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Mediating Role of Consumer Identity between Factors Influencing Purchase Intention and Actual Behavior in Organic Food Consumption in Thailand

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Abstract

The aims of this research are to explore the relationship between the factors influencing purchase intention and actual behaviors of Thai consumers of organic food, and to observe the mediating role of consumer identity between the factors: attitude toward organic food, subjective norm, and perceived behavioral control, and purchase intentions. The theory of planned behavior (TPB) was adopted as a theoretical framework which contained the role of consumer identity as a mediator. Data was collected from 400 Thai consumers of organic foods. Structural equation modeling was used to analyze the data through AMOS package. The results of the data analysis indicate that the consumer identity plays a full mediating role between independent variables (i.e. health concern, subjective norm, organic food familiarity and organic food literacy) and purchase intention. The organic food literacy is the main determinant of consumer identity with the highest coefficient value, whilst the organic food familiarity was placed as the second important determinant of consumer identity. Moreover, the results highlight the strong influence of intention on actual behavior of organic food purchase. Accordingly, this study thoroughly captures the TPB model and strengthens it by confirming relationship between purchase intention and actual purchase behaviors in

organic food consumption and revealed that actual purchase behavior is significantly affected by the purchase intention of Thai consumers of organic food.

Keywords: organic food, consumer identity, health concern, food safety, ecological concerns, organic food familiarity, organic food literacy.

1. Introduction

Worldwide consumers are increasingly concerned about food safety and its quality in addition to environmental friendliness of production methods (Hsu & Chen, 2014). Corporations and governments encouraged their interest toward consumers' environmental consciousness, health concerns, interest and their willingness to pay; as a result, there has been development towards organic foods (Peattie & Crane, 2005), which also encourage number of studies to discuss organic food consumption. For example, the reasons why people consume organic foods have been introduced, which are health, taste, animal welfare, a variety of environmental concerns (Hasselbach & Roosen, 2015), personal values and trust (Grebitus et al., 2015), and identity (De Pelsmacker et al., 2016).

Numerous studies have used theory of planned behavior (TPB) to observe consumer intention to buy organic food. Whilst some studies have examined only until intention to purchase (Hansen et al., 2018; Dean et al., 2012; Michaelidou & Hassan, 2008), others have investigated to actual purchase behavior (Tarkiainen & Sundqvist, 2005; Ham et al., 2018). In turn, when studies encompassed the actual buying behavior; they adopted a diverse range of variables without framing them into the original TPB concepts, such as examining health consciousness, perceived price and knowledge of organic foods (Singh & Verma, 2017); self-efficacy, expectancy, socio-structural conditions, and perception of others' behavior (Li & Zhong, 2017); product quality, health, environmental friendly/animal welfare, safety (Wee et al., 2014). Hence, the aim of this study is to thoroughly capture the original TPB model, by not only verifying the relationship between purchase intention and actual purchase behavior in organic food consumption, but also by classifying health concern, food safety concern and ecological concern into the TPB concept of attitude; familiarity and literacy into its perceived behavioral control; and subjective norm as it is.

Furthermore, when TPB was applied into the field of organic food consumption, some empirical studies such as Yazdanpanah and Forouzani (2015) mentioned the non-significant independent variables of both perceived behavioral control and subjective norm towards the intention to buy. Yadav and Pathak (2016) also reported that there was no notable predictor of subjective norm and environmental concern toward intention to buy organic foods. Since explanations based on TPB towards organic food consumption choices are incomplete, several empirical studies have attempted to add variables to support TPB. For example, attitude toward behavior was added as a mediator (Singh & Verma, 2017; Humaira & Hudrasyah, 2016; Smith & Paladino, 2010), whereas the concept of identity was selected as an independent variable (Michaelidou & Hassan, 2008; Yazdanpanah & Forouzani, 2015; Dean et al., 2012). De Pelsmacker et al. (2016) reported motivation and personal values as significant determinants for organic food and pro-environmental behavior. Douglas and Isherwood (1978) pointed out that social

identity was able to signal purchase behavior. Several studies have shown a substantial connection between person's attitudes, perceived connections to social group and purchase decisions (Jaffe, 1991; Forehand & Deshpande, 2001). Amongst all, one significant approach adopted by Hansen et al. (2018) was to examine organic food identity as a mediator instead of an independent variable. Their study observed how the relationship between consumer motivations and values influence organic food identity and behavior, and although their conceptual model did not aim to include all factors of the original TBP, it offered insights on how to examine the concept of consumer identity with the TBP model. The present study therefore follows this and proposes to add one more concept, the consumer identity as a mediator, to extend the TPB relationship. Stryker (1968, 1980) suggested that for each role and position that we are in our lives, we have different components of self. As experience is internalized, identity is formed and the person embraces this unique view of the world as his or her own (Stryker, 1980). Based on these views, this study presumes that organic food identity is reflected from one's concern, own's knowledge, and people around oneself – consumer identity is posited to be reflected through health concern, food safety concern, ecological concern, subjective norm, organic food familiarity, and organic food literacy.

It should also be noted that, upon the topic of organic food consumption using the TPB framework, much more attention has been paid from the Western context. For instance, the study of American organic food consumers with TPB was conducted by Donahue (2017) examining a role of attitude, descriptive and subjective norms, and perceived behavioral control, on the intention and behavior of respondents in US. Similarly, Dean et al. (2012) used TPB to present the influence of self-identity, past behavior, and moral norm of British respondents on intention to buy organic food/product in the U.K. Other countries have also been introduced such as Denmark (Hansen et al., 2018) and Finland (Tarkiainen & Sundqvist, 2005); however, only the limited number of studies have been presented from the Asian context (Leong & Mariadass, 2019; Singh & Verma, 2017; Yadav & Pathak, 2016). The current study therefore intends to focus on this scarce area, one of the Asian countries, Thailand, to explore the relationship between factors influencing purchase intention and actual behavior of Thai consumers of organic foods.

2. Literature Review and Hypotheses Development

2.1 Theory of Planned Behavior and Consumer Identity

Theory of Planned Behavior (TPB) (Ajzen, 1991) was derived from *Theory of Reasoned Action* (TRA) (Fishbein, 1967; Fishbein and Ajzen, 1975). Whilst TRA emphasized only two components which are attitude toward behavior and perception of social norms, TPB added one more component and consisted of attitude (self-predictable behavior); subjective norm (others' opinions about the behavior); and perceived behavioral control (self-efficacy towards a certain behavior). In TPB, these three components predict "behavioral intention" and subsequently "actual behavior", which have been examined by numerous studies where some attempted to add incremental predictors that enable to strengthen the intention or behavior than original TPB (Ajzen, 1991). Among such, particularly some focused on the concept of consumer identity. For instance, *self-identity* and *social-identity* were employed as additional constructs that increased

the predictive utility of TPB model (Terry et al., 1999; Yazdanpanah & Forouzani, 2015), and an integration of Identity Theory (Stryker, 1968) and Social Identity Theory (Hogg & Abrams, 1988) were observed in the framework of TPB. Sparks and Shepherd (1992) specified the role of identification of green consumers using self-identity and TPB. Furthermore, Yazdanpanah and Forouzani (2015) adopted TPB and found that self-identity and moral norm were additional predictors to TPB which significantly increased the power of prediction of the original theory with students in Iran. Du et al. (2017) also specifically focused on organic consumer identification and examined individuals who categorized themselves as a group of organic consumers, which incorporate environmental consumer identification and their cognitions regarding organic products. A similar term, organic food identity, was introduced by Hansen et al. (2018), and in their research, the health, environmental, and social consciousness positively affect behavioral intention through organic food identity.

The present study has thus also adopted the concept of consumer identity as one psychographic construct. Since the previous studies adopted relevant concepts as mediators e.g., organic consumer identification (Du et al., 2017); organic food identity (Hansen et al., 2018); and organic involvement (Teng & Lu, 2016), this study also includes consumer identity as a mediator and aims to examine the mediating role of consumer identity on the factors influencing purchase intention and actual behaviors on organic food consumption.

2.2 Theory of Planned Behavior – Attitudes

The first component in TPB is the attitude toward behavior of interest as well as toward consequences of the behavior. The definition of attitude can be a perception of a person toward the act in a preferable or unpreferable situation (Fishbein & Ajzen, 1975; Tommasetti et al., 2018). A large amount of empirical research studied health concern, food safety concern, and ecological concern as consumer attitude because they are the factors which consumers use as criteria to make decision on consuming organic food (Michaelidou & Hassan, 2008; Smith & Paladino, 2010; Wee et al., 2014; Hansen et al., 2018).

Health Concern is recognized as consumers' promptness to identify and deal with health actions (Becker et al., 1977). Prior studies reported that the health concern is the primary reason for buying organic food (Chinnici et al., 2002; Padel & Foster, 2005); for example, it has a remarkable influence on consumers' purchase intention in Malaysia (Salleh et al., 2010). Hansen et al. (2018) reported that identification is an essential influence on health consciousness towards the behavioral intention of organic food consumer. Therefore, the following hypothesis is proposed:

- **H_1:** Health concern has a positive influence on consumer identity in organic food consumption.

Food Safety Concern refers to consumers' anxiety of insecticide residues, chemical fertilizers, artificial food additives, and food preservatives including food processing and agricultural operations (Yee et al., 2005). It is one of the significant factors to most of the organic food consumers which means that the food should be handled properly and be of

proper quality (Leong & Mariadass, 2019; Petljak et al., 2018; Razmi & Harun, 2019; Schmidt & Rodrick, 2003). Some studies have reported that consumers' attitudes regarding the food safety are associated with their motives in making specific food choices (Michaelidou & Hassan, 2008; Hus et al., 2016) and consumers acknowledge and identify organic food safer than conventional foods without containing chemicals (Thompson & Kidwell, 1998). Those consumers can differntiate themselves from others who buy conventional foods; and therefore, the consumers' inherent values of food safety can be linked to the safety attribute of organic foods (Teng & Lu, 2016). In this regard, the following hypothesis is proposed:

- **H_2:** Food safety concern has a positive influence on consumer identity in organic food consumption.

Ecological Concern refers to the anxiety of environmental and animal rights (Honkanen, Verplanken, & Olsen, 2006). Ethical consumers with the ecological concern try not to harm the environment but select environmentally-friendly products (Harper & Makatouni, 2002; Wang et al., 2018) and organic foods are acknowledged as environmentally-friendly products (Wilkins & Hillers, 1994). The past studies noted that consumers' attitudes were associated with environmental awareness for their food choice motives (Voon et al., 2011; Yadav & Pathak, 2016), and particularly some indicated that the increase in the environment identification was engaged with pro-environment concern, followed by an action through identifying and stimulating 'green' behaviors (Whitmarsh & O'Neill, 2010). Hence, the following hypothesis is proposed:

- **H_3:** Ecological concern has a positive influence on consumer identity in organic food consumption.

2.3 Theory of Planned Behavior – Subjective Norm

The second component in TPB is subjective norm. *Subjective norm* is normally considered as a particular person's cognizance regarding essential opinions or beliefs of others (Finlay et al., 1999). Many researchers have examined the relationship between subjective norm and buying intention (Michaelidou & Hassan, 2008; Hsu et al., 2016), whilst there are a few empirical studies to deal with consumer identity. One study reported that identification is significantly associated with social consciousness toward behavioral intention for organic foods (Hansen et al., 2018). Social consciousness is defined as the ideas that "characterize certain milieux that are more or less common to people of a certain social environment and that are reinforced in the consciousness of particular individuals by mutual suggestion and by the conviction that they are shared by other people in the same group" (Ossowski, 2001). It can therefore be assumed that these ideas may apply the pressure on consumers to identify themselves as being environmentally friendly individuals who are concerned the quality and safety of foods. According to subjective norm dictated by others, on such perceived social pressurization, individuals act in accordance with influencers' views (Ajzen, 1991). Therefore, the following hypothesis is proposed:

- **H_4:** Subjective norm has a positive influence on consumer identity in organic food consumption.

2.4 Theory of Planned Behavior – Perceived Behavioral Control

The third component in TPB is perceived behavioral control. As noted above, the perceived behavioral control is self-efficacy towards a certain behavior. The definition of self-efficacy is an individualized judgment or belief in personal innate capability to deliver sustainable expected outcome during the obstacle situations (Bandura, 1977). Two variables: organic food familiarity and organic food literacy are introduced here.

As for the organic food familiarity, the knowledge structure of a person's longstanding memory of products is called "product familiarity" and the knowledge must supply the memory to impact on the evaluation for decision making and choice selection (Lichtenstein & Fischhoff, 1977). With the product familiarity, consumers with expertise feel secured and comfortable as well as could improve their perceived control over their behaviors (Notani, 1998). The meaning of organic food familiarity is the number of product experiences in the past (Alba & Hutchinson, 1987) and organic product familiarity will form and forty organic consumer identification (Ashforth & Mael, 1989; Bhattacharya & Sen, 2003). The organic consumer identification has a positive influence between environmental awareness and familiarity with organic product purchase (Du et al., 2017). Hence, the following hypothesis is proposed:

- **H_5:** Organic food familiarity has a positive influence on consumer identity in organic food consumption.

Another variable is the organic food literacy which refers to the ability to select healthier food choices (Brucks, 1985; Alba & Hutchinson, 1987). Consumers who have a high level of food literacy have a self-perceived behavioral control for planning, preparing and consuming healthful foods (Poleman et al., 2018). The different level of consumers' knowledge affects consumers' buying intention (Chiou, 1998). Buying or consuming environmentally friendly goods derives from consumers' knowledge towards environment and ecology (Finisterra do Poco & Raposo, 2008) and organic food knowledge (Saleki et al., 2012). Therefore, the following hypothesis is proposed:

- **H_6:** Organic food literacy has a positive influence on consumer identity in organic food consumption.

2.5 Theory of Planned Behavior – Consumer Identity and Behavioral Intention

Identity Theory (Stryker & Burke, 2000) presents that identity is a key motivator of behavior, as individuals seek conformity with the norm of identity through behavioral acts. Belk (1988) also suggests that consumers typically choose to consume products and services that are compatible with their identity. Verma and Chandra (2018) reported that conscientiousness, one of our personalities, significantly influenced individuals' environmental intention. Number of studies also reported a prominent relationship between being included in a social group, a person's attitude, and purchasing decision making (Jaffe, 1991; Forehand & Deshpande, 2001). It has been noted that social

identity could influence the individual consumers to buy or select items including food items (Stayman & Deshpande, 1989; Wooten, 1995). The properties of organic products (Bauer, Heinrich, & Schäfer, 2013) can be determined and identified by the organic consumer group (Escalas & Bettman, 2003; Park & John, 2010); hence, the following hypothesis is proposed:

- **H_7:** Consumer identity has a positive influence on their intention to buy organic food.

2.6 Theory of Planned Behavior – Behavioral Intention and Actual Behavior

A behavioral intention or willingness is an essential predictor of actual purchase behavior which is evaluated by post consumption (Blackwell, 2001). A number of previous researches have utilized TPB to investigate behavioral intention of consumers regarding organic products (Aertsens et al., 2009; Voon et al., 2011; Al-Swidi et al., 2014); however, those researches investigated only until purchase intention or discontinue to further investigate the actual buying behaviors (Al-Swidi et al, 2014). Only a few studies found that the behavioral intention to purchase relates to their actual purchasing behaviors. The current study therefore proposes the following hypothesis:

- **H_8:** Intention to buy organic food has a positive influence on actual behavior to buy organic food.

2.7 Consumer Identity as Mediator

In addition to examine the existing link in the TPB model, as noted earlier, various studies extended their frameworks by adding more variables as mediators to examine the mediating role. For example, the study by Teng and Lu (2016) reported that organic involvement mediated both the relationship between health consciousness and purchase intention, and between ecological motives and purchase intention of organic food. Moreover, the study of Hansen et al. (2018) explained that when consumers are not ready to change, health consciousness had a significant mediating effect on organic food behavior through organic food identity. Consumer behavior literatures indicate that identity plays an important role as the mediator, mediating the relationship between consumer psychography and their behaviors (Hansen et al., 2018; Currás-Pérez et al., 2009). Therefore, the present study is also convinced to add consumer identity as a mediator and assumes there is the mediating role of consumer identity on the factors influencing purchase intention on organic food consumption. Thus, the following hypotheses are proposed:

- **H_9a:** Consumer identity mediates the relationship between health concern and intention to buy organic food.
- **H_9b:** Consumer identity mediates the relationship between food safety concern and intention to buy organic food.
- **H_9c:** Consumer identity mediates the relationship between ecological concern and intention to buy organic food.
- **H_9d:** Consumer identity mediates the relationship between subjective norm and intention to buy organic food.

- **H_9e:** Consumer identity mediates the relationship between organic food familiarity and intention to buy organic food.
- **H_9f:** Consumer identity mediates the relationship between organic food literacy and intention to buy organic food.

Based on the literature review and hypotheses development conducted above, the conceptual framework has been developed (see Figure 1). The customer identity has been studied in previous researches as a mediator which mediated the relationship between customer motivation and their behaviors (Pieters et al., 1998; Ries et al., 2012). This model is consistent with consumer behavior discipline (Ajzen, 1991) theorizing that identity can be used as a mediating variable between customer attitude and behavior (Bhattacharya & Sen, 2003) with the assumption that customers generally favor consumption which is compatible with their identity (Sparks & Shepherd, 1992).

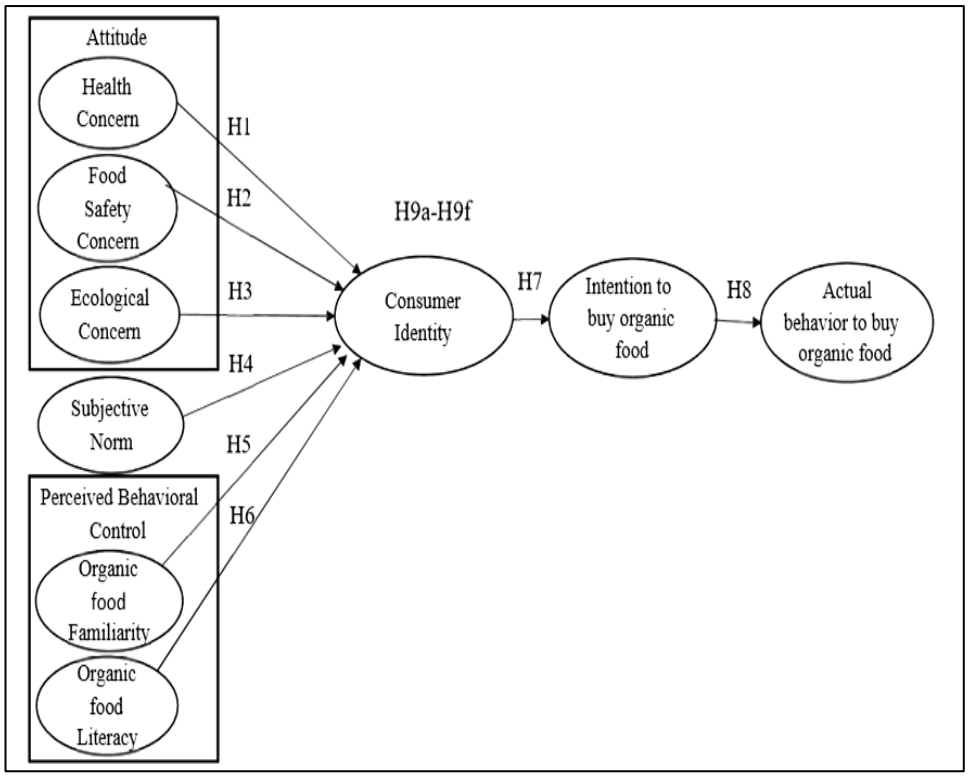

Figure 1: Research Framework

3. Methodology

3.1 Data Collection

The characteristics of target respondents are set into three criteria: firstly, they consumed organic foods in the past 15 days; secondly, they are regular organic food consumers; and

lastly, they purchase organic food despite that conventional foods are available on sales. Data were collected via questionnaires over six weeks administered with two survey groups. The first group was collected from Google online survey through a snowball sampling technique and the second group was collected from an organic food shop located near a well-known hospital in Bangkok using a convenient sampling technique. The snowball sampling is a nonprobability sampling technique and used to find hidden populations, i.e., organic food consumers whom it is difficult to access.

After screening by cutting unengaged respondents who answered with the same or almost same scores, overall, 283 questionnaires were collected via Google online survey (283 usable) and 174 questionnaires were collected at the organic shop (only 117 usable). As for the second group, collecting the data from only one organic shop may cause the limitation on generalizing findings. Nevertheless, together with the 283 usable sample collected from the online survey, the present study reached to have 400 usable sets, which is an acceptable sample size (Yamane, 1967) and these respondents who were already familiar with the organic foods should provide greater insights into the issues related to organic purchase decisions. Moreover, in multivariate research, the sample size should be at least five times of the number of the item measures to be analyzed, or to be better, sample size should have 10:1 ratio (Hair et al., 2010). Since there are 30 variables in this study, the sample size should be 300. Therefore, sample size of 400 is acceptable. Respondent profiles are as follows (see Table 1): 100 percent Thai nationals; 74.8 percent female and 25.3 percent male; 60 percent age over 40 years-old; 90 percent obtained Bachelor degree or higher; 56.5 percent employed status; and 46.3 percent income between 10,000-50,000 Thai baht per month.

This structure of respondent profiles can almost be comparable to that of Kranjac et al. (2017), except its age range. They indicate that organic food consumers who want to buy organic food have the traditional and uniform demographic characteristics, that is, female consumers with university degrees, aged between 31 to 40, and middle to high income level (between 501-1,000 euro). As for the age, the study from the USA presented a similar case to our study showing 41.5 years as the average lifespan of organic food consumers (Hartman Group, 2014). Loureiro et al. (2001) also support our study presenting the average age of 46.8 years. Roitner-Schobesberger et al. (2008) argue that female consumers have more positive attitudes to organic foods and prefer to consume them in large quantities, whilst several other studies reveal that consumers with higher education profiles have positive attitudes and prefer to buy organic products (Krytallis et al., 2006). The sample structure demonstrated in the current study also postulate such findings.

Table 1: Respondent Profiles (n = 400)

		Number of Respondents	Percent (%)
Gender	Male	101	25.3
	Female	299	74.8
Age	Below 18-30 years old	78	19.5
	31-40 years old	82	20.5
	41-50 years old	146	36.5
	Over 50 years old	94	23.5
Education	Below bachelor	40	10.0
	Bachelor degree	175	43.8
	Master degree or higher	185	46.3
Occupation	Employee	226	56.5
	Professional	14	3.5
	Self-employed	68	17.0
	Student	17	4.3
	Other	75	18.8
Income	THB 10,000 and lower	16	4.0
	THB 10,001 and 30,000	102	25.5
	THB 30,001 and 50,000	83	20.8
	THB 50,001 and 70,000	59	14.8
	THB 70,001 and 90,000	27	6.8
	More than THB 90,000	113	28.3

3.2 Measures

This study applies multiple-item measures for all major constructs. These measures are adopted from prior researches and modified for this study. All items were measured on a 6-point Likert scale rank from 1 (strongly disagree) to 6 (strongly agree). Four items were adapted from Singh and Verma (2017) and Hansen et al. (2018) to measure health concern. Food safety concern was measured using five items from Fotopoulos, Krystallis, Vassallo, and Pagiaslis (2015) and Teng and Lu (2016). Ecological concern was measured with four items derived from Golob et al. (2018). Subjective norm used the four items scale adopted from Peštek, Agic, and Cinjarevic (2018). Five items for organic food familiarity was derived from Renner, Sproesser, Strohbach, and Schupp (2012) and Du et al. (2017). Organic food literacy was evaluated with four items adopted from Teng & Lu (2016) and Singh and Verma (2017). Consumer identity was determined using four items from Du et al. (2017), Yazdanpanah and Forouzani (2015); and Hansen et al. (2018). Six items for purchase intention was derived from Wee et al. (2014). Finally, actual purchase behavior was evaluated with the four-item scale obtained from Wee et al. (2014); and Singh and Verma (2017).

4. Data Analysis and Results

The data analysis procedure was designed more for a theory testing with a sufficient number of sample (i.e., 400 samples) and item measures are reflective and with multi-

items and parametric types of scale (Likert scale). Thus, covariance-based SEM (AMOS) should be more appropriate over partial least square SEM (Smart PLS) (Astrachan, Patel, & Wanzenried, 2014). Table 2 presents the factor loading, Cronbach's Alpha, AVE, and CR for all factors. The acceptable factor loading is between 0.50 and 0.95 (Bagozzi & Yi, 1988). Cronbach alpha value of 0.70 or higher indicated a reliable measurement (Hair et al., 2010) whereas the acceptable value of composite reliability (CR) is above 0.70, and the average variance extracted (AVE) is above 0.50 (Fornell & Larcker, 1981; Hair et al., 2010). All factor loadings were between 0.727-0.928 which were within the boundary and they are all significant at $p<0.001$. Cronbach alpha values were 0.799-0.933 thus exceeding 0.70 showing reliable measures. AVE of the latent constructs were between 0.584-0.780 exceeding 0.5, showing good convergent validity. The CR of all constructs were from 0.808-0.933 which is above threshold 0.70, indicating good internal consistency among the measurement items of each construct. Among the original 40 items, ten items had to be dropped from further analysis due to a reduction in reliability.

Table 2: CFA and Measurement Reliability (n = 400)

Constructs	Factor Loading	Mean	SD
Health concern (α = 0.806, AVE= 0.584, CR= 0.808)	0.727-0.813	4.57-5.10	0.867-0.917
Food safety concern (α = 0.894, AVE = 0.665, CR = 0.888)	0.763-0.847	4.86-5.06	0.971-1.025
Ecological concern (α = 0.871, AVE = 0.698, CR = 0.873)	0.761-0.890	4.74-4.99	1.045-1.072
Subjective norm (α = 0.799, AVE = 0.621, CR = 0.831)	0.757-0.832	3.79-4.25	1.155-1.222
Familiarity (α = 0.909, AVE = 0.756, CR = 0.903)	0.819-0.894	4.01-4.24	1.155-1.232
Literacy (α = 0.844, AVE = 0.687, CR = 0.868)	0.773-0.868	3.83-4.03	1.118-1.329
Consumer Identity (α = 0.913, AVE = 0.777, CR = 0.913)	0.857-0.898	3.95-4.17	1.299-1.338
Intention to purchase (α = 0.933, AVE = 0.736, CR = 0.933)	0.798-0.899	4.30-4.55	1.102-1.266
Actual purchase (α = 0.912, AVE = 0.780, CR = 0.914)	0.827-0.928	3.96-4.25	1.297-1.390

Notes: Fit indices: $\chi 2 = 999.62$; df = 443; $\chi 2/df = 2.256$; AGFI = 0.833; GFI = 0.868, CFI = 0.948, RMSEA = 0.056

Table 3 shows that the estimated inter-correlations among all variables were below the square roots of the AVE of each construct which indicate discriminant validity and decreases the impact possibility of common method variance (Fornell & Larcker, 1981).

Table 3: Discriminant Validity Measures

	AVE	Inten	Fdsafy	Ecolo	Subj	Lite	Health	Iden	Act	Fami
Inten	0.736	**0.858**								
Fdsafy	0.665	0.586***	**0.816**							
Ecolo	0.698	0.464***	0.525***	**0.835**						
Subj	0.624	0.517***	0.423***	0.487***	**0.79**					
Lite	0.686	0.687***	0.372***	0.385***	0.494***	**0.828**				
Health	0.584	0.576***	0.557***	0.499***	0.423***	0.462***	**0.764**			
Iden	0.777	0.808***	0.441***	0.452***	0.616***	0.828***	0.566***	**0.882**		
Act	0.78	0.845***	0.425***	0.384***	0.531***	0.758***	0.507***	0.872***	**0.883**	
Fami	0.76	0.647***	0.284***	0.324***	0.491***	0.781***	0.511***	0.845***	0.796***	**0.872**

Notes: ***p <0.001; n= 400, The square roots of AVE for discriminant validity are bold along the diagonal. Health = Health concern, Fdsafy = Food safety concern, Ecolo = Ecological concern, Subj= Subjective norm, Fami = Organic food familiarity, Lite = Organic food literacy, Iden = consumer identity, Inten = Intention to buy organic food, and Act = Actual behavior to buy organic food

4.1 Structural Equation Modeling

This study used structural equation modeling (SEM) with AMOS version 24 to test the hypothesis with two approached steps: a measurement model and structural model.

4.1.1 Measurement Model Analysis

The overall performance of the measurement model was determined via Confirmatory Factor Analysis (CFA). CFA was proceeded on the nine latent variables, including the mediating variable, with each item specified loading on its hypothesized latent factor. The measurement model produces a chi-square of 999.62 (d.f.=443, $p < .001$) which Hoelter (1983) recommends that the absence of absolute fit can be described by sample size (n=400). As the chi-square value is highly affected by sample size; thus, other fit indices are suggested in evaluating model fit (Kline, 2016) such as normed chi-square (χ^2 /df = 2.25) which is at the range between 2.0-5.0 (Wheaton, Muthen, Alwin, & Summers, 1977; Tabachnick & Fidell, 2007), the root mean square error of approximation (RMSEA=0.056) which the cut off points is <0.08 (Hu & Bentler, 1999), the comparative fit index (CFI=0.948), and the goodness of fit index (GFI=0.868) which the threshold is >0.90 (Arbuckle & Wothke, 1999; Byrne, 2010), suggesting that the data suits the measurement model in a satisfactory level (Bagozzi and Yi, 1988).

4.1.2 Structural Model Analysis

After checking the accuracy of the measurements, the study performed the structural model analysis. The results of before and after modification are shown in table 4. The model values before modification did not meet the requirement, after the modification, all the values meet the requirement except GFI which is a slightly lower than required.

Table 4: Goodness-of-fit Indices of Structural Model

	χ2/df	**CFI**	**GFI**	**RMSEA**
	Wheaton et al.,1977; Tabachnick & Fidell, 2007	Arbuckle & Wothke, 1999; Byrne, 2010		
Recommended values	2-5	>0.90	>0.90	<0.08
Model values (before)	4.550	0.860	0.740	0.094
Model values (after)	2.521	0.942	0.864	0.062

Table 5 showed the outcomes of hypothesis testing for H_1-H_8. It revealed that six independent variables accounted for 82.5 percent of explained variances for consumer identity (R square). The results reveal that the hypotheses (H_1-H_6, except H_2 and H_3) are in expected direction with standardized coefficient values at 0.249, 0.295, 0.308, and 0.775 respectively (p value < 0.001); therefore, H_1-H_6, except H_2 and H_3 are supported. Subsequently, this can explain that consumer identity is influenced by health concern, subjective norm, familiarity, and especially literacy with high coefficient but not by food safety concern or ecological concern. H_7 is supported (β=0.76, p<0.001), indicating that consumer identity has influence on intention to buy organic food with R square = 77.7 percent whilst intention to buy positively influences actual behavior to buy organic food (β=0.66, p<0.001) with R square = 83.6 percent; thus, H_8 is supported.

Table 5: Results of Hypotheses Testing for H_1-H_8

	Relationship			Estimate	S.E.	C.R.	P Value	Results
H_1	Health	➔	Iden	0.172	0.070	2.474	0.013	Supported
H_2	Fdsafy	➔	Iden	0.084	0.051	1.643	0.100	Not Supp
H_3	Ecolo	➔	Iden	0.038	0.053	0.725	0.468	Not Supp
H_4	Subj	➔	Iden	0.245	0.060	4.110	0.000	Supported
H_5	Fami	➔	Iden	0.308	0.065	4.761	0.000	Supported
H_6	Lite	➔	Iden	0.491	0.066	7.433	0.000	Supported
H_7	Iden	➔	Inten	0.727	0.099	7.365	0.000	Supported
H_8	Inten	➔	Act	0.780	0.055	14.100	0.000	Supported

Note: Health = Health concern, Fdsafy = Food safety concern, Ecolo = Ecological concern, Subj= Subjective norm, Fami = Organic food familiarity, Lite = Organic food literacy, Iden = consumer identity, Inten = Intention to buy organic food, and Act = Actual behavior to buy organic food

4.1.3 Mediation Analysis

Our research framework proposes that consumer identity as a mediator of the relationships between its antecedents (i.e. health concern, food safety concern, ecological concern, subjective norm, organic food familiarity, and organic food literacy) and intention to buy. To test the mediating role of consumer identity, the bootstrapping in AMOS 24 (2000 samples) was applied to evaluate the direct and indirect effects of these

variables. The results reveal that all direct effects from those six independent variables to intention to buy are not significant with low regression values at 0.07, 0.03, 0.03, 0.02, and 0.03 respectively except food safety concern (β= 0.26, $p<0.001$). For the indirect effects, the values were higher at 0.58, 0.52, 0.39, 0.48, and 0.36 respectively and significant at $p<0.001$ except for food safety concern (β= 0.06, $p>0.05$). Since H_2 and H_3 have shown no significant, meaning food safety concern and ecological concern do not influence consumer identity, the results of those direct and indirect effects previously mentioned claim that consumer identity is a full mediator of the relationship between health concern, subjective norm, familiarity, literacy and intention to buy except for food safety and ecological concern. In line with the explanation provided by Baron and Kenny (1986); thus, this leads us to full support for H_9a-H_9f except H_9b and H_9c. Table 6 summarizes the results.

Table 6: Mediation Analysis

	Path	IV➔ Med	Med➔DV	Total Effect (β)	Direct Effect		Indirect Effect		Results
					β	p value	β	p value	
H_9a	Health➔Iden➔Inten	0.013	.000	0.65	0.07	.416	0.58	.001	Full mediator
H_9b	FdSafy➔Iden➔Inten	0.100	.000	0.33	0.26	.001	0.06	.132	No mediator
H_9c	Ecolo➔Iden➔Inten	0.468	.000	0.55	0.03	.709	0.52	.001	No mediator
H_9d	Subj➔Iden➔Inten	0.000	.000	0.36	0.03	.698	0.39	.001	Full mediator
H_9e	Fami➔Iden➔Inten	0.000	.000	0.45	0.02	.741	0.48	.001	Full mediator
H_9f	Lite➔Iden➔Inten	0.000	.000	0.33	0.03	.835	0.36	.001	Full mediator

5. Discussion

The findings of this study strengthen TPB in the organic food consumption by presenting that consumer identity has a positive relationship with intention to purchase organic food, which has also been reported by Hansen et al. (2018). Once consumers think of themselves as organic food consumers (Yazdanpanah & Forouzani, 2015), this can have a strong influence on intention to buy, which is described by self-congruity theory (Sirgy, 1986). This theory explains that consumers connect their identity with an image of products; hence, they tend to purchase a product which has a similar image to that of their own. Schuitema, Anable, Skippon, and Kinnear (2013) and Noppers, Keizer, Bolderdijk, and Steg (2014) also used this theory to connect self-image/identity with buying intention.

Another noteworthy finding of this study is that, together with a limited number of studies available (e.g., Du et al., 2017; Hansen et al., 2018), the concept of identity is found to be the full mediator of the relationship between independent variables (health concern, subjective norm, organic food literacy, and organic food familiarity) and

purchase intention. Such finding is unique when past researches did not yield a clear picture as expected (e.g., Conner, Warren, Close, & Sparks, 1999; Johe & Bhullar, 2016).

Furthermore, the results of this study highlight the strong influence of intention on actual behavior to buy organic food, verifying what has been proposed in TPB (Ajzen, 1991). This is also consistent with prior researches (Wee et al, 2014; Golob et al, 2018). Brown, Pope, and Voges (2003) claimed that consumers with intention to purchase the product should display actual purchase behaviors higher than those who have no intention to purchase. Thus, this study empirically affirms the relationship between buying intention and actual purchase behavior as being theorized in TPB. This must also be an evidence to benefit marketers for them to encourage consumers' intention to buy the product since it leads the consumers to finally buy products.

Generally in the previous studies of TPB, attitudes toward behavior, subjective norm and perceived behavioral control explain the variance of behavioral intention approximately from 28% to 40% R^2, (Verma, & Chandra, 2018), whereas behavioral intention and perceived behavioral control explain the variance of actual behavior approximately from 12 to 50% (Conner et al., 1999). In order to improve these R^2 values, some studies tried to examine attitude toward behavior as a mediator, mediating the relationship between determinants and behavioral intention. The results were slightly improved which were from attitude to intention explained 45-50% (Leong & Mariadass, 2019) and intention to actual behavior explained 25-36% (Smith & Paladino, 2010; Humaira & Hudrasyah, 2016). In turn, Hansen et al. (2018) inserted organic food identity instead of attitude, and their results showed a significant improvement – the determinants explained the variation of identity for 83% and identity explained intentional organic food behavior for 93%. Being consistent with the study of Hansen et al. (2018), our results present the determinants which explained the variation of consumer identity for 82.5%; the consumer identity explained the variation of intention to buy organic food for 77.7%; and the intention explained the variation of actual behavior to purchase organic food for 83.6%.

This study points out that organic food literacy is the main determinant of consumer identity as shown by the highest coefficient value in our data analysis. The previous studies presented some inconsistency in the results of the influence of consumer knowledge toward organic food consumption. Ahmad and Juhdi (2010) reported that knowledge on organic food did not encourage continued consumption of organic food among Malaysian consumers. The study of Teng and Wang (2015) also revealed that consumer knowledge on organic food could have impact on attitude only after trust had been developed. However, the current study recognized that the consumer knowledge toward organic food had strong influence on consumer identity, that is, consumers who are knowledgeable in organic food tend to identify themselves more of a green consumer.

As for the organic food familiarity, Fekadu and Kraft (2001) showed a strong relationship between familiarity and self-identity in food consumption. Soderlund (2002) examined familiarity and reviewed that a person who has been thinking about an item comparatively longer appears to be more positive than a person who has spent little time thinking about the item. The present research also supports this as the organic food familiarity was found as the second important determinant of consumer identity, which

discusses that Thai consumers are familiar with and have more knowledge of organic food consumption.

The subjective norm is moderately related to consumer identity in this study, which is also recognized in the study of Shamir (1990) viewing that collectivists tend to pursue identity salience where it is a desire to identify with social groups to create and preserve one's own sense of self. Based on such, the present study implies that buying organic food becomes a social norm in Thailand and suggests the importance of social norms in determining consumer identity in Thai context.

Although the past researches have examined the relationship between health concern, food safety concern, and ecological concern, with attitude of green consumers or consumer identity as green consumers and their behaviors, their results were not consistent. Hansen et al. (2018) emphasized the link of health consciousness with organic food identity than that of environmental consciousness. Mondelaers, Verbeke, and Huylenbroeck (2009) also found a strong link of health concern over ecological one in organic food choices. Moreover, Leonidou, Leonidou, and Kvasova (2010) reported that the health concern is a major driver of organic food identity, whilst Hartmann and Apaolaza-Ibáñez (2012) introduced the relation between the ecological concerns with attitude toward green energy brands however not with the health concern. The current study also indicates that the consumer identity is determined by the health concern. This is consistent with the findings of Hansen et al. (2018), which presented that health concern is related to organic food identity. Therefore, the present study illustrates that Thai consumers are aware of issues related to their health and regard health as an important indicator whilst making a decision to buy organic food products, which confirms that health concern is valuable to be included in TPB for organic food consumption in Thailand.

Unexpectedly, this study did not identify the relationship between food safety concerns with consumer identity. The similar result was reported by Teng and Lu (2016) and Pino et al. (2012) that the mediating impact of organic attitude between food safety and purchase intention could not be observed. This may be because consumers may leave their responsibilities to their government agencies to enforce food safety for them (Shaharudin et al., 2010). Moreover, the impact of food safety could be different depending on the type of organic products. For example, Fotopoulos and Krystallis (2002) discussed that during the bovine spongiform encephalopathy crisis (known as mad cow disease), a food safety plays an important role in the organic food purchase decision whist flour or bread categories have never been under that crisis. Thus, they can generally be considered safe, and consumers may have less concern on food safety. Likewise, this study presents that ecological concern has no positive influence on consumer identity which is inconsistent with the findings of Brieger (2019). By analyzing more than 30,000 samples collected from 38 countries, Brieger (2019) confirmed the positive relationship between individuals' social identity and environmental concern. The findings of the current research imply that the environmental concern of Thai consumers may be less than that of other countries. Moreover, the present study endorsed the findings of Magnusson et al. (2003) that health concern is more important in comparison to

environmental concern in organic food context. One argument said that even environmentalists may not transfer their attitudes to be pro-environmental behavior (Pieters et al., 1998); for example, environmental concern did not have significant influence with consumer behavior toward organic food in Penang, the second largest city of Malaysia (Rajaretnan & Lim, 2016).

5.1 Managerial Implication

Over recent years, an increasing number of organic food consumption in Thailand confirms the growing interests of both consumers and producers in this alternative. To understand the level of consumer identity regarding organic food is an initial step to develop and enlarge this market. Our findings suggest that producers and/or marketers of organic food brands must pay particular attention not only to the functional features of their goods but also consumer identity to leverage their consuming behaviors. For example, for the segmentation of Thai organic food consumers, producers and marketers should provide the knowledge and build trust with their consumer identity instilled in them. The identity of being an "organic consumer" must enhance their purchasing behaviors to be healthier with higher nutrition and no food additives as well as being concerned for environment and social responsibility. The marketing programs can therefore be suggested to integrate all domains employed in this study, that is, health concern, organic food literacy, organic food familiarity, and subjective norm to consume organic foods.

5.2 Research Implication

The findings of this study reveal that the TPB can be of great use to verify the relationship between purchase intention and actual purchasing behavior in organic food consumption, demonstrating the strong influence of purchase intention on actual purchase. Furthermore, our conceptual framework added the consumer identity as a mediator to extend the TPB relationship, and one of the significant contributions was to recognize the consumer identity as a full mediating role between the four independent variables (i.e. health concern, subjective norm, organic food familiarity, and organic food literacy) and purchase intention where the highest level of influence was found with organic food literacy.

Another notable contribution is that this study discusses organic food consumption in Thailand in order to explore the relationship between the factors influencing purchase intention and actual behavior of Thai consumers of organic food. Admittedly, little research has explored this context so far; and therefore, the present study offers insights to those academics whose interest lies in understanding the antecedents of consumer identity, intention, and purchasing behavior of Thai organic food consumers.

5.3 Limitation of Study

The first limitation of this study can be our respondents' profile showing 75 percent female. Gender can be one factor influencing organic food consumption: females having more positive attitudes toward organic foods and prefer to consume it in large quantities (Roitner-Schobesberger et al., 2008). Another issue can be the respondents' profile showing 90 percent with a higher educational attainment (44 percent with a

Bachelor degree and 46 percent with a Master degree or higher). Several studies have reported that consumers with higher education profiles have essentially positive attitudes and prefer to buy organic products (Krytallis et al., 2006). The future study should consider using a probability sampling technique to reach no such data bias.

Brown (2003) reported that lack of information was reflected on customers' difficulty in finding the environmentally-friendly products. Also, several studies reported that difficulty in finding organic food in the stores or lack of organic food availability is one barrier for consumers (Beardworth et al., 2002). Future study therefore can include the availability variable as an additional predictor.

It can also be stated that this study investigates six organic variables as the antecedents of consumer identity. Future studies may consider other notions influencing consumer identity with respect to the consumption of organic food; for example, other possible personal characteristics or quality of health. Future research may explore the influence of situational elements on identity and buying intention towards organic food, such as self-esteem, effect on personal/social identity, or time constraints.

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