

## AN EXPLORATION IN THE THEORY OF PLANNED BEHAVIOR: A CASE OF ORGANIC FOOD IN VIETNAM

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**Abstract:** *The main purpose of this study is to explore the effects of consumer values' components such as health consciousness, environmental consciousness and consumer knowledge on consumer attitude; and the effects of consumer attitude, perceived behavioral control and subjective norm on purchase intention in the organic food market in Vietnam. Based on a sample of 352 respondents, structural equation modeling (SEM) is used to test hypotheses. The result reveals that: (1) health consciousness, environmental consciousness have positive effects on attitude, but consumer knowledge has no effect on consumer attitude; (2) consumer attitude, perceived behavioral control and subjective norm have positive impacts on purchase intention. Lastly, these findings have managerial implications for decision makers.*

**Keywords:** *Consumer values, consumer attitude, perceived behavioral control, subjective norm, purchase intention, organic food.*

### 1. INTRODUCTION

In recent years, climate changes, health concern, and environmental problems have emerged as an issue of interest to the general public. Especially, Okada and Mais (2010) indicated that consumers behave "green" in their purchasing decisions. Besides, the demand for green products has increased dramatically (Dangelico and Pontrandolfo, 2010) and some consumers are willing to pay a premium price for green products (Haytko and Matulich, 2008; Okada and Mais, 2010; Litvine and Wustenhagen, 2011). The eco-friendly consumption called "green consumerism" has extended to the Asian countries (Lee, 2008), including Vietnam. Generally, Vietnamese consumers are more willing than before to favor green concepts.

In terms of green product sector, organic foods are known to many consumers (Alvensleben, 1998), however, the percentage of consumers purchasing organic

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foods is low (Fotopoulos and Krystallis, 2002). In legal terms, a food product can only be labeled and called organic if 95 percent of its agricultural raw materials have been produced or grown organically (The United Kingdom Register of Organic Food Standards). Moreover, Vindigni (2002) stated that organic food is the output of organic agriculture methods or ecological farming techniques. Organic products are also additionally acquired by methodologies friendly to the environment, by cultivation techniques that consider both the attributes of the final product and the production methods (Chinnici *et al.*, 2002).

There are numerous studies regarding consumers' attitudes and purchase behaviors of green products (Chen, 2007; Magnusson *et al.*, 2001; Padel and Foster, 2005). Similarly, there are several concerns of customers about organic food. These include consumer personal values (Dreezens *et al.*, 2005), health considerations (Lockie *et al.*, 2002), a concern for environment (Lockie *et al.*, 2004) and organic food knowledge. Besides, attitude has strong correlational relationships with behaviour toward organic foods and behavioral intention to buy organic food (Sparks, 1995). It is also essential to identify attitude to explain purchase intention in the context of organic food (Magnusson, 2003). Previous studies have indicated that the theory of planned behavior (TPB) has been applied to predict green consumer behavior. Therefore, the objective of this research is to synthesize the theoretical basis of consumer values, attitude and purchase intention; thereby to build proposed models of the relationship between the components of consumer values and TPB for organic food, which base on synthesis of theory and results from previous researches.

## **2. LITERATURE REVIEWS**

### **2.1. Research concepts**

#### ***2.1.1. Consumer values and its components***

Previous studies reported that there are some definitions of "value" in various contexts. In one instance, value is defined as "the consumer's overall assessment of the utility of a product based on perceptions of what is received and what is given" (Zeithaml, 1988), which focuses on consumer benefits or the worth of using a product. On the other hand, value is considered as a belief about desirable end states (Feather, 1990; Schwartz and Blisky, 1987), which focuses on a psychological aspect. Furthermore, Rokeach (1973) indicated that consumers with different value systems will perform different behaviors because each value has different standards or goals. Therefore, values may influence formation of an individual's attitude by guiding theirs to look for objects that will satisfy their values (Poortinga *et al.*, 2004). For instance, people who value a healthy life may have favorable attitudes

toward objects that contribute to a healthy life (i.e., fitness club, dietary supplement, healthy food, etc.). Research has shown that values may provide a basis for consumers' evaluations and consumers' preferences for products. Given the fact that values influence consumer attitudes, we need to know what kinds of values are related to consumer attitudes toward purchasing products. According to the relevant literature, values concerned with health and environment influence attitudes toward buying organic food (Baker *et al.*, 2004; Chryssohoidis and Krystallis, 2005). Besides, according to Chryssochoidis (2000); Padel and Foster (2005), consumer knowledge determines to have a positive influence on their attitude towards organic food. Therefore, the current study proposes three consumer values that may influence attitudes toward buying products: health consciousness, environmental consciousness, and consumer knowledge.

*Health consciousness.* Becker (1977) defined health consciousness as the readiness to undertake health actions. Jayanti and Burn (1998), Gould (1990) considered that health consciousness plays an important psychographic variable in expansion developing audience segmentation related to health issues. Health consciousness illustrates the level of person's daily activities. Furthermore, health consciousness guides people to engage in healthy behaviors (Becker *et al.*, 1977). Health conscious consumers care about the desired state of well-being and put forth an effort to maintain a healthy life (Newsom, *et al.*, 2005). In addition, Health consciousness is concerned about consumer state of wellbeing and is motivated to improve their health and quality of life, such as preventing ill health (Newsom *et al.*, 2005). Originally, this factor stems from the feeling of "freedom from chemicals" of consumers which was mentioned by Devcich *et al.* (2007). Moreover, it is believed that the level of individual health consciousness is closely related to how they look for and respond to health information (Basu and Dutta, 2008). Therefore, taking heed of individuals' health consciousness is important in designing health interventions and segmenting target publics, because it determines their responses to health information and sources of health information.

*Environmental consciousness.* Lee (2008) states that "Environmental conscious refers to the degree of emotional involvement in environmental issues, and it taps the individuals' affective response towards environmental protection". While Yeung (2005) defines environmental conscious as "An affective attribute that can represent a person's worries, compassion, likes and dislikes about the environment". Aman *et al.* (2012) defines environmental conscious in his research as "The level of emotional and commitment towards the environmental issues". Furthermore, environmental consciousness refers to all actions of people that are significantly related to the nature of environment, such as consumption of environmental resources. There is a broad range of behaviors that falls within the

notion of environmental consciousness such as the production and consumption of food, buying a house, transportation and shopping (Jager, 2000). Mostafa (2007) said that environmental conscious is becoming a very important factor for marketers because it eases in targeting the environmentally conscious consumer. Consumers who have high environmental conscious will figure out how environmental quality can be improved and they will involve themselves with buying environmentally friendly products (Sinnappan and Rahman, 2011). Moreover, environmentally conscious people are apt to change their purchasing behaviors to improve the environment (Chase, 1991), and they are willing to pay higher prices for green products. In addition, some companies have used recyclable packaging, which also reflects concern about disposal problems (Kumar and Prakash, 2005). These changes made by companies may help reduce pollution from the production and discard processes.

*Consumer knowledge.* Brucks (1985) described three kinds of consumer product class knowledge used in consumer behavior research namely: subjective knowledge, objective knowledge and prior experience. Firstly, subjective knowledge is the individual's perception which how much they know. Secondly, objective knowledge is a measure what people actually know about something. Thirdly, "prior experience is the amount of purchasing or usage experience which the consumer has with the product before" (Brucks, 1985). Subjective knowledge refers to what the consumers perceive that they know. In other words, it is called as self-rated knowledge. It represents for the confidence of an individual about their knowledge. Chrysochoidis (2000) indicated that the lack of confidence is resulted from the low level of subjective knowledge. Particularly, Ellen (1994) indicated that subjective knowledge had more positive influence on consumer attitude than objective knowledge. In addition, Sørensen *et al.* (1996) stated that "prior experience plays an essential role to determine consumer attitude since the more experienced consumers have, the more positive attitude they would have". However, Brucks (1985) indicated that measures of knowledge by experience are not significant directly linked to behavior.

### **2.1.2. Consumer attitude**

Eagly and Chaiken, (2007) considered that "attitude is defined as a psychological path of evaluating a specific object with favor or disfavor". It tends to endure over time than an occasional event. For instance, Solomon *et al.* (2010) indicated that "hearing a loud noise over time could develop a negative attitude towards the sound". In addition, attitude can be seen as a fixed way of thinking when it endures for a longer time. It includes assessments of the items referred to it proceed or not. Moreover, attitude developed through experiences may change when new

experiences are obtained (Ajzen, 2001; Chen, 2007). Consumers have attitude to specific product behavior, for example which type of food the person prefers to use. Attitude towards a general consumption behavior can also occur. For instance, how often the person should shop food (Solomon *et al.*, 2010). The more positive the attitude is regard to a behavior, the stronger is the individual's intention to perform the behavior under consideration (Tarkiainen and Sundqvist, 2005). Chen (2007) stated that consumer attitude and preferences to the purchase of a particular product are based on consumer attitude and personal desirability of performing a behavior. Attitude towards a certain behavior is based on the expectations and beliefs of the consequences as a result of a particular behavior (Ajzen, 1991; Tarkiainen and Sundqvist, 2005; Chen, 2007). Furthermore, attitude toward the behavior is defined as the individual's positive or negative feelings about performing behavior (Ajzen, 1991).

### **2.1.3. Subjective norms**

Subjective norms are defined as the social pressure for an individual to engage or comply with a group behavior such as family members, friends, co-workers, or children. These norms are normative beliefs and expectation that the groups or important references have on this person (Ajzen, 1991). Moreover, Huda *et al.* (2012) indicated that "subjective norms are one's perceptions or assumptions about others' expectations of certain behaviors that one will or will not perform". Since this perception is very subjective in nature, this dimension is referred to as subjective norms. In addition, subjective norms are a function of one's beliefs that are formed by others in one's life (Fishbein and Ajzen, 1975). Also, subjective norms are the impacts of external factors on customer intention (Miller *et al.*, 2005). Subjective norm is one of the factors which predict consumer behavior, when an individual's actions influence on another consumer behavior (Sheeran and Taylor, 1999).

### **2.1.4. Perceived behavioral control**

Ajzen (1991) stated that "perceived behavioral control is the extent to which a person feels able to enact the behavior". Ajzen (1991) also indicated that there are two aspects: the control which people have over the behavior and how a person feels confident about performing behavior. Perceived behavioral control is evaluated by control beliefs which the power of not only situational but also internal factors contributed to the performing of the behavior. Furthermore, perceived behavioral control is related to the level of control that a person perceives over the consumer behavior (Chen, 2007; Kang *et al.*, 2006). Therefore, an individual who perceive a higher the percentage of personal control will have stronger behavioral intention to buy a product (Ajzen, 1991). In general, there are many factors such as

time, money, and skills which are known as influencing factors on perceived behavioral control (Ajzen, 1991). In specific, when people believe they have more resources, their perceptions of control are high and hence their behavioral intentions increase.

#### **2.1.5. Purchase intention**

Blackwell *et al.* (2001) defined that purchase intention shows what consumers plan they will buy. Also, Brown *et al.* (2003) stated that if consumers have intentions to buy a product, they will pay higher buying rates than those customers who have no intention of buying. In addition, Elbeck and Mandernach (2008) indicated that the readiness of potential buyers regarding intention to buy a product. A company could be considered on the market survey about the customers' purchase intention. Besides, purchase intention is the pre-step that guides clients to actual purchase actions, and is understood as intention to buy products (Howard and Sheth, 1967). According to Keller (2001), consumers' buying decision is very complex. Purchase behavior is an important key point for consumers during considering and evaluating of certain product. Moreover, purchase intention is a significant factor use in predicting purchasing process (Ghosh, 1990). When the consumers decide to purchase the product in certain store, they will be driven by their intention. Besides, Zeithaml (1988) and Grewal *et al.* (1998) indicated that purchase intention might be affected by price, quality perception and value perception. In addition, consumer behavior will be changed by the physiological motivation (Kim *et al.*, 2001).

### **2.2. Relationship between research concepts**

#### **2.2.1. Relationship between components of consumer value and attitude**

Consumer values may influence formation of an individual's attitude by guiding them to look for objects that will satisfy their values (Grunert and Juhl, 1995; Poortinga *et al.*, 2004). Research has shown that values may provide a basis for consumers' evaluations and consumers' preferences for products (Allen, 2002; Howard, 1977). Given the fact that values influence consumer attitudes, we need to know what kinds of values are related to consumer attitudes toward purchasing organic food products. According to the relevant literature on organic food consumption, it appears that values concerned with health, environment and knowledge influence attitudes toward buying organic food (Baker *et al.*, 2004; Chryssohoidis and Krystallis, 2005). It is believed that the level of individual health consciousness is closely related to how they look for and respond to health information (Basu and Dutta, 2008). In addition, health consciousness has been found to predict attitude toward organic foods (Magnusson *et al.*, 2003). Roddy *et*

*al.* (1996) stated that people who are more concerned about food safety hold positive attitude towards organic food.

In addition, organic products are viewed as promoting a healthy lifestyle, explained by the lifestyles of health and sustainability (Essoussi and Zahaf, 2008). Thus, there are some similarities in consumers' purchase behaviors between organic foods. Previous studies has also showed the relevant literature on organic food consumption which values concerned with health factor influence attitudes toward buying organic food (Chrysohoidis and Krystallis, 2005). Hence, the following hypothesis of the relationship between health consciousness and consumer attitude is suggested:

**Hypothesis 1:** Health consciousness has a significant positive direct effect on consumer attitude.

Environmental behavior guides to all actions of people that are significantly related to the nature of environment, such as consumption of environmental resources. Chase (1991) also stated that environmentally conscious individual is adept to change consumer purchasing behaviors to improve the environment. Moreover, consumers are more involved in organic and environmental friendly related issues, such as environmental protection tend to have positive attitude towards organic food and strong intention to purchase organic foods (Vermeir and Verbeke, 2006; Chen, 2007). Hence, the following hypothesis is formulated:

**Hypothesis 2:** Environmental consciousness has a significant positive direct effect on consumer attitude.

Consumer's knowledge is specific information that affects consumers buying decision. Knowledge is also proposed to have a positive effect on a person's perceived diet effectiveness and their consumption of organic products (Peter *et al.*, 1999). In addition, Von Alvsleben (1997) indicated that the perceptions of consumers about the organic food is important because these factors help consumers recognize the characteristics and benefits of organic food compared with other kinds of food and adopt a positive attitudes toward organic food. Besides, consumer knowledge determines to have a positive influence on their attitude towards organic food (Chrysochoidis, 2000; Padel and Foster, 2005). Roddy *et al.* (1996) argued that if consumers have consumed organic food before, they will have more positive attitude on organic food. Thus, the following hypotheses are proposed:

**Hypothesis 3:** Consumer knowledge has a significant positive direct effect on consumer attitude.

### ***2.2.2. Relationship between consumer attitude and purchase intention***

Ajzen (1985) indicated that "attitude toward behavior refers to personal evaluations being favorable or unfavorable to perform the behavior". If consumers have a

positive attitude toward products, they will take a certain behavior. Moreover, according to Landell (1992), attitudes toward a product indicate the feelings that customer focus on and the thing in which they are interested. Consumers who have a favorable attitude toward a product will be more inclined to buy the product. Therefore, attitudes toward organic food are significant to purchase intention. However, if customers have negative attitudes, they will not buy the product (Moye and Kincade, 1999). Moreover, positive attitude towards the products not only affects the buying decision of customers and an individual's health, it also influences the success or failure of food products in the food marketplace (Thompson and Kidwell, 1998). In the organic food sector, previous studies supported that there is a significant relationship between consumers' attitudes and purchase intentions for green products in not only different cultures but also in different product categories (Tarkiainen and Sundqvist, 2005). Thus, this study proposes that:

**Hypothesis 4:** Consumer attitude has a significant positive direct effect on purchase intention.

### ***2.2.3. Relationship between subjective norm and purchase intention***

Subjective Norms in TPB, was described to be the subject of every other important people that help to influence behavior of an individual (Ajzen, 1991). Besides, subjective norms are the impacts of external factors on customer intention (Miller, 2005). Previous studies also stated that subjective norm is one of the factors which predict consumer behavior, when an individual's actions influence on another consumer behavior (Sheeran and Taylor, 1999). In addition, Bamberg (2003) and K a l a f a t i s *et al.* (1999) indicated that subjective norm have strong relationship with purchase intention for green products. Also, Lim and Dubinsky (2005) stated that subjective norm has predicted intention in the areas of internet while Bansal and Taylor (2002) researched in bank sectors. Previous studies on organic food purchases supported the effect of subjective norm on purchase intention for organic foods (Chen, 2007; Sparks and Shepherd, 1992). Based on the discussion above, hypothesis (H5) is generated:

**Hypothesis 5:** Subjective Norm has a significant positive direct effect on purchase intention.

### ***2.2.4. Relationship between perceived behavioral control and purchase intention***

Perceived behavioral control plays an important role in the TPB. Perceived behavioral control is also related to the level of control that a person perceives over the consumer behavior (Kang *et al.*, 2006; Chen, 2007). Therefore, an individual who perceive a higher the percentage of personal control will have stronger



behavioral intention to buy a product (Ajzen, 1991). There are many factors such as time, money, and skills which are known as influencing factors on perceived behavioral control (Ajzen, 1991). Furthermore, perceived behavioral control is evaluated by the perception of the resources, knowledge and ability to behavioral performance. In specific, when people believe they have more resources, their perceptions of control are high and hence their behavioral intentions increase. Based on the reviews from previous literatures, hypotheses (H6) is made:

**Hypothesis 6:** Perceived behavioral control has a significant positive direct effect on purchase intention.

### 2.3. Conceptual framework and research hypotheses

Based on a review of the literature and empirical results regards their relationships among research concepts as mentioned above, a conceptual framework and hypotheses are illustrated in Figure 1.

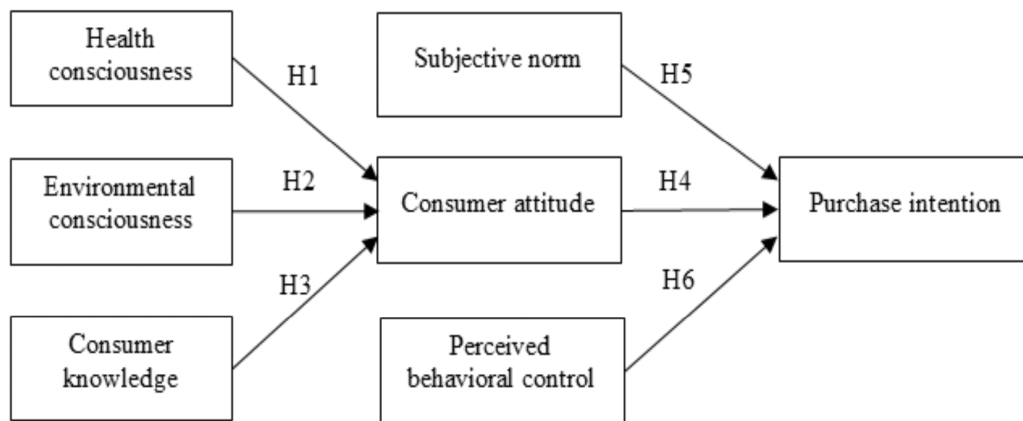


Figure 1: Proposed theoretical framework

### 3.1. Research Methodology

#### 3.1.1. Sampling procedures and data collections

The sample consisted of 400 sample, data were collected via hard copies. The survey questionnaires were distributed to individuals who agreed to participate and who were 18 years of age or older in Vietnam. A total of 369 samples were gathered, and 352 of these were valid. The resulting questionnaire was originally drafted in English, translated into Vietnamese, and then back translated into English to make sure that the items were original.

### **3.1.2. Measurement of instruments**

The questionnaire is divided into 3 parts. Firstly, part 1 measures personal consumption of organic food. Secondly, part 2 is the number that best represents personal agreeableness on a five-point scale. Finally, part 3 includes personal information about demographic and socioeconomic characteristics.

Part 2 was divided into seven sections: Health consciousness (HC) 5 items were adapted from Gould (1990), Cash and Labarge (1996); Environmental consciousness (EC) 3 items were adapted from Maloney and Ward (1973); Consumer knowledge (CK) 3 items were adapted from Schaefer (1997); Consumer attitude (CA) 3 items were adapted from Tarkiainen and Sundqvist (2005); Thøgersen (2007); Aertsens *et al.* (2009); Subjective norms (SN) 4 items were adapted from Bansal Taylor (2002), Lin (2007); Perceived behavioral control (PBC) 3 items were adapted from Ajzen (2002), Bansal and Taylor (2002); Purchase intention (PI) 3 items were adapted from Michalidou and Hassan (2008), Lin (2007). The measurement uses a five-point Likert scale, ranging from “strongly disagree” (1) to “strongly agree” (5).

Exploratory factor analysis (EFA), Cronbach’s reliability, and Confirmatory factor analysis (CFA) are three techniques that were used to evaluate the final items which would be utilized for the proposed model and hypothesis testing. Lastly, the proposed model and hypotheses were tested by analyzing the structure equation modeling (SEM) using AMOS software 21.

## **4. RESEARCH ANALYSIS AND RESULT**

### **4.1. Descriptive analysis**

The results showed that the samples of data were comprised of 97 male (27.55%) and 255 female (72.45%) with more than three-fourths of the respondents’ age was between 18 to 45 years (81.7%). The urban area dominated the race group with 291 respondents (82.6%) and 61 rural (17.4%). Respondents’ income per year was below \$2000 (22%), from \$2000 to \$4000 (47%), and higher \$4000 dollar (31%). Approximately 26.6 percent had earned a master’s; 52.6 percent of the participants possessed a bachelor degree; and 20.8 percent of respondents had below bachelor level.

### **4.2. Exploratory Factor Analysis (EFA) and Cronbach’s Alpha analysis**

Exploratory factor analysis (EFA) was conducted to validate and simply reduce the data as well as it is an interdependence technique primarily used for data reduction and summarization as well as to identify underlying relationships (Hair *et al.*, 2006). The results showed that Kaiser-Meyer-Olkin (KMO) measure of

sampling adequacy was 0.736 ( $> 0.5$ ) that indicated sufficient inter-correlations among the factors. All item loadings exceed 0.50, except for HC4 with factor loadings below than 0.5 w hereby w as excluded as suggested by Hair *et al.* (2010). Moreover, seven factors were extracted with a cumulative explained variance is = 69.140% ( $> 50\%$ ) at the Eigen-value is 1.328. Table 1 delineates result of the exploratory factor analysis.

**Table 1**  
**Exploratory factor analysis**

	Component						
	1	2	3	4	5	6	7
HC1	.760						
HC2	.811						
HC3	.865						
HC4	.416						
HC5	.787						
EC1						.851	
EC2						.795	
EC3						.863	
CK1			.846				
CK2			.884				
CK3			.890				
CA1					.800		
CA2					.851		
CA3					.813		
SN1		.823					
SN2		.829					
SN3		.744					
SN4		.825					
PBC1				.849			
PBC2				.889			
PBC3				.799			
PI1							.827
PI2							.800
PI3							.756
Eigen-value	3.846	3.167	2.388	2.194	2.042	1.628	1.328
<b>Extraction Sums of Squared Loadings</b>	<b>16.026</b>	<b>13.196</b>	<b>9.952</b>	<b>9.141</b>	<b>8.508</b>	<b>6.785</b>	<b>5.532</b>

Cronbach's Alpha reliability coefficient is used to determine the consistency of the data. Cronbach s alpha for all the constructs (Table 2) were above 0.60

(Nunnally & Burnstein, 1994). Additionally, the item-to-total correlations were all above the threshold of 0.30. Therefore, observed variables of each scale are retained in confirmatory factor analyses (CFA).

**Table 2**  
**Cronbach's Alpha, composite reliability, and average variance extracted**

<b>Health consciousness (<math>\alpha = .782</math>; CR = .850; AVE = .587)</b>
HC1: I reflect on my health a lot
HC2: I'm generally attentive to my inner feelings about my health
HC3: I'm involved with my health
HC5: Good health is of major importance in a happy life
<b>Environmental consciousness (<math>\alpha = .840</math>; CR = 0.804; AVE = .580)</b>
EC1: When I think of the ways industries are polluting the environment, I get frustrated and angry
EC2: I would be willing to stop buying products from companies guilty of polluting the environment
EC3: I become irritated when I think about the harm being done to plant and animal life by pollution
<b>Consumer knowledge (<math>\alpha = .765</math>; CR = .855; AVE = .664)</b>
CK1: My knowledge about organic food is sufficient
CK2: My knowledge about organic food is based on previous experience such as purchasing/consuming/hearing from others/reading about it
CK3: In overall, I have a positive experience/impression about organic food
<b>Consumer attitude (<math>\alpha = .750</math>; CR = .809; AVE = .585)</b>
CA1: I think it is good to buy organic food
CA2: I think it is important to buy organic food
CA3: I think it is wise to buy organic food
<b>Subjective norm (<math>\alpha = .753</math>; CR = .831; AVE = .552)</b>
SN1: People who influence my decisions would approve of me buying organic food
SN2: People who are important in my life would approve of me buying organic food
SN3: People who influence my behavior would encourage me to use organic food
SN4: People who are important in my life would encourage me to use organic food
<b>Perceived behavioral control (<math>\alpha = .766</math>; CR = .826; AVE = .614)</b>
PBC1: For me, buying organic food would be possible
PBC2: If I wanted to, I could easily buy organic food
PBC3: I believe that I have the resources and the ability to buy organic food
<b>Purchase intention (<math>\alpha = .747</math>; CR = .765; AVE = .520)</b>
PI1: If organic food was available, I would buy it
PI2: It is likely that I will purchase organic food
PI3: I plan to buy organic food

### 4.3. Confirmatory Factor Analysis

AMOS 21 is employed to conduct confirmatory factor analysis (CFA) on items that were retained from the results of the exploratory factor analysis and Cronbach's Alpha. The results show that the variance extracted (AVE) of each factor was greater than 0.5 (from 0.520 to 0.664) and the composite reliability (CR) of each factor was greater than 0.7 (from 0.765 to 0.855) (Table 2), which are higher than the suggested criteria of 0.5 and 0.7 respectively (Bagozzi & Yi, 1988).

For the assessment of the measurement model, the goodness-of-fit index (GFI) and adjusted goodness-of-fit index (AGFI) reached 0.924 and 0.899 respectively, which were satisfied to the recommended values in Hair *et al.* (2010). Additionally, the root mean square residual (RMR) was 0.034, and the root mean square error of approximation (RMSEA) was 0.042, which indicated a good fit (Hair *et al.*, 2010). In order to correct the absolute fit measures for the bias against large samples and increased model complexity, the incremental fit indices were also reported. The comparative fit index (CFI), the most widely used incremental fit index, was 0.959. Furthermore, results support the discriminant validity of the scales. The discriminant validity of the scales evaluated for all any two constructs and all  $\pm 2$  differences were significant.

### 4.4. Structure Equation Model

The purpose of this study is to find out the interrelationships among components of consumer values, consumer attitude, subjective norms, perceived behavioral control and purchase intention (Figure 2). The fit statistics  $\chi^2/df = 1.612 (< 2)$ ,  $p < 0.01$ ; CFI = 0.956 & GFI = 0.919 ( $> 0.9$ ); AGFI = 0.900 ( $> 0.8$ ); RMSEA = 0.042 & RMR = 0.049 ( $< 0.1$ ) were all indicative of a good fit (model fit criteria suggested by Hu & Bentler, 1999).

In order to test the relationships between research constructs, this study examined the estimated coefficients and t-values (CR values) of their corresponding paths. Result shows the relationship between health consciousness and consumer attitude ( $\beta = 0.302$ ,  $t = 4.728$ ,  $p < 0.000$ ), and the results are consistent with H1, that the Health consciousness is positively associated with consumer attitude. Furthermore, H2 predicted that environmental consciousness influences on consumer attitude, result confirms a positive effect of environmental consciousness on consumer attitude ( $\beta = 0.219$ ,  $t = 3.442 = p < 0.000$ ), thus supporting this hypothesis. In contrary, the result does not confirm H3 that the influence of consumer knowledge on consumer attitude ( $\beta = 0.096$ ,  $t = 1.597$ ,  $p = 0.110$ ). The result also shows that Hypothesis H4, H5 & H6 are accepted meaning that purchase intention has been significantly impacted by consumer attitude ( $\beta = 0.264$ ,  $t = 4.110$ ,

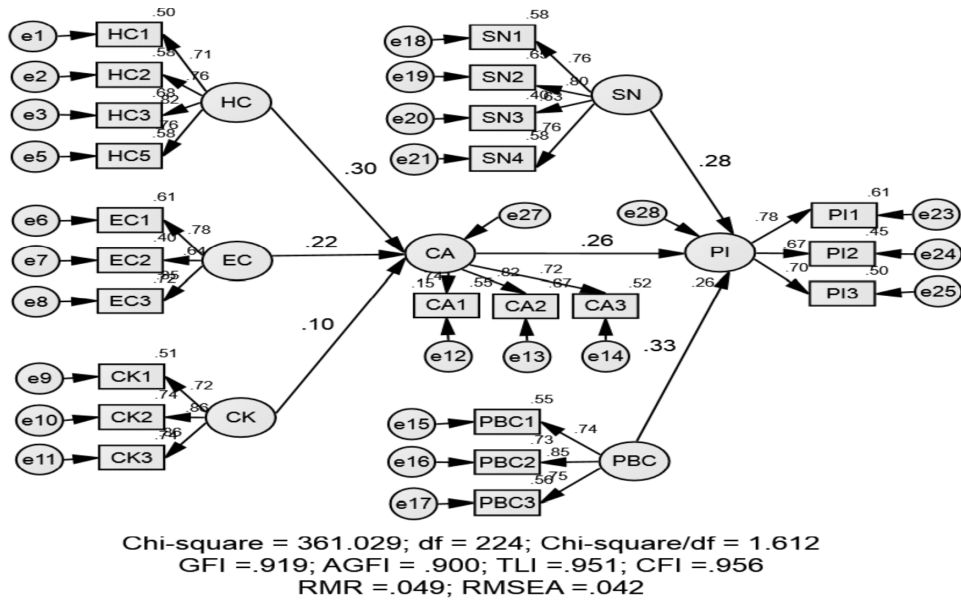


Figure 2: The SEM finalized model and results

$p < 0.000$ ), subjective norms ( $\beta = 0.282, t = 4.484, p < 0.000$ ), and perceived behavioral control ( $\beta = 0.333, t = 5.151, p < 0.000$ ) (Table 3).

Table 3  
 Results of hypotheses testing

Relationships	Standardized estimate (SEs)	Estimate	SE	CR	P-value	Results
CA ← HC (H1)	.302	.261	.055	4.728	.000	Supported
CA ← EC (H2)	.219	.145	.042	3.442	.000	Supported
CA ← CK (H3)	.096	.077	.048	1.597	.110	Unsupported
PI ← CA (H4)	.264	.290	.070	4.110	.000	Supported
PI ← SN (H5)	.282	.271	.060	4.484	.000	Supported
PI ← PBC (H6)	.333	.368	.071	5.151	.000	Supported

## 5. CONCLUSIONS, SUGGESTIONS AND FUTURE RESEARCH DIRECTIONS

### 5.1. Research conclusion

This study attempted to empirically test the influence of components of consumer values, consumer attitude, subjective norms and perceived behavioral control with regard to purchase intention based on exploration of TPB model. One of the objectives of this study is to explore the main effects of consumer values on the

customer's attitude, and the influences of attitude factor on purchase intention. The research also tests the influences of subjective norms and perceived behavioral control on intention factor. Firstly, the findings of this research demonstrate the effects of health and environment factors and consumer attitude are significant. However, the results show that consumer knowledge factor has no influence on consumer attitude factor. In addition, the results indicate that the influence of attitude toward organic food on purchase intention is significant. These results imply that a good consumer values and consumer attitude will lead to higher level of consumer's purchase intention. Similarly, both subjective norms and perceived behavioral control factors have influence on consumer's purchase intention. Therefore, consumers are more likely to purchase organic food when they have positive subjective norms and perceived behavior.

## **5.2. Discussion**

The results of the current study have confirmed the interrelationships among the research constructs. The conceptual model as developed in this study has also been shown to be a useful framework for purchase intention. Simultaneously, the usefulness of the application of the framework of the TPB model to the organic food is confirmed.

Although the application of the TPB model to the organic food is similar to that seen in most previous studies, some different potential influential factors are explored in this work.

In line with the research of Kim and Chung (2011), the results of this study imply that consumer values play an important role in raising consumer attitudes. The findings reveal that health consciousness and environmental consciousness are important in predicting consumers' attitudes toward organic foods. Previous studies show that the higher consumer knowledge is and a positive impression/experience they have, the more positive attitude they hold towards organic food (Chrysochoidis, 2000; Padel and Foster, 2005; Stobbelaar *et al.*, 2007). However, our findings did not find support for the relationship between consumer knowledge and consumer attitude, but this insignificant result may be due to not only organic food suppliers which are limited in Vietnam but also the information about organic food is not enough for consumers.

Secondly, the results of this study reconfirm that consumer attitude has a huge impact on consumer purchase intention. This finding is in line with Ajzen (1991); Chen, (2007), which stated that consumer' attitude has a positive impact on purchase intention. Moreover, results from testing hypothesis have demonstrated that the more positive attitude the consumers hold towards organic food, the more likely they purchase afterwards. Therefore, retailers should put significant efforts

into making consumers recognize their positive value attributes and characteristics, so that individuals will consider them when they need to make a relevant purchase. Obviously, retailers have to give promotion programs, including organic food knowledge, health and environmental awareness in order to increase consumer purchase intention.

The study results further suggest that subjective norm tends to influence consumer's purchase intention. Various researchers indicate that the effect of subjective norm on purchase intention for organic foods (Chen, 2007; Sparks and Shepherd, 1992). Finally, more consumer behavioral control will enhance positive purchase intention. Perceived behavioral control has improved intentions predictions (Armitage and Conner, 2001; Godin and Kok, 1996). This means that our findings support the idea that more behavioral control raises purchase intention (Kazemi *et al.*, 2013). Therefore, retailers should increase customer satisfaction.

### **5.3. Managerial implications**

As mentioned previously, consumer values can directly affect attitude toward organic food and purchase intention of consumers. Thus, the result of this study could be considered as a piece of advice for marketers in regard to consumer attitude towards organic food in Vietnam. It particularly indicates which factors have an impact on consumer attitude and which factors do not. Due to the fact that consumer values are concluded to influence consumer attitude, these factors should be more detailed in focus or exploited by the marketers to develop advertising strategies in the future in Vietnam. For example, health aspects should be more emphasized in organic food's advertising instead of environment-related factors. Moreover, information about the products should be widespread in public through various ways of social media in order to increase the consumer knowledge. In parallel, the message should be clear and as detail oriented such as the ingredients, production process and how positively it affects the consumer's health. Therefore, managers should pay more attention to the organic information to attract potential customers, which can enhance the loyalty of existing customers, and increase the purchase intentions.

### **5.4. Limitations and future research**

The sample respondents are mostly young people and their family. Hence, our sample respondents may thus not be representative enough in relation to this population, and so the generalizability of our results may be limited. For future research, other sampling method could be adapted in order to reach large number of respondents. In addition, characteristics could be further investigated such as specifying into different ranges to observe the impact of these factors on attitude



and purchase intention more clearly. In terms of the influence of factors on consumer attitude, future studies could replicate it in another context such as different countries and cultures. Moreover, the future studies may consider exploring how deeply the influence of consumer's needs and past experience affect their attitudes toward organic food and purchase intention.

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