parents are also more likely to consider children's views on their purchase decisions. In addition, parents who engage in co-shopping with their children are concerned with the growth of independent thinking and the individuality of these children (Sheth et al., 1999). Finally, during family meals there exist an opportunity for parents to provide healthful choices and maintain also be a pattern of healthy eating.

From the consumer behavioral perspective, some different psychological models within dissimilar disciplines have been proposed to explain consumer behavior towards food as well as fish (Shepperd, 1989; Steptoe et al., 1995). Several studies are based on the Theory of Planned Behavior (TPB) (Ajzen, 1991) as a general framework (Berg, Johnsson & Corner, 2000; Boger, Brug, Assema & Dagnelie, 2004; Bredahl & Grunert, 1997; Conner & Armitage, 1998; Corner & Norman, 2002; Olsen, 2003, 2004, 2007; Raats et al., 1995; Shepherd & Stockley, 1985, 1987; Sparks et al., 1995; Trondsen, Scholderer, Lund & Eggen, 2003; Verbeke & Vackier, 2005). In general, some researchers have successfully explained different variances determining food or fish consumption, including the availability of fresh fish and meal preparation skills, perceived convenience, health involvement, attitude towards eating fish (evaluative, affective), subjective norm (social norm, personal norm), perceived behavior control (facilitating conditions, past experience, habit), and socio-demographic consumer characteristics (Verberke & Vackier, 2005).

However, most of the research of work on food and seafood consumption behavior so far has been set in developed countries and in western cultures. In fact, Vietnam has a significant potential for fisheries development. From the supply side, Vietnam is a coastal country with an abundance of marine products, estimated at 1.9 million tons of catch per year



(MARD, 2008). From the demand side, the annual per capita consumption of fish was 17.45 kg in 2003 and is estimated to increase to 20-25 kg in 2010 of 85 million populations (GSO, 2008). Most of Vietnamese consumers have long embedded in collective the culture and family traditions. So far, the family structure has changed, and nuclear family (consisting of a mother and father and their children) prevails. Within families, individual members often differ in their preferences and attitudes towards food/fish consumption and these differences will somewhat influence family's decision in consuming fish area. Thus, an insightful understanding of the role of family interaction and, in particular to dissect the practical role of attitude, preference conflicts, norms (family, descriptive) and family identity in explaining intention/behavior toward fish consumption in this market is significant for both marketers and industry managers.

## **1.2 Research objectives**

Based on the discussion above, the main objectives of the thesis are to:

- Explore and test the roles of attitude, preference conflict, norms and family identity in explaining intention/behavior toward fish consumption in Vietnamese families; and
- Discuss theoretical and managerial implications.

The first part of this study will discuss the main constructs, starting with reviewing previous studies about how attitude, preference conflict, norms, family identity explain or predict food consumption intention/behavior. This will be done utilizing a theoretical framework based on the Theory of Planned Behavior (Ajzen, 1991), but more focused on some other variables (ambivalence, family conflict and identity) in an extended model (Conner & Armitage, 1998; Olsen, 1999; Terry & Hogg, 1996; Terry, Hogg & White 1999; Vaske et al., 2007). Furthermore, the study will deal particularly with the construct's definition and measurement, followed by some empirical findings. Based on technical research analysis, the study develops the discussion of implications for both theoreticians and practitioners, ending with directions suggested for future research.

Data from cross-province consumer survey in Vietnam was collected with the convenience method. It was then processed with techniques including confirmatory factor analysis, reliability and validity of measures test. Next, the theoretical approach was also developed by using Structural Equation Modeling (SEM). Finally, the group analyses are performed in order to test the proposal moderating effect of family identity. The process of analysis was supported by Amos 16.0 software applications.

### **1.3 Structure of thesis**

The thesis is divided into five parts. It starts with the introduction, followed by Part 2 which investigates in detail the theoretical framework focusing on concepts and research hypotheses of attitude, preference conflict, norms (family, descriptive), family identity, and intention/behavior. The model application is developed accordingly. Next, Part 3 contributes to data and methods including data collection, construct measurement and data analysis procedures. Part 4 discusses the results from data analysis and model application. The final part presents the discussion and implications of this research.

## **2. THEORETICAL FRAMEWORK**

The Theory of Planned Behavior (Ajzen, 1991) has successfully been used to explain or predict food consumption behavior (Bogers, Brug, Van Assema & Dagnelie, 2004; Conner & Armitage, 1998; Jonsson & Conner, 2000) included fish consumption behaviour (Bredahl & Grunert, 1997, Olsen, 2003, 2007; Tuu et al., 2008; Verbeke & Vackier, 2005). In the broad application of food as well as fish literature, a number of researchers have successfully applied these theories by considering the impact of additional variables upon behavioral domains such as moral norms (Sparks, Shepherd & Frewer, 1995); past behavior/habit (Smith et al., 2008); belief salience, self efficacy, self-identity, and affective beliefs (Conner & Armitage, 1998); injunctive norms, descriptive norms (Berg, Johnsson & Corner, 2000); healthy eating (Povey, Conner, Sparks, James & Shepherd, 1999); social norms (Olsen, 2007); personal norms (Verbeke & Vackier, 2005); and descriptive norms (Tuu et al., 2008).

In recent years, some studies have incorporated social identity or self categorization perspectives within the general framework TPB (Terry & Hogg, 1996; Terry, Hogg & White 1999) included in the area of food consumption behavior (Louis et al. 2007). In addition, theories about group conflict (Tajfel & Turner, 1979) and ambivalence (Armitage & Conner, 2000; Bengtson et al., 2002) can be included. In the following, this study starts with a brief discussion of these theories, and then will propose a conceptual model which will be tested empirically in the later part of the study. Next, the author will discuss the additional constructs used in this study. Finally, a review of the empirical literature relevant for the study will also be discussed.

### **2.1 Theory Planned Behavior (TPB)**

The Theory of Planned Behavior (Ajzen, 1991) is an extension of the Theory of Reasoned Action (TRA; Ajzen & Fishbein, 1980). Conner et al., (1998) proposed that both theories suggest the deliberative processing models where individuals make behavioral decisions based on careful consideration of available information. According to Ajzen & Fishbein (1980), the main objective of the Theory of Reasoned Action is to predict and understand the causes of behavior. According to the TRA model, the direct predictor of behavior is intention which can be viewed as the conative dimension of the attitude variable.

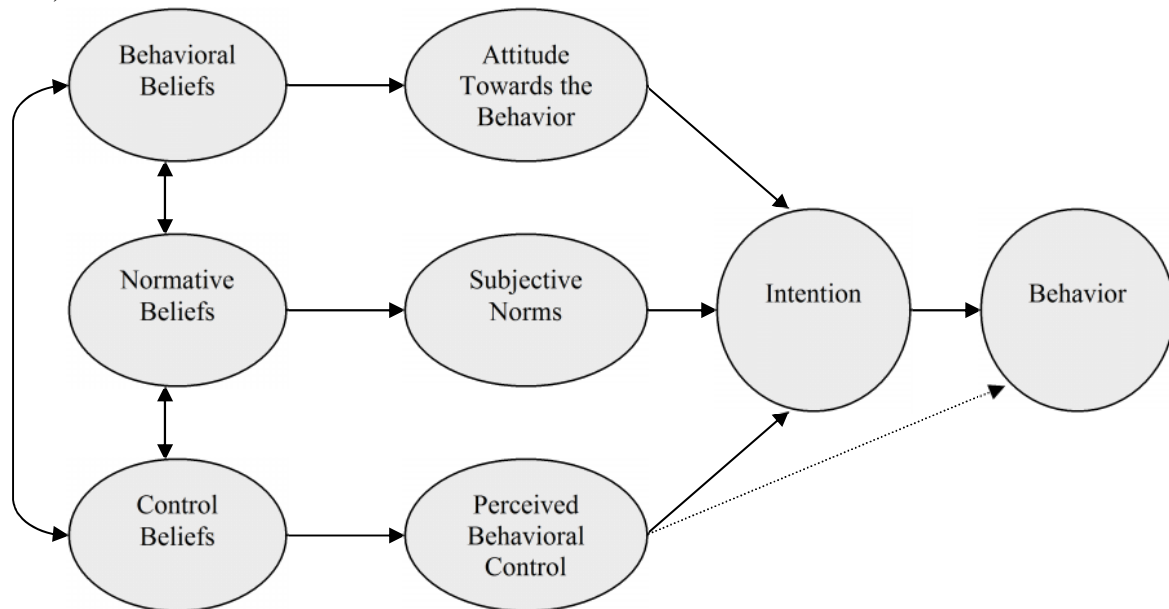
Intention is presented as a switch between the cognitive and evaluative components of attitude and behavior (Ajzen, 1988) and intentions are the direct function of both individual and social related variables (Ajzen, 1988). Intention is interpreted as a person's motivation influencing behavior. Both intentions and behavior are held to be powerfully related when considered at the same level of specificity in relation to the action, target, context, and time frame (Fishbein & Ajzen, 1975; principle of compatibility).

Additionally, intentions mediate the influences of attitude and subjective norms on behavior. These two constructs represent personal and environmental factors. While attitudes are overall evaluations of the behavior by the individual (both negative and positive), subjective norms are presented as of individual's beliefs about the level of significance others think he/she should engage in the behavior. Subjective norms are used to assess social pressures on individuals to perform or not to perform a particular behavior.

The TPB model can serve as a useful basis to examine the extent of intentions, attitudes, perceived social pressure and perceived control. The model is comprised three variables which altogether predict the intention to perform a behavior. The TPB theory argues that the Perceived Behavioral Control (e.g., perceived control over performance of the behavior) is supposed to directly influence both intention and behavior. However, the link between PBC and behavior is more complex since these two constructs have both direct and indirect relationship, which is mediated by intention. Ajzen & Madden (1986) proposed that this direct path is assumed to exist only if PBC is a good proxy of actual. Meanwhile, if behavior is new to the subjects, this relationship cannot occur. Furthermore, this study focuses on some other variables (ambivalence, family conflict and family identity) in an extended model of TPB and also tests the role of them in explaining intention/behavior towards fish consumption. Thus, the PBC construct is rejected in the conceptual model.

In general, the structure of TPB has been widely accepted. However, some efforts are still going on to enhance the predictive power of TPB. Thus, the TPB theory version 2 has been proposed and added in new components such as behavioral beliefs, normative beliefs, and control beliefs (see Figure 2.1). *Behavioral beliefs* tie the behavior of interest to the expected outcomes with the subjective probability that the behavior will create a given outcome (Ajzen, 2005). It is argued that "although a person may hold many behavioral beliefs with respect to any behavior, only a relatively small number are readily accessible at a given moment. It is assumed that these accessible beliefs in combination with the subjective values of the expected outcomes determine the prevailing attitude toward the behavior".

*Normative beliefs* are interpreted as the perceived behavioral expectations of main referent individuals or groups as the person's spouse, family, and friends to comply with those expectations (Fishbein & Ajzen, 1975). The *control beliefs* are the consideration the presence of factors that will increase or decrease advantages in performance of a behavior (Ajzen, 2005).



**Figure 2.1 The Theory of Planned Behavior (adapted from Ajzen, 2005)**

Human behavior takes many forms, which have long attracted attention and research work from many psychologists (Jaccard and Blanton, 2005). For example, Anderson (1981) showed that these are two forms of behavior, including implicit response (mental response that an individual makes with respect to stimulate target) and explicit response (the translation of that implicit response to an explicit clearly demarcated action with respect to stimulate). Jaccard & Blanton (2005) emphasized that although human behavior takes many forms, research should focus on the explicit response because it denotes overt action to a different person. In the definition of human behavior, therefore, authors also focused on the observable response and believed that human 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. An action has a denotable beginning and a denotable ending and is performed in an environmental context in which the individual or group is embedded” (Jaccard & Blanton, 2005).

Fishben & Jaccard (1973) found that the structure of behavior has four elements: *first*, an action (e.g., purchasing, eating, evaluating and disposing), *second*, an object or target toward which the action is directed (e.g., fish, adolescent, parent), *third*, a setting (e.g., at

home or in a restaurant), and *final*, a time (e.g., main meal, today or in coming weeks). Fishben and Ajzen (1977) emphasized the role of making observable and careful decisions about how these four elements are expressed since they play the vital role in predicting of behaviors. In this research, therefore, the consumption behavior is disaggregated into four components, including action (eating), object (fish), setting (at home), and time (at lunch or dinner).

Based on the above discussions, this research defines consumption behavior as the frequency of individual's (fish) consumption in the family over time. In order to measure the amount of individual consumption over the period of time, this study will focus on the self reported measure of past behavior (both general frequency and recent frequency) (adapted from some previous research). In practice, self-reporting of past behavior frequency has been applied in seafood consumption research (Shepherd & Raats, 1996; Myrland et al., 2000; Olsen, 2001, 2005; Verbeke & Vackier, 2005; Tuu et al., 2008).

Intention, within TPB model, is defined as individual's estimate of the probability that he or she will actually perform the important behavior. Ajzen (1991) argued that intention is assumed to capture the motivational factors that influence a behavior. In order to perform the behavior, intention seems to be indicate of how hard people are willing to try, how much effort they are planning to exert. According to Olsen & Heide et al, (2008) in psychology and food science, intention is understood to capture the motivational factors that influence human behaviour and it is often applied as a behavioral indicator.

Consistent with above discussions and focusing on family context in consuming fish area, this research defines intention as motivation of individuals toward eating fish. In addition, intention is measured as likelihood (very unlikely and very likely) that a person's willingness to engage in consuming fish/ seafood (Fishbein & Ajzen, 1975; Ajzen, 1991).

### 2.1.1 A proposed model to explain consumer's intention and consumption of fish

The conceptual model will be tested with this research is presented in Figure 2.2. As shown, this study proposes that ambivalence, family conflict, family norms, descriptive norms, and family identity may have a direct effect on attitude, and that attitude is highly associated with intention/behavior to consume fish. This study also opens up for possibility that family conflict, family norms, and descriptive norms may have an independent and direct effect on intention. In addition, family identity may not only have a direct effect on intention and behavior, but also be posited as a moderator of the relationship between family norms and intention. In the following sections, this research discuss and define several key constructs and then present specific hypotheses regarding the relationships shown in Figure 2.2.

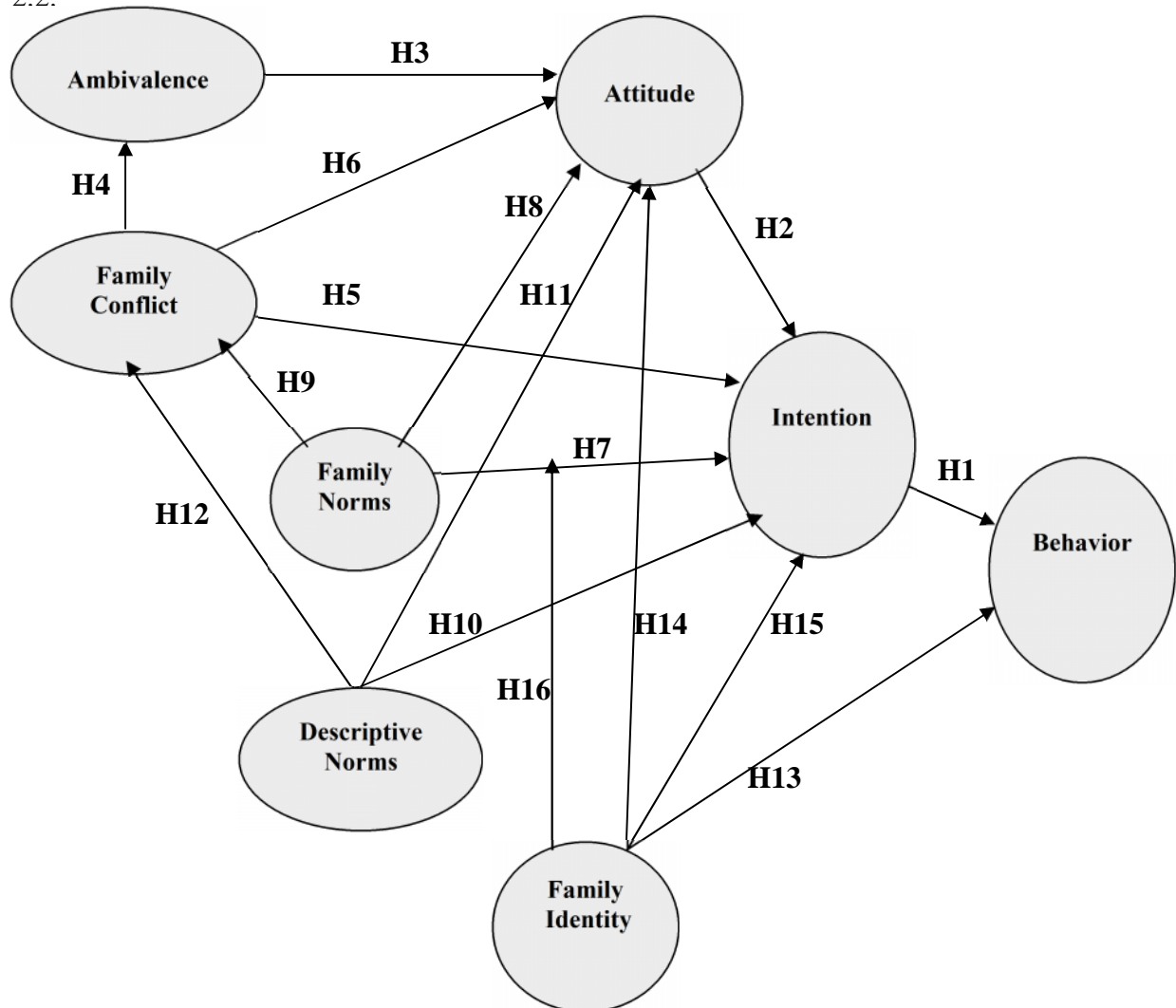


Figure 2.2 The proposed model

### ***2.1.2 The relationship between intention and behavior***

In food/seafood context, intention to buy or consume is also considered to be one of the most important behavioral indicators proposed by TPB. For example, by a meta-analytic review and support for Bagozzi's (1992) position, Armitage & Conner (2001) found that intention was superior predictors of future behaviour. In addition, Tuu et al., (2008) found that intention has a significant effect on behavioral frequency. Verbeke & Vackier (2005) affirmed that behavioral intention has the highest correlations with fish consumption frequency. Thus, my first hypothesis suggests that:

**H1:** Intention to eat fish is positively related to behavior to consume.

## **2.2 Attitude, beliefs and preference conflict**

### ***2.2.1 Attitude and beliefs***

The concept of attitude started to be used by social scientists back to the 1930s and has become mainstream thought since. In the practices, in 1934, after reviewing of the definitions of attitude, Allport redefined attitude as "a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related" (p. 810). Later, Fishbein & Ajzen (1975) viewed attitudes as learned predispositions to respond to an object by repeated information, experiences, and positive reinforcements. Fazio (1986) defined attitudes as "essentially an association between a given object and a given evaluation. The evaluation may range in nature between a very "hot" affect to a "cold", cognitively based judgment of the favorability of the attitude object". According to Eagly & Chaiken (1993), attitudes are often considered a psychological tendency towards evaluating an object (some degree of favor or disfavor, satisfaction or dissatisfaction etc.). Though these definitions have approached "attitude" from different angles and backgrounds, they share the common thread in tackling "object". The term "object", in fact, is used in a very expansive sense, covering social issues (poverty, violence, pollution), concrete objects (fish/seafood, persons), action (eating, buying, selling), sensory features (colour, odour), and situations (Olsen, 1999; Honkanen et al., 2004).



Based on the above discussions, this research focuses on the context of local fish consumptions and defines attitude as an association in memory between a given object (e.g., fish product) and a given summary evaluation of the object (Fazio, 1995). According to Ajzen & Fishbein (1980) attitudes are produced from behavioral beliefs, stemming from, an individual's beliefs (both positive and negative) about the consequences and their personal evaluation of these objects. Verbeke et al., (1999) indicated that beliefs are the cognitive knowledge that consumers have linking attributes, benefits, and objects.

Fishbein & Ajzen (1975) found that global evaluation of an object is produced by salient beliefs. According to Ajzen (2001), salient beliefs are the most frequently represented outcomes in each individual, and should therefore be the key determinants of attitudes. The salient beliefs (knowledge or cognition) concept in marketing research is often considered quality attributes and cues (Peter & Hans, 1995). They emphasized that perceived quality (the concept integrates the different aspects of quality) can be intrinsic or extrinsic. It is used for consumers to denote more abstract beliefs about a product's quality. Experience quality attributes (e.g., taste, texture) are based on actual consumption while credence quality attributes (e.g., healthiness, exclusiveness) remain purely cognitive. Perceived quality is based on consumer's evaluation and will vary accordingly because consumers differ in their preferences, perceptual abilities, and experience levels related to products.

### ***2.2.2 Attitude and preference associated with fish***

Attitudes towards fish have been studied extensively during the last few decades (Shepherd et al., 1996; Bredahl et al., 1997; Saba et al., 2002; Verbeke et al., 2005; Olsen, 1989; 2001; 2005; 2007) for two practical reasons. For positive aspects, fish is often evaluated as a product low in saturated fats, nutrition, taste and healthy food (Dopico et al., 2007). These properties play the dominant role in explaining the attitude and behavior to consume the product. Olsen (1989) found that taste-preference towards seafood is the most important predictor of consumption behavior. However, fish products have some negative attributes such as perishable nature, bones, scales, and smell etc and in particular, frozen (opposite of fresh) -- which is associated with "nonfresh," "bad quality," "tasteless," "watery," "boring," and other negative evaluations (Olsen, 2004) are shown as attitudinal barriers to more frequent fish consumption.

Academic literature has been produced in line with this, including defining the term "preference". According to Honkanen et al., (2004), for instance, preference often refers to

the choice of one object over the other. Meanwhile, Kinnucan et al., (1993) argued that preferences relate to determining specific products that a consumer considers in a choice situation. Preference has also been defined as "something that is preferred; the object of prior favour, or choice" (Delbridge and Bernard 1998, p. 908). According to Olsen (2003), preference is recognized as an attribute of attitude (e.g., like or dislike).

In food consumption research, preference is a dynamic concept, subject to cultural and cognitive interpretations. For instance, researchers consider food preference as the core evaluation construct -- an important basis for predicting food choice and behavior (Honkanen et al., 2000 for a review). By analyzing fish markets, Edwaeds (1992) indicated that consumer preferences do change over time. In addition, Olsen (1999) showed that preferences may vary according to the time of the day, during meals or simply by the different ways in which foods are prepared or served. Further, Rolls (1988) consider family environment and peers major determinants for children' and teenagers' food preferences. Foods rejected by most family members are not likely to be served in the family (Koivistro and Sjöden, 1996; Olsen, 2004). Preference and food choice are various across situations and cultures (Sheppherd, 1989; Leek et al, 2000).

In this study, the preference concept (liking or disliking) is considered to be an attribute of attitude (Olsen, 2003). Ewa Babicz et al. (1999) stated that preference is described as a common predisposition for a particular food, independent of the eating situation, and expressed by the degree of liking or disliking of food, desired food frequency or fraction of subjects selecting the food as a response to its name. Dopico et al (2007) notes the preference of the product (fish) is affected by different attributes such as hedonic/sensory (colour, shape, homogeneity, smell, taste, texture or consistency) commodities/functional (health benefits, convenience benefits, naturalness, animal friendliness, wholesomeness, exclusiveness), and expressive/symbolic (status, exclusiveness, distinction, brand). The above quality attributes are found as the criteria of perceived quality.

Research over the past thirty years has shown a strong link between attitudes and intention (Armitage & Conner, 2001). The attitude – intention relationship is also well documented in the areas of fish research (Olsen, 2001; Verbeke & Vackier, 2005; Tuu et al., 2008). Therefore, this study proposes to a general hypothesis with respect to determinants of intention to eat fish, following the TPB:

**H2:** Attitude towards fish is positively related to intention to consume.

### ***2.2.3 Ambivalence and preference conflict***

With respect to ambivalence, some investigators describe ambivalences (intrapersonal ambivalence) as individuals can hold both a positive and negative evaluation of a given attitude object at the same time (Olsen, 1999 for a review). Individuals who are ambivalent may perceive both advantages and disadvantages towards an object simultaneously (Povey et al., 2001). In addition, Olsen (1999) proposed that with seafood as consumer product, customers with ambiguous attitudes often evaluate his/her satisfaction when thinking about nutritional value, but unsatisfied with some other attributes or undesirable consequences. In research on consumers' views on food quality, Holm and Kildevang (1996) argued that consumers have difficulties in choosing foods which involving feelings of ambivalence, helplessness and personal shortcomings.

Referring to preference conflict definition, to the best of my knowledge, the term "preference conflict" has not been widely discussed in the domain of fish (Olsen, 1999). Based on the above discussions, this study defines preference conflict as mix feelings (positive and negative) or personal ambivalence in fish consumption preference. This definition covers key ideas of most formal definitions of preference conflict. Further, preference conflict expresses general attitudes or mix feelings towards fish such as liking vs. disliking; satisfaction vs. dissatisfaction; attraction vs. aversion; and favor vs. disfavor.

Bromer (1998) noted the negative relationship between ambivalence and attitude extremity confirmed in some studies. Olsen (1999) found that the valence of relationship between ambivalence and attitude will depend on distribution of results along the attitude scale from negative extreme (e.g., very disliked or very dissatisfied) to positive extreme (very liked or very satisfied). According to Olsen et al., in press, if the respondents like or are satisfied with attitude object (negatively skewed distribution), the relationship should be negative; if highly liked or satisfied with less ambivalence. If people dislike the attitude object and the distribution becomes positively skewed, one can expect a positive correlation between ambivalence and attitude: Most liked or satisfied with more ambivalence. Based on the above discussion, this study proposes that:

**H3:** Attitudinal ambivalence is negatively related to attitude towards fish.

### **2.3 Conflict in family preference**

In recent years, the term conflict has been discussed and measured in different ways, reflecting different levels at which various conflicts exist (Deutsch 1990; Thomas 1992a). Esteban et al (1999) defined conflict as the equilibrium sum of resources that are dissipated in the struggle for preferred outcomes. Conflicts are almost inevitable when humans interact (Hamouda et al., 2004). According to Campbell et al., (2001), conflicts are among one of the most powerful sources of distress in daily life. Conflict is also considered interpersonal ambivalence or sociological ambivalence (Priester & Petty, 2001). Though definitions may focus upon different aspects of conflicts, they all agree that conflicts are the result of individuals' or groups' contrary goals and the overt opposition by one person to another person's actions or statements.

With respect to ambivalence and conflicts, recent research has examined the relationship between these terms. Ambivalence (which is above mentioned is not related to individual attitudes (intrapersonal ambivalence), but to interpersonal ambivalence or interpersonal conflict. According to Vaske et al., (2007) the previous research argued that interpersonal conflicts occur when the presence or behavior of an individual or group interferes with the goals of another individual or group. In that respect, interpersonal ambivalence seems to trigger an interpersonal conflict.

To date, although some researchers have raised the importance of interactions among family members during key meals (breakfast, lunch, dinner), in other eating occasions, and in special events in shaping food choices in family (Marshall, Anderson, Lean & Foster, 1995), research on family conflicts, however, is relatively sparse in the consumer behavior domain (While & Johnsen, 2001). According to Hall (1987) family conflicts are defined as “disagreement between two or more persons” (p.768). The disagreement can occur between interparental or parent – child, parent – adolescent or inter – siblings, as well as in other family relationships (Kline et al., 2004). Qualls (1988) proposed that the difference in goals, decisions, preferences, opinions, cognitions or emotions is considered the key drivers in studies on interpersonal conflict in the family. This study follows this tradition and defines conflict as “disagreement in preference between family members”.

With reference to family conflicts in food consumption, Story et al. (2002) indicated that the discrepancies are very common among parents and teenagers in food choice. In addition, according to Turner et al., (2006), in purchasing healthy or junk foods (what are usually considered as high in fat and sugar), conflicts may occur between parents and children. As children often want junk food, they will try to persuade or dominate others by applying some strategies such as crying, pouting, and other non – verbal techniques to fulfill their objectives, which may ultimately impact the parent' decision outcome (Turner et al., 2006 for a review). Nevertheless, Walker et al (1995) argued that although some parents are well aware that some food is good for health, they do not choose to buy it. I can be explained by both affordability and the risk that their children will not continue on this type of food, which results in an obvious waste of their limited resources. On the other hand, in order to solve conflicts with their children, though they can afford to purchase healthy food, they choose not to. In addition, Bourdeaudhij et al. (2002) indicated that individual changes in eating preference will almost inevitably affect other family members. If one individual wants to change his/her fat intake, other family members may either resist or have to make dietary changes. The above evidence would explain the difference in preferences that result in family conflicts.

Several studies have suggested that preference for fish differ among family members. The difference can be determined by age, health involvement, and sensory or hedonic dimension (smell, taste, texture, or consistency). With regard to age, elderly people in general consume fish more often than younger people do (Olsen, 2003 for a review). Although young consumers are somewhat conscious that fish are good for their health, they still do not request it (Dopico et al, 2007). Meanwhile, the elderly people are more health conscious and therefore they eat fish more often. According to Dopico et al., (2007) health benefits of fish can be derived from its nutritional value and from other properties such as low saturated fat content, naturalness, food safety, “low fat content”, “rich in omega 3 fatty acids”, and “rich in vitamins and mineral salts”. However, Olsen (2003) argued that although consumers may have the same opinion and assessment about the importance of fish/seafood as a healthy source of nutrient, the consumption behaviors are still different. The variations can be explained by the influence of sensory or hedonic dimensions (smell, taste, texture, or consistency) on behavior frequency. Leek et al. (2000) indicated that some consumers do not consume fish partly because they think as compared to meat, fish does not have various flavors and quality is not consistent. Smell is also an important negative contributor.

However, given these conflicts, Solomon (1996) suggests that the parents can try to resolve the conflict by exercising the power they have over their children. For example, mothers who have the final say on family meals may use her established role to dominate such the decision making process. Other studies mention that no individual has the consistent control power to exert influence over other family members for fish consumption decision. One reasonable exception is the significant role of mothers in solving this type of family conflict in a typical effort to maintain family peace and harmony. As a result, in many instances, they are the first to compromise their preferences in seafood consumption by changing their intention, which result in behavior changes.

The study will also focus on explaining the interaction preference conflicts among family members. First, disagreements are common in family food preference and choice (Bove, Sobal & Rauschenbach, 2003). Thus, this study covers conflict attitudes and preferences between family members within consumer food choice. Meanwhile, some researchers expected the positive relationship between preference conflict in the family and adolescent's attitude toward fish/seafood (Berg et al., 2000; Köivisto & Sjöden, 1996). In addition, Pries & Petty (2001) provided a study of college student ambivalence and their assessment of their parents' attitudes and preference towards different attitude object. They indicated that greater interpersonal discrepancy increased subjective ambivalence. Based on the above discussions, this study hypothesizes that:

**H4:** Family conflict in preference is positive related to attitudinal ambivalence.

Additionally, attitude and also intention constructs towards fish/seafood consumption in the family are also reviewed in order to develop hypothesis in the later part of the research. This study proposes that if family members like (or dislike) fish, the conflict should be low. Furthermore, some studies show that mothers mostly try to balance the conflicts between family members. It is reasonable to suggest that conflict may cause some kind of frustration in relation to intentions and it will then have a negative impact on intended action in the same way as studies on adolescents have primarily concluded that increased parent – adolescent conflict is conducive to negative behavioral intention (Hall, 1987). Based on the above discussion, I propose that:

**H5:** Family conflict in preference is negatively related to intention to consume fish.

**H6:** Family conflict in preference is negatively related to attitude towards fish.

## **2.4 Norms**

According to Christensen et al., (2004), an individual's behavior is influenced by two types of norms. He found that a number of theories of normative behavior have suggested a distinction between injunctive or subjective norms and descriptive norms. For example, regarding to injunctive or subjective norms, Verbeke & Vackier (2005) indicated that it is not only seem to be others person pressures and expatiations (social norms) but also personal feelings of moral obligation (moral norms) to perform or not to perform a particular behavior. Meanwhile, descriptive norms as typical behavior or what most people do regardless of its appropriateness (Christensen et al., 2004). From above discussions, this study mentions the family aspect and use two constructs for considering relation to family pressure and expectations to perform particular eating behavior (family norms) and also perceptions of what others do, think or feel about a specific behavioral (descriptive norms).

### **2.4.1 Family norms**

This part starts with social norms definition. It seems to be social factors pressuring behavior of consumers to perform or not to perform. Pressures may come from expectations from society in general (subjective norms) (Ajzen, 1991) or from specific groups (like family, friends) or individuals (normative beliefs) (Verbeke & Vackier, 2005). Wenzel (2004) proposed social norms as moral standards attributing to a social group or a collective. Meanwhile, a defining characteristic of social norms perspective within social psychology research is a focus on the approval of others' expectations (Olsen, 2007; Olsen & Ruiz, 2008). Social norms can be measured by asking respondents to rate the extent to which "important others" would improve or disapprove of her performing a given behavior (Ajzen, 1991).

Social norms reflect social aspects in the nature of individuals. Human behavior is not only influenced by personal feelings of moral obligation but also by perceived social pressure to perform or reject to do a certain thing (Ajzen, 1991). Thus, this study mentions the family aspect and defines family norms as family pressure and expectations (Olsen, 2001).

In the food/seafood context, according to Köivisto & Sjöden (1996), family norms also suggest that if someone in the family does not like food (or reject it); high probability is

that the food will not be served for other family members. In addition, eating mainly occurs under the pressure of others. Some research clearly found that when individuals consume alone, social facilitation effect leads to the levels of food consumption lower than when eating occurs in a group setting (familiar people) (Nestle et al., 1998). Meanwhile, family norms may possibly guide such behavior for other meals. According to Videon et al., (2003) adolescents connect eating healthful foods with eating family meals and identify parents as important influences on their consumption patterns. On the other hand, in the context reference to parent, in general, Grossbart et al., (1991) argued that children's views are also more likely to consider when parents making on food purchase decisions. They often feel in the wrong about not spending enough time with their children. Thus, some parents often giving their children more money and also food they prefer along with more freedom and independent decision makes (McNeal & Yeh, 2003). Videon et al., (2003) found that parents who recognize the role vital of breakfast and thus to encourage and to provide guidelines for their children represents a promising intervention for improving adolescent nutrition. Finally, Research on seafood context indicated that family norms can energize people not to perform certain behaviors (e.g., someone in the family will not cook fish/seafood for family dinners if someone in the family does not want to consume) (Verbeke & Vackier, 2005).

As noted in the empirical research in social psychology. According to Smith et al., (2007) the attitude-behavior correlation will influenced by the norms construct since the norm is tied to a specific and relevant group that is a subjectively salient or important basis for self-definition. Terry and Hogg (1996) proposed that if individuals are indicated themselves seem to be belonging to a group (e.g. family members) and also feel that being a family is important to them, they will align their behaviors with the norms and standards of the family. Thus, they are influenced by norms prescribe the milieu-particular attitudes and behaviors appropriate for family members. Furthermore, the relative significance of both social norms and attitude variables are well documented in the literature (Olsen, 2001 for a review). In particular, when taking the family context into considerations, by researching on sharing meal of most Vietnamese households as well as family members who are encouraged to consume what mother makes, Tuu et al., (2008) indicated that the family norms construct had a significant positive influence on both attitude and intention towards fish consumption. Story et al. (2002) also found that parents are indicated as most influential concerning teenagers' food attitudes. A research on Danish households showed that either fresh or frozen seafood are consumed, family's positive expectations are indicated as the attitude factor (taste or



preference) (Bredahl & Grunert, 1997). On the basis of these arguments, this study proposes the following:

**H7:** Family norms are positively related to intention to consume fish.

**H8:** Family norms are positively related to attitude towards fish.

Furthermore, I expect that conflicts will reduce or do not exist if family members have the same expectations about fish served as the main dish, or the level of satisfaction of the family members with the meal is similar. Based on this assumption, this study hypothesizes that:

**H9:** Family norms are negatively related to preference conflict in family.

#### ***2.4.2 Descriptive norms***

According to Olsen et al., (2008), the norm construct not only mention social elements, but to descriptive components. He emphasized that descriptive norms deal with perceptions of what others do, think or feel about a specific behavioral (e.g. eating, drinking). In addition, Christensen et al., (2004) defined descriptive norms as typical behavior or what most people do regardless of its appropriateness. Meanwhile, Moan & Rise (2006) suggested that descriptive norms are the perception of what significant others are doing. Based on the above discussions, this study focuses on family context and defines descriptive norms as the perceptions of eating preference (as liking in the attitude variable) of others members in the family (Olsen et al., 2008).

In food consumption research, According to Olsen et al., (2008 for a review), in the family, parents are often relationship with their children in food preferences. For example, Parents or other person normally who are responsible for family meals prefer healthy and nutritional food. Meanwhile, teenagers often consumes food base on taste more than nutrition. Thus, discrepancies in preferences are common in family food consumption behaviour as well as between parents and children. In addition, research upon children indicated that they may be unwilling to eat healthy food because of the fear of being perceived as different within a group situation (Gelperrowic & Beharrell, 1998). Children' behavior can be changed, depending on the environment in which they are present (Brown et al, 2000).

Tuu et al., (2008), in a study of fish consumption in Vietnam, indicated that descriptive norms had a significant positive influence on intention to consume. In addition, in

TPB model, descriptive norm enhances to predict behavioral intentions and enter in the regression equation alongside attitudes (Rivis & Sheeran, 2003). Further, children's feelings and behaviors are more affected by personal observations of their parents' preference, attitudes and eating patterns (Tuu et al., 2008). Based on the above discussion, I propose that:

**H10:** Descriptive norms are positively related to intention to consume fish.

**H11:** Descriptive norms are positively related to attitude towards fish.

Meanwhile, this study proposes that preference conflict will reduce or do not exist if individuals' perception the eating preference (as liking in the attitude variable) of others members in the family. Thus, this study offers the hypothesis as following:

**H12:** Descriptive norms are negatively related to preference conflict in family.

## **2.5 Social and family identity**

### ***2.5.1 Theories of social identity***

Several studies suggested that social norms are not always a good predictor of intention and behavior (Ajzen, 1991; Terry & O'Leary, 1995; Conner, Norman & Bell, 2002). According to Ajzen (1991), the lack of proof for the influence of norms on attitude - behavior may be due to personal factors which are the primary determinants of behavior. In addition, some authors have argued that norms have been conceptualized as external pressures on people - pressures reflecting others' specific expectations and existing 'out there' instead of within the person's own psyche (Smith et al., 2007). Therefore, Terry & Hong (1996) has proposed the social identity approach in order to develop an alternative conceptualization of norms in the attitude-behavior relationship.

According to Terry et al., (1999) the social identity theory found that a vital element of the self-concept is derived from memberships in social groups and categories. In addition, Fielding et al., (2008) indicated that a person's behavior will become group-based and guided by the norms of that social category or group since the salient basis for self-conception is a specific social identity. Furthermore, he argued that the basic motivation for self improvement is achieved in group contexts by positive in-group evaluations relative to other relevant out-groups. Thus, membership in a positively typical category or group can contribute to a positive evaluation of self.

### ***2.5.2 Social identity in the family***

According to several researchers, the social identity construct derives from category or group membership (Abrams & Hogg, 1999; Madginal, 2001). Because of that aspect, social identities in these studies are defined in various ways. Tajfel (1974) proposed social identity as "the individual's knowledge that he belongs to certain social groups together with some emotional and value significant to him of this group membership". Terry et al., (1999) defined that "social identities are cognitively represented as group prototypes that describe and prescribe beliefs, attitudes, feelings and behaviors that optimize a balance between minimization of in-group differences and maximization of intergroup differences". Madginal (2001) emphasized that individuals are expected to behave as a group member in those situations where social group is made salient and to behave as an individual when personal identity is salient.

These definitions have approached different angles and backgrounds; they share the common thread in tackling "group". The term "group", in fact, is used in a very expansive (e.g. family, friend, clubs members, sports teams...). From above discussions, this study focuses on the family aspect and considers that the most developed conceptualization of family identity sees it as a form of social identity whereby an individual comes to view him or herself as a member of a family.

According to Epp & Price (2008), the concept of family identity to be used in some other areas such as marketing (Belk 1988), sociology (Bielby & Bielby 1989), communication studies (Galvin & Kathleen 2003), family studies (Fletcher 2002), and psychology (Fiese et al. 2002). Thus, the term family identity has been discussed in different ways. Reiss (1981) found that family identity is seem to be interaction both inside among family members and on the outside in relation to the perceptions of outsiders based on observable family behavior. In addition, some authors argued that "Family identity is the family's subjective sense of its own continuity over time, its present situation, and its character. It is the gestalt of qualities and attributes that make it a particular family and that differentiate it from other families" (Epp & Price, 2008 for a review).

In this context, I define family identity as the extent to which an individuals' sense of oneness with the family members. This study emphasizes that family identity is not only mention in sharing interactions among relational bundles within the family but also as a

variable that resides in the minds of individuals (as co-constructed in action) (Gergen, 1996). In addition, some previously researchers suggest that family identities is not shape individual identities, but individual family members hold or reject certain aspects of their family identities (Epp & Price, 2008 for a review). Further, some empirical research proposed that the nature and frequency of everyday family interactions are significant for self, relational, and family identity (Epp & Price, 2008). For example, frequent interactions (consumption objects and activities) with family provide the most abundant conditions for adolescent growth, counterbalancing each other in positive and socially healthy ways (Larson 1983).

In the food perspectives, Moision et al., (2004) found that food plays a role in the production and negotiation of family member identities. For instance, the mother's job, who has schedule forces her to buy 'packets of Mousseline soup and ravioli what they eat every day'. These fast foods also deprive the family of shared preparation time as a chance to bond (Mehta, 2003 for a review). De Vault (1991) proposed that meals preparation within family is to construct home and family around shared consumption practices. Consistent with this perspective, family meals become a central site for making family meanings (DeVault, 1991). Moreover, according to Moision et al., (2004) 'proper meals' help maintain and reinforce a coherent patriarchal family ideology.

The family identity construct has received a few consumer studies connect identity challenges families face during transitions to consumption-related behavior (Epp & Price, 2008). They emphasized that the consumption behavior variable has also explored the use as coping mechanisms for family disruption and stress. Research on separation and divorce suggests that consumption behavior is used to restore or build a sense of family identity (Rindfleisch et al., 1997). According to Epp & Price (2008) eating behavior in the family will engage in to restore, maintain, a sense of family and also to build a new family identity. In addition, Christensen et al., (2004) proposed that if individuals conform to a norm and as well as evaluate their identity positively they will persist with these behaviors and increase their identification with the group. Furthermore, an individual would behave more in sync with those attitudes than others if there exists normative support from a relevant group for attitudes towards a particular issue or behaviors (Johnson et al., 2003). Moreover, when research on student identity, Louis et al., (2007) supported previous research and indicated that the perceived norms of a specific and behaviorally relevant reference group (friends and peers at university) were positively related to students' intentions to engage in health-related behaviors. Smith & Louis (2009) emphasized that these intentions were significantly stronger

among persons who identified strongly with the reference group (e.g., family members). In the other case, individuals who did not identify strongly with the reference group, personal factors were the strongest predictors of behavioral intention. Thus:

**H13:** Family identity is positively related to fish consumption behavior.

**H14:** Family identity is positively related to attitude towards fish.

**H15:** Family identity is positively related to intention to consume fish.

In some of the studies, by considering television is central to the study of family identity construct; Epp & Price (2008) supposed that the socialization of practices will vary from family norms including how much, what kinds of television family members watches, how they share that experience. They further test how different individual, relational, and collective identities moderate socialization of central family practices. As a result, strengthening socialization effects related to this relational unit that may reinforce from family norms. From above discussion, I argue that if an individual is in accord with norms of behaviorally relevant group (strong identity), group identities as moderator of family norms in relationship of the constructs with behavioral intention as a result (Terry & Hogg, 1996). Based on these discussions, this study suggests that:

**H16:** Family identity is a moderator variable between the family norms – intention relationship.



### 3. DATA AND METHODS

#### 3.1 Data collection

First, I conducted a fieldwork and pre-testing of the questionnaire. 20 respondents were asked to complete a form with questions about their thoughts and opinions about the survey instrument. Based on the feedback the pre-test, a final questionnaire was completed.

A convenience consumer sample is collected from three cities (Nha Trang, Ho Chi Minh and Can Tho) in the South of Vietnam. 487 respondents were personally interviewed at home and completed the final questionnaire requiring 30-40 min. Households were selected at random and then selected respondent who were aged 18 and over. Otherwise, the samples were focusing on the population regarding gender, married status, age, education, average income of family per month, family size. The typical respondent was female (67%), married (68%), the average age among the respondent was 33.9 years, and the average size of the household was 4.6 persons. The detail demographic characteristics as presented in table 3.1.

**Table 3.1 Socio – demographic characteristics of the sample (% of respondents, n = 487)**

<b>Gender</b>	Male	32.6	<b>Marital status</b>	Single	32.0
	Female	67.4		Married	68.0
<b>Education</b>	12 years	63.5	<b>Age</b>	25 years	28.1
	> 12 years	36.5		26 – 40 years	42.7
<b>Income family (per month)</b>	< 5 millions	22.0	41 – 55 years	23.5	
	5-9 millions	63.8	> 55 years	5.7	
	> 9 millions	14.2	<b>Family size</b>	2 persons	1.9
<b>Live with</b>	Mother, father	25.1	3 – 4 persons	55.6	
	Only mother	3.5	5 – 6 persons	34.2	
	Only father	.0	> 7 persons	8.3	
	Foster parents	.2	<b>Region</b>	HCM City	30.8
	Your children	38.6		Can Tho City	29.7
	Other	32.2		Nha Trang City	39.5

## **3.2 Measurement of constructs**

### ***3.2.1 Consumption behavior***

This study emphasizes that consumption behavior was assessed by the self-reported measure of past behavior (both general frequency and recent frequency). The self-reported measure is adapted from some prior research in the area of food consumption behavior (Shepherd & Raats, 1996; Myrland et al., 2000; Olsen, 2001, 2003, 2005, 2007; Verbeke & Vackier, 2005; Tuu et al., 2008). For instance, with general frequency by asking the respondents: “How many times on average during the last year have you eaten fish as meal in your home?” This assessment was addressed by a nine-point scale of form such as 1 = more seldom, 2 = 1-2 times every months, 3 = 3 - 4 times every months, 4 = 1- 2 times a week, 5 = 3-4 times a week, 6 = 5 - 6 times a week, 7 = 7- 8 times a week, 8 = 9 - 10 times a week, 9 = 11 times a week or more. The second item assessed recent frequency (Bagozzi & Kimmel, 1995), by asking the respondents “Could you please estimate how many times during the last 7 days have you eating fish as your main course at home”. The respondents were given the opportunity to mark their responses on a scale from 1 to 14 times. According to Olsen (2003 for a review), applying both general frequency and recent frequency in measure of consumption behavior will help to reduce measurement and survey errors.

### ***3.2.2 Intention***

This research focuses on fish context and defined intention as motivation of individuals toward eating fish. Armitage & Conner (2001) indicated that behavioral intention is measured in terms of expectation. The three items are assessed in terms of intended, expected and desired (Armitage & Conner, 2001; Verbeke & Vackier, 2005). The respondents are asked to score the probability that they intend to eat fish in three days (7 – point likelihood scale that from (1) Very unlikely to (7) Very likely, and the middle of 4 is neutral estimation.



### ***3.2.3 Attitude, beliefs and preference associated with fish***

This research is focused on fish context and defines attitude as an association in memory between a given object (e.g., fish product) and a given summary evaluation of the object (Fazio, 1995). *First*, the general attitude towards fish was evaluated, therefore, on the basis of a five items on a seven-point Likert scale adapted from Shepherd & Raats, 1996; Myrland et al., 2000; Olsen, 2001, 2005; Verbeke & Vackier, 2005; Tuu et al., 2008). For example, the respondents were asked to express their attitude “When I eat fish as the main meal in my home, I feel”: good vs. bad, satisfied vs. unsatisfied, pleasant vs. unpleasant, exiting vs. dull, positive vs. negative. *Second*, because attitude towards fish can be assessed by different beliefs. For instance, taste vs. distaste and nutrition are suggested as the most salient food attributes forming a general evaluation of food while quality and freshness in a more general sense are important for the evaluation of seafood (Olsen, 2004 for a review). Thus, the four point semantic differential including four bipolar adjectives were used to assess by asking respondents to indicated their evaluate “When I evaluate fish as a main course at home, I think that fish have/is...”: good taste vs. bad taste, good texture vs. bad texture, delicate appearance vs. bad appearance, healthy vs. unhealthy, easy to prepare vs. difficult to prepare, easy to buy vs. difficult to buy, available vs. unavailable, fast to prepare vs. time-consuming to prepare, safe vs. unsafe, nutritious vs. innutritious, easy to cook in many different ways vs. difficult to cook in many different ways, reasonable priced vs. too expensive, and high value for money vs. low value for money.

In this study, the preference concept (liking or disliking) is considered to be a focus on attitude (Olsen, 2003). Therefore, preferences for fish as meal were measured a long a seven-point semantic differential scale ranking from “dislike very much” (1) to “like very much” (7). The scale is in accordance with Honkanen et al. (2004).

### ***3.2.4 Ambivalence and preference conflict***

Some researchers describe ambivalences (intrapersonal ambivalence) as follows: individuals can hold both positive and a negative evaluation of a given attitude object at the same time (Olsen, 1999 for a review). In addition, Olsen (1999) proposed that with seafood as a consumer product, customers with ambiguous attitudes often evaluate his/her satisfaction when thinking about nutritional value, but they may express dissatisfaction with some other

attributes or undesirable consequences. This study, therefore, will focus on subjective ambivalence and measure it with four items such as “I have conflicting thoughts about fish”, “I have mixed feelings about fish”, “My thoughts and feeling about fish are conflicting”, “and I can feel both satisfied and dissatisfied when I eat fish”. All these items were measured on a seven-point Likert scale anchored by disagree strongly (-3), neither disagree nor agree (0) and agree strongly (+3). This scale is adopted from some prior research (Jonas et al., 2000a; Olsen et al., 2005).

### ***3.2.5 Conflict in family preference***

This study defines preference conflict as disagreement in fish consumption preference between family members. Further, preference conflict expresses general attitudes or feeling relative to other members in the family such as liking vs. disliking; satisfaction vs. dissatisfaction; attraction vs. aversion; favor vs. disfavor in consuming fish. Therefore, measuring of preference conflict was performed with four items on a seven-point Likert scale anchored disagree strongly (-3), neither disagree nor agree (0), and agree strongly (+3). For example, items asked participants to response “I often feel difference between my family’s members preference when having fish as main meal in the family”, “I often feel conflict between my family’s preference and my own preferences when having fish as main meal in the family”, “I often feel that my family and I disagree when having fish as main meal in the family” and “Having fish as main meal in the family, I feel we often disagree about how satisfied we are with the meal”. These measures are also suitable for the formal definition of parent – adolescent conflict by Hall (1987), and are previously used by (Olsen & Grunent, 2010 - forthcoming in European Journal of Marketing).

### ***3.2.6 Family norms***

In this study, family norms are defined as family pressure and expectations (Olsen, 2001). Therefore, family norms construct seem to be related to the family group and assessed by three items on a seven-point Likert scale anchored disagree strongly (-3), neither disagree nor agree (0), and agree strongly (+3) (Olsen, 2007). For instance, the respondents were asked to response “My family expects me to have fish regularly for main meal”, “My children expect me to have fish regularly for main meal”, “My spouse/partner expects me to have fish regularly for main meal”. In addition, participants were asked to indicate the extent to which they agreed with three statements “My family wants me to have fish regularly for

main meal”, “My children wants me to have fish regularly for main meal”, “My spouse/partner wants me to have fish regularly for main meal”. Finally, the questions were “My family encourages me to have fish regularly for main meal”, “My children encourage me to have fish regularly for main meal”, “My spouse/partner encourages me to have fish regularly for main meal”. According to Olsen et al., (2008), expect, want and encourage are analogous to the traditional items used to measure social norms as social pressure and expectations.

### ***3.2.7 Descriptive norms***

This study focuses on family context and defines descriptive norms as the perceptions of eating preference (as liking in the attitude variable) of others members in the family (Olsen et al., 2008). This study, thus, measures descriptive norms by three items on a seven-point Likert scale anchored disagree strongly (-3), neither disagree nor agree (0), and agree strongly (+3). Respondents were asked to response “My family like to eat fish regularly for main meal”, “My children like to eat fish regularly for main meal”, “My spouse/partner like to eat fish regularly for main meal” (Olsen et al., 2008).

### ***3.2.8 Social and family identity***

Family identity is defined as the extent to which an individuals’ sense of oneness with the family members. In this study, to the best of my knowledge, the measuring of family identity construct in the area of fish consumption behavior is not extended to assess. Thus, the family identity measure is adapted from some prior research in the other context (Hogg, Hains, & Mason, 1998; Madrinal, 2001). For example, I measured family identity with general aspects by five items: “I feel strong ties to my family”, “My family means a lot to me”, “I have a lot in common with my family”, “In general, belonging to family is an important part of my self-image”, “In general, I am glad to be a member of the family I belong to”. In addition, this study also measures family identity with meal in the family by four items: “It is important for me to eat together with my family”, “I feel good when eating together with my family”, “I feel pleasant when eating with my family”, and “I feel bored if I am not eating with members in family”. All these items were measured on a seven-point Likert scale anchored by disagree strongly (-3), neither disagree nor agree (0) and agree strongly (+3).

### **3.3 Data analysis procedures**

The first goal of a quantitative analysis was to confirm each measure taps facets of the intended construct (convergent validity) and that the constructs are distinct from each other (discriminant validity). The second goal was to test appropriate constructs in the conceptual model and the causal relations as presented in figure 2.2. These analyses were conducted using maximum likelihood estimation in Amos 16.0. Hair et al., (1995) found that structural equation modeling can apply correlation or variance matrix as its key in constructing the model. In addition, variance matrix is applied seem as input is appropriate to test a theory. Some index such as the Chi-square ( $\chi^2$ ), Goodness of Fit Index (GFI), Comparative Fit Index (CFI), and Root mean square error of approximation (RMSEA) are applied in order to evaluate the overall model fit (measurement and construct model). The GFI has been found to be sensitive to sample size, while CFI is essentially independent of sample size (Anderson & Gerbing, 1988). Acceptable model fits are indicated by GFI and CFI values exceeding .90 and RMSEA values below .08 represent a moderate fit, while values less than .05 are seem to be good (Browne & Cudeck, 1992). Finally, group analyses are proposed to test the proposal moderating effect of family identity.

## **4. RESULTS**

The goal of this part is to present the results and analysis from data collection of 487 samples. The Amos 16.0 software was used as a powerful statistical analysis and data management for this study. The results will be presented in three main analysis sections: (1) the results of confirmatory factor analysis; (2) the structural equation modeling which is applied to test the proposed conceptual model with causal relations; and (3) finally the results of group analyses with family identity as a moderator.

### **4.1 Reliability and validity of the measurement model**

The first goal is to confirm that each measure taps facets of the eight latent constructs (convergent validity) and that the constructs are distinct from each other (discriminant validity). An analysis of the measurement model with 28 variables resulted in a good fit with a  $\chi^2$  value of 567.094 (df = 322, p = .000); RMSEA = .040; GFI = .92; CFI = .97. Convergent validity was examined by looking at the individual item loadings on the constructs and the average measure of variance shared between the items and the construct (Jöreskog & Sörbom, 1993). Reliability of the multi – item scales were assessed by computing Jöreskog’s composite reliability coefficient for each constructs (Anderson & Gerbing, 1988). This method of computing reliability is similar to Cronbach’s alpha, but rather than assuming that each item has equal weight, as in alpha, the items are weighted by their respective factor loadings. The standardized confirmatory factor analysis coefficients and construct reliability for the measurement model are presented in Table 4.1.

**Table 4.1 Standardized confirmatory factor analysis coefficients and construct reliability**

<b>Constructs and indicators</b>	<b>St. factor loadings</b>	<b>t-value</b>	<b>Composite reliability</b>	<b>Variance Extracted</b>
<b>Attitude</b>			<b>.86</b>	<b>.67</b>
Bad/Good	.82	20.84		
Unsatisfied/Satisfied	.91	24.14		
Dislike very much/Like very much	.72	17.46		
<b>Ambivalence</b>			<b>.87</b>	<b>.63</b>
I have conflicting thoughts about fish	.75	18.72		
I have mixed feelings about fish	.85	22.35		
My thoughts and feeling about fish are conflicting	.84	21.76		
I can feel both satisfied and dissatisfied when I eat fish	.73	18.03		
<b>Family conflict</b>			<b>.83</b>	<b>.56</b>
I often feel difference between my family's members preference when having fish as main meal in the family	.68	16.04		
I often feel conflict between my family's preference and my own preferences when having fish as main meal in the family	.83	20.85		
I often feel that my family and I disagree when having fish as main meal in the family	.76	18.40		
Having fish as main meal in the family, I feel we often disagree about how satisfied we are with the meal	.71	16.77		
<b>Family norms</b>			<b>.91</b>	<b>.77</b>
My family expects me to eat fish	.81	21.25		
My family wants me to eat fish	.92	25.82		
My family encourages me to eat fish	.90	24.70		
<b>Descriptive norms</b>			<b>.78</b>	<b>.55</b>
My family like to eat fish	.89	23.38		
My children like to eat fish	.59	13.49		
My spouse/partner like to eat fish	.71	17.18		

**Table 4.1 (Continued)**

<b>Constructs and indicators</b>	<b>St. factor loadings</b>	<b>t-value</b>	<b>Composite reliability</b>	<b>Variance Extracted</b>
<b>Family identity</b>			<b>.90</b>	<b>.61</b>
I feel strong ties to my family	.84	22.08		
I have a lot in common with my family	.75	18.67		
In general, belonging to my family is an important	.82	21.33		
In general, I' m glad to be a member of the family	.81	21.09		
I feel good when eating together with my family	.83	21.76		
I feel bored if I am not eating with members of my family	.60	14.02		
<b>Intention</b>			<b>.93</b>	<b>.81</b>
I intended to eat fish	.92	25.81		
I expected to eat fish	.92	25.98		
I desired to eat fish	.85	22.91		
<b>Behavior</b>			<b>.88</b>	<b>.78</b>
How many times on average during the last year have you eaten fish/seafood as meal in your home?	.91	23.04		
Could you please estimate how many times during the last 7 days have you eating fish as your main course at home?	.86	21.18		

**Note:** Chi - Square = 567.094, df = 322, p-value = .000; RMSEA = .040; GFI = .92; CFI = .97, N = 487.

Table 4.1 indicates that the individual item loadings (lambdas- ) on the constructs were all highly significant ( $p < .001$ ; t- value  $> 13$ ) with factor loadings ranging from .59 to .92. All the individual scales exceeded the recommended minimum standards proposed by Bagozzi and Yi (1988) in term of construct reliability; composite reliability was greater than .70 and variance extracted greater than .50.

Table 4.2 displays the intercorrelations between the factors proposed in the model. All the correlations, except for that between family norms and descriptive norms, are significant ( $p < .01$ ) and below .64. In addition, the squared correlation between each of the constructs (except for that between family norms and descriptive norms) is less than the average variance extracted from each pair of constructs, which constitutes discriminant validity (Fornell and Larcker, 1981).

**Table 4.2 Construct mean, standard deviations, and correlations of the constructs**

	Mean	SD	1	2	3	4	5	6	7	8
1. Attitude	5.82	1.25	<i>.67</i>	.21	.10	.08	.12	.15	.38	.18
2. Ambivalence	3.52	1.57	-.46	<i>.63</i>	.27	.07	.12	.11	.19	.15
3. Family conflict	4.28	1.64	-.31	.52	<i>.56</i>	.13	.19	.05	.12	.08
4. Family norms	5.59	1.37	.29	-.27	-.36	<i>.77</i>	<i>.76</i>	.12	.07	.07
5. Descriptive norms	5.34	1.41	.35	-.35	-.44	<i>.87</i>	<i>.55</i>	.16	.18	.18
6. Family identity	6.21	1.16	.39	-.33	-.22	.35	.40	<i>.61</i>	.14	.08
7. Intention	4.97	1.80	.62	-.44	-.35	.27	.42	.38	<i>.81</i>	.40
8. Behavior	5.58	2.45	.43	-.39	-.28	.27	.43	.28	.63	<i>.78</i>
$\chi^2$ (df), p	–	–	567.094 (322), p = .000							
GFI	–	–	.92							
CFI	–	–	.97							
RMSEA	–	–	.04							

**Note:** All factor inter – correlations are significant at  $p < .01$

**Note:** Correlations below the diagonal of the matrix; Squared correlations above the diagonal of the matrix are significant at  $p < .01$ ; Extracted variances in Italics on the diagonal.

However, the intercorrelations between family norms and descriptive norms are no constitutes discriminant validity because the squared correlation between each of two this constructs is .76 greater than the average variance extracted from each pair of constructs is .66. Because this study focuses more on family issues, a new CFA with without descriptive norms is performed.

The measurement model with 25 variables were improved the results good fit, standardized factor loadings and construct reliabilities for the new measurement model are presented in Table 4.3.



**Table 4.3 Standardized confirmatory factor analyses coefficients and construct reliability (Modified model without descriptive norms)**

<b>Constructs and indicators</b>	<b>St. factor loadings</b>	<b>t-value</b>	<b>Composite reliability</b>	<b>Variance Extracted</b>
<b>Attitude</b>			<b>.86</b>	<b>.67</b>
Bad/Good	.82	20.83		
Unsatisfied/Satisfied	.91	24.13		
Dislike very much/Like very much	.72	17.46		
<b>Ambivalence</b>			<b>.87</b>	<b>.63</b>
I have conflicting thoughts about fish.	.75	18.71		
I have mixed feelings about fish.	.85	22.35		
My thoughts and feeling about fish are conflicting.	.84	21.76		
I can feel both satisfied and dissatisfied when I eat fish.	.73	18.03		
<b>Family conflict</b>			<b>.83</b>	<b>.56</b>
I often feel difference between my family's members preference when having fish as main meal in the family.	.68	16.00		
I often feel conflict between my family's preference and my own preferences when having fish as main meal in the family.	.83	20.81		
I often feel that my family and I disagree when having fish as main meal in the family	.76	18.45		
Having fish as main meal in the family, I feel we often disagree about how satisfied we are with the meal.	.71	16.74		
<b>Family norms</b>			<b>.91</b>	<b>.76</b>
My family expects me to eat fish.	.80	20.65		
My family wants me to eat fish.	.92	26.12		
My family encourages me to eat fish.	.89	24.06		
<b>Family identity</b>			<b>.90</b>	<b>.61</b>
I feel strong ties to my family.	.84	22.09		
I have a lot in common with my family.	.75	18.66		
In general, belonging to my family is an important.	.82	21.31		
In general, I' m glad to be a member of the family.	.81	21.10		
I feel good when eating together with my family.	.83	21.75		
I feel bored if I am not eating with members of my family.	.60	14.00		

**Table 4.3 (Continued)**

Constructs and indicators	St. factor loadings	t-value	Composite reliability	Variance Extracted
<b>Intention</b>			<b>.93</b>	<b>.81</b>
I intended to eat fish	.91	25.80		
I expected to eat fish	.92	25.99		
I desired to eat fish	.85	22.91		
<b>Behavior</b>			<b>.88</b>	<b>.78</b>
How many times on average during the last year have you eaten fish/seafood as meal in your home?	.91	22.85		
Could you please estimate how many times during the last 7 days have you eating fish as your main course at home?	.86	20.98		

**Note:** Chi - Square = 414.023, df = 254, p-value = .000; RMSEA = .036; GFI = .93; CFI = .98; N = 487.

As shown in Table 4.4, after rejecting descriptive norms construct in analysis, all the correlations are significant ( $p < .01$ ) and below .64. In addition, the squared correlation between each of the constructs is less than the average variance extracted from each pair of constructs, which constitutes discriminant validity (Fornell and Larcker, 1981).

**Table 4.4 Construct mean, standard deviations, and correlations of the constructs**

	Mean	SD	1	2	3	4	5	6	7
1. Attitude	5.82	1.25	<b>.67</b>	.21	.10	.08	.15	.38	.18
2. Ambivalence	3.52	1.57	-.46	<b>.63</b>	.27	.07	.11	.19	0.15
3. Family conflict	4.28	1.64	-.31	.52	<b>.56</b>	.13	.05	.12	.08
4. Family norms	5.59	1.37	.29	-.27	-.36	<b>0.76</b>	.16	.07	.07
5. Family identity	6.21	1.16	.39	-.33	-.22	.40	<b>.61</b>	.14	.08
6. Intention	4.97	1.80	.62	-.44	-.35	.27	.38	<b>.81</b>	.40
7. Behavior	5.58	2.45	.43	-.39	-.28	.26	.28	.63	<b>.78</b>
<sup>2</sup> (d.f), p	–	–	414.023 (254), p = .000						
GFI	–	–	.934						
CFI	–	–	.98						
RMSEA	–	–	.036						

**Note:** All factor inter-correlations are significant at  $p < .01$

**Note:** Correlations below the diagonal of the matrix; Squared correlations above the diagonal of the matrix are significant at  $p < .01$ ; Extracted variances in Italics on the diagonal.

## 4.2 Structural analysis of the proposed relationships

The main effects of the model presented in Figure 2.2 were modified because of the constructs, descriptive norm not proved discriminant validity. Thus, three hypotheses (H10-H12) are deleted from the new and modified model. Apart from the Chi – square (434.65, df = 260, p-value = .000), the new structural model is accepted a good fits and are indicated by (RMSEA = .037, GFI = .93, and CFI = .98). The modified model after the respecification of the proposed model is presented in Table 4.5 and this study uses the results from this model for further discussion.

**Table 4.5 Results of hypotheses tests and structural model**

Hypothesized paths	Hypothesis	Estimate	t-value	Support/Not support
Intention → Behavior	<b>H1</b>	.61	13.04***	Support
Attitude → Intention	<b>H2</b>	.52	10.41**	Support
Ambivalence → Attitude	<b>H3</b>	-.34	-5.66**	Support
Family conflict → Ambivalence	<b>H4</b>	.48	8.55***	Support
Family conflict → Intention	<b>H5</b>	-.16	-3.38***	Support
Family conflict → Attitude	<b>H6</b>	<b>-.05</b>	<b>-.859 ns</b>	<b>Not support</b>
Family norms → Intention	<b>H7</b>	<b>.02</b>	<b>.42 ns</b>	<b>Not support</b>
Family norms → Attitude	<b>H8</b>	.10	1.88	Support
Family norms → Family conflicts	<b>H9</b>	-.36	-7.11***	Support
Family identity → Behavior	<b>H13</b>	<b>.05</b>	<b>1.07ns</b>	<b>Not support</b>
Family identity → Attitude	<b>H14</b>	.23	4.50***	Support
Family identity → Intention	<b>H15</b>	.15	3.31**	Support

P < .05; \*\* p < .01; \*\*\* p < .001

ns: non-significant

Chi - Square = 434.65, d.f = 260, p-value = .000.

RMSEA = .037, GFI = .931, CFI = .980.

Intention ( $R^2 = .43$ ), Behavior ( $R^2 = .39$ ).

As shown in Table 4.5, intention to eat fish is significantly and positively related to behavior to consume ( $\beta = .61, t = 13.04, p < .001$ ), thereby supporting Hypothesis H1. This study found a highly positive relationship between attitudes towards eating fish and intention to consume. Thus, Hypotheses H2 is supported ( $\beta = .52, t = 10.41, p < .01$ ). As suggested by Hypothesis H3, attitudinal ambivalence is significantly negative related to attitude toward eating fish ( $\beta = -.34, t = 5.66, p < .01$ ). This study expected that family conflict in preference is positively related to attitudinal ambivalence (H4) and negatively related to intention toward eating fish (H5). Both hypotheses are therefore confirmed (at  $\beta = .48, t = 8.55, p < .001$  for H4; and  $\beta = -.16, t = -3.38, p < .001$  for H5). However, the direct and negative relationship between family conflicts in preference and attitude toward eating fish is not significant ( $\beta = -.05, t = -.86$ ), thereby not supporting Hypothesis H6.

The direct relationships between family norms and intention in Hypothesis H7 were not statistically significant ( $\beta = .02, t = .42, ns$ ). However, family norms had a significant and positive relationship with attitude toward eating fish, supporting Hypothesis H8 ( $\beta = .10, t = 1.88, p < .05$ ). Meanwhile, family norms are significantly and negatively related to preference conflict in family with ( $\beta = -.36, t = -7.11, p < .001$ ), thereby confirming Hypothesis H9. Hypothesis H13 proposed that family identity is positively related to fish consumption behavior is not confirmed ( $\beta = .05, t = 1.07, ns$ ). However, family identity is significantly positively related to attitude ( $\beta = .23, t = 4.50, p < .001$ ) and does show the similar relationship with intention ( $\beta = .15, t = 3.31, p < .01$ ), providing supported for Hypotheses H14 and H15. Finally, the final model explained 43 percent of the variance in intention to consume fish ( $R^2 = .43$ ) and 39 percent in fish consumption behavior in a family ( $R^2 = .39$ ).

### **4.3 Family identity as a moderator**

Baron & Kenny (1986, p.1174) define a *moderator* as “a qualitative or quantitative variable that affects the direction and/or the strength of the relationship between the independent and dependent”. In order to test family identity construct as a moderator, this study applied group analyses in Amos 16.0. High – and Low groups were conducted via a median split (**6.21**) on the family identity score calculated as the average of the six items used in measurement model. Because these models were nested, the differences in Chi-square between the models should be distributed as Chi-square with degrees of freedom equal to the differences in the number of free parameters (Jöreskog & Sörbom, 1993). Differences in Chi-square values between models determine whether family identity acts as a moderating

variable. This means that the moderator variable has a significant influence of these relationships when a significant decrease in Chi-square from the equal (constrained) model to a free (unconstrained) model in which one or several relationships are set free.

This study used a model that imposes equality constraints on a parameter (a) across High-and Low-Family identity subgroups, and a general model that allows the parameter to vary freely across subgroups when compared (Homburg & Giering, 2001). In the next step, I ran a simultaneous analysis where all parts of the structural model were set equal across high and low family identity subgroups. This study constrained the path to be equal across high and low family identity subgroups in the free models, and except for the link that was potentially affected by the moderator variable, which was left free.

**Table 4.6 Structural Parameter Estimates for Family Identity as Moderator Model for Low – and High – Family Identity Groups.**

	Low family identity (n = 240)		High family identity (n = 247)		Chi – square difference ( df = 1)
	Estimate	t- value	Estimate	t- value	
Hypothesized path					
Family norms → Intention (H16)	.11	1.56 (ns)	.19	4.11***	( $\chi^2 = 2.138, p = .14$
R <sup>2</sup> Intention	.013		.036		

**Note.**  $\chi^2$  for a gamma set equal the High - and Low - family identity subgroup ( df = 1):  
2.138, p = .14  
ns = nonsignificant  
\*\*\*p < .000

The Chi-Square Difference Test is conducted to examine whether family identity qualifies as a moderator in the relationship between family norms and intention. The findings indicated that the relationship between family norms and intention (Family norms → Intention) (  $\chi^2 [1] = 2.138, p = .14$ ) (see the right column of table 4.6) in the free model does not provide a significant good fit to the data as much as the constrained model does. This result suggests that family identity does not moderate the structure for how family norms influences intention.



## **5. DISCUSSION AND IMPLICATIONS**

The main objective of the thesis is to explore and test the roles of attitude, preference conflict, norms and family identity in explaining intention/behavior toward fish in Vietnamese households. This study has undertaken within a theoretical framework based on the Theory of Planned Behavior (Ajzen, 1991), adding three constructs (ambivalence, family conflict and family identity) in the extended model (Conner & Armitage, 1998; Terry & Hogg, 1996; Terry, Hogg & White 1999; Olsen, 1999; Vaske et al., 2007). In this research, the items applied to measure the constructs in my model were adopted from previous researches in Western countries. A convenience consumer sample is collected from three cities (Nha Trang, Ho Chi Minh, and Can Tho) in the South of Vietnam. Three techniques were used, including (1) the confirmatory factor analysis to test the reliability and validity of the measurement model; (2) the structural equation modeling to test the proposed relationships between the constructs; and (3) the group analysis to test the proposed moderating effect of family identity. All these techniques were conducted in Amos 16.0. The last section of the study is dedicated to the further discussions, implications, limitations and future research.

### **5.1 Theoretical discussion and implications**

In general, confirmatory factor analysis in the measurement model provided strong support for constructs reliability and validity. However, the distinguishing between family norms and descriptive norms constructs as proposed in the initial model is not confirmed. Because this study focused more on family issues, a new confirmatory factor analysis without descriptive norms is performed. Thus, three hypotheses (H10-H12) are deleted from the new and modified model. As a result, the measurement scale was competent in discriminating among the analysed factors. The new structural model is accepted a good fits. Furthermore, this study used the results from this model for testing the proposed relationships between the constructs and also testing the proposed moderating effect of family identity.

As mentioned in the research findings, this study confirmed that intention is a significant predictor of behavior as proposed by the model. Actually, the correlation between intention and behavior is significantly high (0.61), as documented in social as well as seafood studies (Olsen, 2001; Verbeke & Vackier, 2005). With the coefficient correlation of .52 ( $p <$

.01), this study also found a highly positive relationship between attitudes towards eating fish and intention to consume fish in Vietnamese families. This finding supports earlier study by arguing that attitude represents the most important predictor of intention in the TPB (Armitage & Conner, 2001), including intention to consume fish (Bredahl & Grunert, 1997; Tuu et al., 2008; Verbeke & Vackier, 2005).

Research on the role of ambivalence found that respondents reported subjective ambivalence in their attitudes in the same way as in previous studies (Conner & Sparks, 2002). Ambivalence experienced by individuals can refer to both positive and negative evaluation of a given attitude object at the same time (Olsen, 1999 for a review). If the individuals like or feel satisfied with attitude object (negatively skewed distribution), the relationship should be negative. Thus, the result supported this aspect and indicated that ambivalence is an antecedent to construct attitude variable ( $r = -.34, p < .001$ ).

One extension of previous research on intrapersonal ambivalence, namely interpersonal ambivalence or interpersonal conflict seems to be a significant predictor of ambivalence, attitude, and intention as proposed by the model. As expected, the positive and significant relationship between preference conflicts and ambivalence is confirmed in the result ( $r = .48, p < .001$ ). This finding supported the some empirical results I am aware of concerning this relationship (Priester & Petty, 2001; Olsen, 2010 in press). This finding can be explained by an “agreement effect”, “balance effect”, and “consistency effect” (see Priester & Petty, 2001 for a discussion). For example, is it possible that people prefer to hold attitudes that are similar to families, and that preference conflict in families causes more attitudinal ambivalence?

In addition, this study expected that preference conflict in family is negatively related to intention toward eating fish. The findings highlight that intention to consume fish will reduce, if the conflict in family’s preference in eating fish occurs ( $r = -.16, p < .001$ ). The conclusion is reasonable, and significantly confirmed one research which has been found investigating the intentional outcome of preference conflict in the area of family decision – making (Olsen & Grunert, 2010 – forthcoming in European Journal of Marketing). However, it is interesting to know that while preference conflict in family is a significant predictor of intention, it does not similarly apply to attitude. This result might be explained by several reasons. First, it may come from the typical respondents (67% were female and 68% were married). In the families, parents are well aware that fish is good for health (positive attitude), they do not intend to buy it because both affordability and the risk that their children will not



continue on this type of fish, which results in an obvious waste of their limited resources. Second, it might come from the role of mothers in solving this type of family conflict in a typical effort to maintain family peace and harmony. Consequently, in many instances, they are the first to compromise their conflicting preferences in fish consumption by shifting their intention, which in turn leads to behavior changes.

This study mentioned the family aspect and defines family norms as family pressure and expectations. I not only examine the family norms construct relevant to relationship with social aspects (family conflicts), but also via the individual phenomenon such as attitude and intention. The results indicated that the two social constructs are not independent ( $r = -.36$ ,  $p < .001$ ). In general, this finding supports the former in terms of fish consumption behavior suggesting that the parents prefer to eat fish more often than their children (Olsen, 2001; Verbeke & Vackier, 2005). In this case, the family members have heterogeneous expectation about regular fish consumption for the main meal; as a result, family members are more likely to disagree on how satisfied they are with the meal (more conflicts).

Further, results of the study did not significantly confirm an expected direct positive relationship between family norms and intention to eat fish. However, these findings are consistent with some previous studies that family norms failed to predict intention to consume (Tuu et al., 2008 for a review). This can be explained by family practicalities. For example, parents expect/want/encourage their children to eat more fish for main meals, but children still reject eating fish. In this situation, parents-who are responsible for preparing main meal for their families-may, make necessary changes to accommodating to different tastes and preferences. Furthermore, although my hypothesis is confirmed by the correlation between family norms and attitude ( $r = .10$ ,  $p < .10$ ), the relationship has low significance. It is consistent with the descriptions in the previous section regarding how heterogeneous expectations determine increased variance in fish consumption satisfaction in the family (more conflicts).

The family identity mentioned to share social cognition and feelings of oneness with the family members by daily family interactions (Ryan, 1982). In practice, after controlling of the remaining components of the proposed model (ambivalence, family conflicts, and family norms), family identity emerged as an independent predictor of attitude and intention. As predicted, family identity is highly positive related to attitude and intention to consume fish. These results are consistent with earlier findings within tenets of social identity theory, which suggested that when individuals identify themselves strongly with a group, they tend to

converge their attitudes with the in-group members (Tajfel & Turner 1986) and behavior intention (Madrigal, 2001).

By demonstrating further support for the role of family identity in the prediction of behavior, since the beta coefficient for this variable was not statistically significant, it indicates that the relationship between two constructs is indirect. This finding is more consistent with previous research, which predominantly showed that social identity influences intentions but has no relationship with behavior (Terry & Hogg 1996; Terry et al., 1999). In addition, when group norms are not a salient basis for self conception, performance of behavior is expected to depend more on personal characteristics and intentions and less on group processes (Terry & Hogg 1996).

The results did not support ( $p < .14$ ) some earlier studies arguing that family identity moderates the family norms-intention relationship. In fact, the family norm-intention relationship will be higher for respondents who have more family identity. There was evidence that, for people who strongly identified with the family, intention to perform the behavior was influenced by perceived family norms. According to this perspective, when one's identity as a unique person is salient, personal beliefs and feelings are likely to form the most cognitively accessible basis for behavioral choice (Fazio, 1990). The present result found that the family identity score was over 6, which support the strength of the family identity construct in a Vietnamese context. However, findings regarding the role of family identity as moderating the family norms – intention relationship are not consistent with results reported by (Terry & Hogg, 1996). Also, these results fail to accord with a group identity perspective. The inconsistency can be explained by profiles of respondents. First, the respondents in this study are members living in families where fish can be frequently served as a meal. Meanwhile, participants who engage in regular exercise in research by Terry & Hogg (1996) are a relatively homogeneous reference group (university students). Second, the familial generation gap is more likely to cause conflicts among members on their preferences and attitudes towards fish consumption. These differences will, to some extent, influence family's behavior in daily fish consumption. On the contrary, the reference students are living in the same generation. Among this group, depersonalization often occurs where a person's feelings and actions are more impacted by group prototypes and norms than by personal factors (Terry & Hogg, 1996). Consequently, findings from two research papers diverge in their opinions about family identity as the moderator for family norms - intention

relationship. Thus, the mixed results entail the necessity for future research on the conditions promoting the moderating effect of family identity on family norms – intention relationships.

Overall, the findings are important in that they contribute to clarifying the relationship among ambivalence and conflicts. This study has addressed the two types of conflicts in family instance. Further, the present results highlight the need to simultaneously incorporate the role of family conflicts and family identity into an extended Theory of Planned Behavior. Thus, the research is more the case given the recent interests among academia and economists in the role of social variables in the area of food consumption behavior of home meals in the cross culture settings.

## **5.2 Managerial implications**

Overall, Vietnam has a significant potential for fisheries development. Fish served as the main meal in Vietnamese families represents the large domestic market potential. Practically, the research findings provide insights as how to tapping into the full market opportunities. In a Vietnamese context, particularly most of Vietnamese consumers have long embedded in collective the culture and family traditions and nuclear family (consisting of a mother and father and their children) prevails. Parents play an important role in solving this type of family conflict in a typical effort to maintain family peace and harmony. In addition, they have the responsibility to educate and provide fish to a meal for the family. For example, children's feelings and behaviors are not only affected by personal observations of their parents' preference, attitudes and eating patterns, but affected by their parents' wishes, desires that children should eat healthy food or particular meals, as well (Tuu et al., 2008). As a result, in such situations, fish industry should be very active at the time of exploiting this segment. Especially, they should go along with giving consumers an engagement about the quality guarantee, communicating positive aspects related to the products (e.g., safe, healthy, quality, stability and so on) (Povey et al., 2001), but more importantly keeping these actions consistently.

General attitudes of parents towards fish consumption are significantly positive; and the consumers in the surveyed areas consume fish at a rather high intention and positive behavior. These results confirm that the fish industry has a high potential for expanding its domestic market. The market grows when income and living conditions improve and when demands for healthy foods increase (GSO, 2008). In order to maintain and develop the potential market, fish industry should set up appropriate marketing strategies. First and

foremost, the advertising message should be customized for the target market segments. For instance, fish advertisers, women's magazines, and cookbooks reproduce a message that providing fish is the main meal for women to a successful home life (Moisio et al., 2004 for a review).

In family aspect, purchase intention/behavior is not only influenced by individual phenomenon such as preferences/attitudes, values, personality and knowledge but also includes social aspects such as family norms, family conflicts, and family identity. Based on some previous research, this study focused on fish consumption intention/behavior and confirmed that social variables seem to be of vital importance in consumption of home meals (Miller, 1998; Olsen, 2001; Olsen & Ruiz, 2008). Consistent with this perspective, marketers and industry managers should understand the importance of the family as a unit of consumption, as well as how family norms, family conflicts, and family identity interact in explaining intention, consumption or purchase decisions. In particular, Olsen et al., (2005) proposed that ambivalent consumers would be targets for persuasive messages to increase the value of their positive beliefs and/or decrease their negative beliefs regarding buying or using a particular product, brand or service. Further, with consumer's only negative beliefs, strategies might require longer-term efforts, first creating ambivalent attitudes and then converting them to positive ones at a later point (Olsen et al., 2005).

### **5.3 Limitations and future research**

Although the study contributes to the current literature in fish consumption behaviors, it is important to highlight some limitations that can be improved in future research.

Firstly, although the sample broadly represents the population from three cities in the South of Vietnam, the research scope can be extended and sampling methods can be more selective. Also, this study deals with one behavioral situation (fish consumption in families). Future research should therefore be extended with data collected in the North of Vietnam and more food products are included

Secondly, attitude variable in this research is not only related to general attitude towards fish which was measured by five items, but also to assess by different beliefs (good taste vs. bad taste, good texture vs. bad texture, delicate appearance vs. bad appearance, healthy vs. unhealthy, easy to prepare vs. difficult to prepare., etc.). However, this study is

based on general attitude measure. Therefore, future replications of this research are encouraged to use both general attitude and different beliefs measure.

Thirdly, this study applied one direct measure of subjective ambivalence. While previous research has operational ambivalence in different ways (Thompson, Zanna & Griffin, 1995). Given this aspect, future research should be extended to measure different forms of subjective and objective ambivalence, direct versus indirect measurement, intracomponent versus intercomponent ambivalence (Maico, Esses, & Bell, 2000).

Fourth, this research is not only related to individual attitudes (intrapersonal ambivalence), but also to interpersonal ambivalence or interpersonal conflict in attitude and preference. This includes different assessments of sociological ambivalence and should also be possible to find family aspect where interpersonal conflict is not available (both like or both dislike the object), or have another valence (parents like and children dislike the object). The evidence that future research should investigate under what conditions I find what kind of relationship between attitudinal ambivalence and interpersonal ambivalence.

Further, the norms construct refers to not only mentioned social elements, but also to descriptive components (Olsen, 2008). In this study, I found evidence that the intercorrelations between family norms and descriptive norms do not constitute discriminant validity because the squared correlation between each of two this constructs is greater than the average variance extracted from each pair of constructs. It is a valuable result that descriptive norm and family norm are converted into one construct. Because the study focused on family situation, this study has tested a modified model with one fewer construct (descriptive norm). However, future research should extend the construct. In addition, this study also recognized that although established measures descriptive norms construct was adopted and adapted from previous researches, other ways of measuring the same construct may yield different results. Thus, future research should pay more attention to the assessment of the descriptive norms construct.

Finally, the results presented here were based on cross – sectional data, and therefore causal effects can only be inferred. Future research should manipulate one or several of the antecedent's construct to verify the causal relationship between the variables.

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