

ISSN 1996-3343

Asian Journal of
Applied
Sciences

An Exploratory Study on the Organic Food Purchase Intention among Thai-Cambodian Cross-border Consumers

¹P. Pomsanam, ¹K. Napompech and ²S. Suwanmaneepong

¹College of Administration and Management, King Mongkut's Institute of Technology Ladkrabang, Thailand

²National Science and Technology Development Agency, Thailand

*Corresponding Author: Pisnu Pomsanam, King Mongkut's Institute of Technology Ladkrabang (KMITL), College of Administration and Management, Chalongkrung Rd., Ladkrabang, Bangkok, 10520, Thailand
Tel: +662 329 8459/60 Ext: 6301, 2119, +662 329 8000 Fax: +662 329 8461*

ABSTRACT

Sustainable organic food consumption has begun to play an important and influential role in the purchasing decisions of millions of global consumers due to increasing concern about health and environmental issues. This study aims to explore the influence of attitude, subjective norms, perceived behavioral control, health consciousness and environmental concern on organic food purchase intentions among Thai-Cambodian cross-border consumers. A modified version of the theory of planned behavior was adopted as the research framework of study analysis and hypotheses. Data was collected from 400 Thai consumers in Sa Kaeo province, Thailand and 400 Cambodian consumers in Banteay Meanchey province, Cambodia. The regression results of Thai consumers indicate that all variables are significant and health consciousness and subjective norms were important and found to be the top two predictors of organic purchase intention. In contrast to Cambodian consumers, the results demonstrate that attitude and subjective norms have no positively significant relationship to purchase intention. However, health consciousness, environmental concern and perceived behavioral control can be used to predict the organic food purchasing intention of Cambodian consumers.

Key words: Cambodia, environmental concern, health consciousness, organic food, purchase intention, Thailand, theory of planned behaviour

INTRODUCTION

In recent years, organic agriculture in Thailand has increased steadily. In the last two years, farmlands dedicated organic agriculture have doubled in area and more than 5,000 organic farms have been certified. In early 2012, an organic agriculture learning exchange center was established under the Thai-Cambodian government. Its purpose is to promote the production of and to find markets for, organic food in the cross-border areas of Thailand's Sa Kaeo province and Cambodia's Banteay Meanchey province. These efforts are also focused on food safety, helping consumers to be healthier and to enjoy a better quality of life. The reason for studying Thailand-Cambodia border trade, especially in regard to organic agriculture products, is because it is an area where people cultivate and trade a particularly substantial amount of organic agricultural products. Also, these are the first border areas supported by the governments, who have officially launched this organic agriculture learning exchange project for the public via various media. In other border

trade areas, there is less cultivation and trade of organic agricultural products. In fact, most organic vegetables (e.g., kale, morning glory, asparagus) that are distributed to health food stores and departmental stores in Bangkok (Thailand) and Phnom Penh (Cambodia) come from this source.

Understanding consumer purchase intention is important for policymakers, marketers and entrepreneurs of all kinds, especially those selling organic food. Even though vast amounts of studies have investigated consumers in regards to organic purchases, their findings have not reached a consensus with regard to the primary determinants of organic purchase intention (Lockie *et al.*, 2004). Moreover, these studies focused only on Western consumers (Chinnici *et al.*, 2002; Magnusson *et al.*, 2001; McEachern and McClean, 2002; Smith and Paldino, 2010). To date, no research papers have investigated the purchasing intention of consumers in cross-border Asian countries, such as Thailand and Cambodia, in the area of organic food markets. Also, organic purchase intention differs from country to country. Thus, such a study is necessary in order to develop a better understanding of organic food purchase intentions in a particular cross-border area under the cooperation of the governments of Thailand and Cambodia.

The purpose of this research was to study the factors involved in organic food purchase intention according to the theory of planned behavior. These include attitude, subjective norms and perceived control, consumer demographics, health consciousness and environmental knowledge among Thai-Cambodian cross-border consumers. The findings of this research can be used as guidelines by entrepreneurs interested in organic agriculture business in this area.

MATERIALS AND METHODS

Theory of planned behavior: The Theory of Planned Behavior (TPB) predicts behavior by assessing the intention to perform a specified behavior (Ajzen, 1991). TPB has been employed in a variety of contexts, including organic food (Magnusson *et al.*, 2001; Tarkiainen and Sundqvist, 2005). Thus, in line with such studies, the current study incorporates TPB as its theoretical framework. This study's research framework considers the effects of attitudes, subjective norms, perceived behavioral control, health consciousness and environmental concern on organic food purchase intention.

Attitude: As stated by Ajzen (1991) attitudes are the favorable or unfavorable evaluations that people make of particular behaviors. Because attitudes affect intentions, the more favorable an attitude is, the greater the will and intention to carry out that particular behavior will be (Tarkiainen and Sundqvist, 2005). Attitudes are significant because consumers need to understand their attitudes in order to overcome the restrictions they seem to face when buying (Hill and Lyncheham, 2002). Previous studies have found that consumer's attitudes toward organic food are strongly related to their readiness to take healthy actions (Lin *et al.*, 1996; Thompson and Kidwell, 1998). Also, research supporting the attitude-intention relationship shows that attitudes has an influence on consumer's organic purchase intention (Squires *et al.*, 2001). In this study, it is hypothesized that:

Hypothesis 1: Attitudes will positively influence intention to purchase organic foods

Subjective norms: Subjective norms influence purchase behaviors and can be seen as the social pressure that influences a person to behave in a certain manner (Ajzen, 1991). Miller (2005) described subjective norms as the effects of external factors on customer intention. Subjective norms

also influence people's buying behavior (Ajzen, 1991). Tarkiainen and Sundqvist (2005) claimed that attitudes are communicated between people and therefore those people with positive attitudes towards a product influence the attitude formation of people around them. Empirical research on the effect of subjective norms on intention to purchase has been inconclusive. Some research (Sheeran and Taylor, 1999; Godin and Kok, 1996) found that subjective norms are good predictors of behavior, especially when another person's well-being is affected by an individual's action. In contrast, Rimal *et al.* (2005) reported that the effect of subjective norms is negligible. In this study, it is hypothesized that:

Hypothesis 2: Subjective norms will positively influence intention to purchase organic foods

Perceived behavioral control: According to Ajzen (1991), perceived behavioral control is the extent to which a person feels able to engage in a behavior in situations where people do not exert full control over the behavior in question (Ajzen, 2002a). Perceived behavioral control reflects past experience and also anticipated obstacles (Ajzen, 1991). It has two aspects: The extent to which a person can control behavior and how confident a person feels about being able to perform or not perform the behavior. This is determined by the individual's beliefs regarding the power of both situational and internal factors to facilitate performing the behavior. Ajzen (2002b) claimed that perceived behavioral control can account for considerable variance in behavioral intentions and actions. Perceived behavioral control can be further divided into two components: Perceived self-efficacy, which refers to ease or difficulty of performing the behavior and perceived controllability, which refers to the extent to which performance is up to the actor.

Past research on organic consumption has shown that the most common reasons for not buying organic food are their unavailability and higher price compared to conventionally produced food (Boccaletti and Nardella, 2000; Magnusson *et al.*, 2001; Fotopoulos and Krystallis, 2002; Zanolli and Naspetti, 2002). These obstacles are clearly not under the consumer's control; yet, they have the potential to limit or even prevent consumer purchases. Therefore, perceived control is important to consider as consumers are more likely to enact behaviors over which they have full control (Conner and Armitage, 1998). Evidence suggests that behavior is influenced by an individual's perceived control (Ajzen, 1991). In this study, it is hypothesized that:

Hypothesis 3: Perceived behavioral control will positively influence intention to purchase organic foods

Health consciousness: Organic food contains no harmful additives and is perceived as safer with greater health benefits than conventional food (Lea and Worsley, 2005; Magnusson *et al.*, 2001; Radman, 2005; Grankvist and Biel, 2001). In addition, healthiness has become an important factor in the buying decision process (Magnusson *et al.*, 2001; Makatouni, 2002; Padel and Foster, 2005). Several previous studies have revealed that most people purchase organic products for health reasons which have also been identified as the strongest motivator in purchasing organic produce (Chinnici *et al.*, 2002; Makatouni, 2002; Padel and Foster, 2005; Squires *et al.*, 2001; Chen, 2009). However, some studies have found that a person's health consciousness may not be sufficient to predict organic purchases (Lockie *et al.*, 2004). In this study, it is hypothesized that:

Hypothesis 4: Health consciousness will positively influence intention to purchase organic foods

Environmental concern: Environmental concern has been defined as both knowing that the production, distribution, use and disposal of products lead to external costs and also evaluating such external costs negatively and trying to minimize them through personal behavior (Grunert and Juhl, 1995). Due to major environmental destructive changes like damage to natural resources, loss of agricultural lands and ozone depletion (Mainieri *et al.*, 1997), consumers are increasingly demanding food products that are produced by means of natural production methods that do not damage the environment (Squires *et al.*, 2001). Organic produce is perceived as less damaging to the environment than conventionally grown foods (Williams and Hammitt, 2001). Thus, environmental concern is a major determinant of purchasing organic food (Barr *et al.*, 2003; Milfont and Duckitt, 2004; Mostafa, 2007). However, Tregear *et al.* (1994) found that environmental motivations explained only a small amount of organic purchases. In this study, it is hypothesized that:

Hypothesis 5: Environmental concern will positively influence intention to purchase organic foods

Purchase intention: Purchase intention can be considered the predictor of future purchase decisions (Warshaw, 1980; Fishbein and Ajzen, 1975). Previous studies have revealed significant differences between buying intention and buying behavior (Warshaw, 1980; Mullet and Karson, 1985). For instance, there is a difference between purchase intention and purchase behavior in a customer's perception. However, researchers cannot ignore customer perceptions; indeed, many studies have investigated the significant and positive relationship between intention to purchase and the purchase behavior of customers (Newberry *et al.*, 2003; Choo *et al.*, 2004; Tarkiainen and Sundqvist, 2005).

Research instrument: Data were collected by questionnaires which were divided into three parts. The first part consisted of 22 items measuring the constructs in the theory of planned behavior including attitude, subjective norm, perceived behavioral control and purchase intention with items adopted and modified from various studies. The second part consisted of 22 items measuring health consciousness and environmental concern, adopted from relevant research. Each part used 7 point Likert scale. The third part contained 11 items about the respondent's demographic characteristics and personal information, such as gender, age, education level, occupation and income.

The study employed two questionnaires with structured close-ended questions: One was developed for Thai participants and the other for Cambodian participants. One questionnaire was initially developed in the Thai language and translated into the Khmer language by a bilingual Cambodian lecturer. The questionnaire was then back-translated into the Thai language by another bilingual person to ensure translation equivalence. Before the questionnaire was employed, the questionnaire was evaluated by experts in related fields to ensure that words or phrases that did not completely capture the concept addressed by the original item were corrected. Then reliability assessments for examining the internal consistency of the indicators were conducted. The results showed that the alpha coefficient of each variable were exceeded the minimum value of 0.7 (Hair *et al.*, 2010) thus reliability is no rejected.

Data collection: Data were collected via self-administered questionnaires. Since, the sample size was 400 for Thai consumers and 400 for Cambodian consumers, questionnaires were distributed in Sa Kaeo province of Thailand and Banteay Meanchey province of Cambodia. This study collected data until 400 completed questionnaires were collected from Thai respondents and 400 from Cambodian respondents.

Data analysis: Multiple regression was conducted to identify the factors that influence organic purchase intention. The regression model was as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 \quad (\text{Thai})$$

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 \quad (\text{Cambodian})$$

Where:

Y : Organic food purchase intention

X₁ : Attitude

X₂ : Subjective norm

X₃ : Perceived behavioral control

X₄ : Health consciousness

X₅ : Environmental concern

RESULTS

Bivariate Pearson correlation analysis: Pearson correlation was used to examine the presence of multicollinearity. Pearson coefficients presented in Table 1 indicate the magnitude and direction of the association between independent variables. The results show that the magnitude of the correlation coefficients is moderate. However, to ensure that there is not a high-degree of first-order collinearity among the independent variables, the Variance Inflation Factor (VIF), a conventional measure for multicollinearity, was calculated. A VIF that exceeds 10 indicates a multicollinearity problem (Mason and Perreault, 1991). VIFs shown in Table 2 were within this value (Max VIF = 2.524), so there is no multicollinearity problem in the data.

Table 1: Pearson correlation matrix (1-tailed test)

Variables	AT		SN		PBC		HC		EC	
	TH	CD	TH	CD	TH	CD	TH	CD	TH	CD
Attitude (AT)	1.000	1.000								
Subjective Norm (SN)	0.583	0.617	1.000	1.000						
Perceived Behavioral Control (PBC)	0.502	0.209	0.546**	0.444**	1.000	1.000				
Health Consciousness (HC)	0.585	0.478	0.503**	0.515**	0.532**	0.165**	1.000	1.000		
Environmental Concern (EC)	0.502	0.404**	0.388**	0.476**	0.442**	0.224**	0.707**	0.718**	1.000	1.000

TH: Thai, CD: Cambodian, *Significant at 5% level, ** Significant at 1% level

Table 2: Test of collinearity

Variables	VIF	
	Thai	Cambodian
Attitude	1.903	1.724
Subjective norm	1.777	2.180
Perceived behavioral control	1.674	1.272
Health consciousness	2.524	2.342
Environmental concern	2.063	2.149

*Durbin-Watson range of Thai and Cambodian is 1.881 and 1.886, respectively

Description of the sample: Description of the sample displayed in Table 3. A comparative demographic result is apparent between Thailand and Cambodia; most respondents of both groups were female (Thai = 63.25%, Cambodian = 52.00%). The largest number of Thai respondents was from the age group of 25-34 years old (32.75%) while the largest number for Cambodians was the group of 15-24 years old (37.25%). Half of Thai respondents were married (50.50%) and most had

Table 3: Demographic profile of respondents

Demographics	Frequency		Percentage	
	Thai	Cambodian	Thai	Cambodian
Gender				
Female	253	208	63	52
Male	147	192	37	48
Age				
15-24	86	149	21	37
25-34	131	109	33	27
35-44	84	73	21	18
45-54	74	43	19	11
>54	25	26	6	7
Marital status				
Single	182	219	46	55
Married	202	174	50	43
Divorce	16	7	4	2
Children				
None	190	223	47	56
1-2	175	100	44	25
3-4	30	57	8	14
5-6	5	17	1	4
7-8	0	3	0	1
Family size				
1-4	269	125	67	31
5-8	126	260	32	65
9-12	5	15	1	4
Education				
Primary	53	46	13	12
Secondary	129	198	32	49
Diploma	68	101	17	25
Bachelor	126	53	32	13
>Bachelor	24	2	6	1
Occupation				
Student	34	79	9	20
Government officer	130	52	32	13
State enterprise	12	21	3	5
Employees	110	57	27	14
Private business	66	110	17	28
Farmers	48	81	12	20
Personal income (Baht)				
<5,000	69	182	17	45
5,000-10,000	139	137	35	34
10,001-15,000	94	43	24	11

Table 3: Continue

Demographics	Frequency		Percent	
	Thai	Cambodian	Thai	Cambodian
15,001-20,000	45	26	11	7
>20,000	53	12	13	3
Household income (Baht)				
<10,000	85	187	21	47
10,000-15,000	115	102	29	25
15,001-20,000	48	52	12	13
20,001-25,000	40	33	10	8
>25,000	112	26	28	7
Disease				
Yes	79	107	20	27
No	321	293	80	73

*Cambodian Riel (KHR), Thai Baht (THB), *Currency exchange rate at July 5, 2013 (KHR 5,000 = THB 38.50)

Table 4: Multiple regression results

Dependent variables	Independent variables	Standardized coefficients (β)		t		Sig.	
		TH	CD	TH	CD	TH	CD
Organic food purchase intention	Constant	0.323	1.552	1.264	5.462	0.207	0.000
	Attitude	0.121	0.032	2.598	0.597	0.010**	0.551
	Subjective norm	0.201	-0.015	4.480	-0.255	0.000**	0.799
	Perceived behavioral control	0.135	0.150	3.093	3.186	0.002**	0.002**
	Health consciousness	0.312	0.430	5.826	7.913	0.000**	0.000**
	Environmental concern	0.156	0.151	3.224	2.755	0.001**	0.006**

Thai: $R^2 = 0.552$, $F = 97.206$, $Sig. = 0.000$, Cambodia: $R^2 = 0.552$, $F = 42.949$, $Sig. = 0.000$

no children (47.50%), while most of the Cambodian respondents were single (54.75%) and had no children (55.75%). Family size was one of the vital characteristics that influenced respondents' food consumption patterns and food preferences; in this study, the household size of Cambodian respondents was between five and eight people (65.00%), compared to Thai respondents, with one to four people (67.25%).

Most respondents from both countries had completed secondary school (Thailand = 32.25%, Cambodia = 49.50%), followed by graduated with a bachelor's degree for Thailand (31.50%) and diploma for Cambodia (25.25%). In terms of occupation, most Thai respondents were government officers (32.50%) while Cambodians were in private business (27.50%). This study also found that most Thai and Cambodian respondents have an income between 5,000-10,000 baht (34.75%) and <5,000 baht (45.50%), respectively. Also, respondents from Thailand (80.25%) and Cambodia (73.25%) reported they had no disease.

Hypothesis testing: Table 4 presents results of a multiple regression analysis. The findings demonstrate that 55.2% (TH) and 35.3% (CD) of the variation in rating of consumer purchase intention is explained by the regression model for the data from both countries.

For the Thai data, all predictors were significant, with the predictability of the five variables in the following descending order: Health consciousness ($\beta = 0.312$, $p < 0.01$), subjective norm

Table 5: Summary of hypotheses findings

Hypotheses	Variables	Significant		Result	
		Thai	Cambodian	Thai	Cambodian
H1	Attitude	0.010	0.551	Accept	Reject
H2	Subjective norm	0.000	0.799	Accept	Reject
H3	Perceived behavioral control	0.002	0.002	Accept	Accept
H4	Health consciousness	0.000	0.000	Accept	Accept
H5	Environmental concern	0.001	0.006	Accept	Accept

($\beta = 0.201, p \leq 0.01$), environmental concern ($\beta = 0.156, p \leq 0.01$), perceived behavioral control ($\beta = 0.135, p \leq 0.01$) and attitude ($\beta = 0.121, p \leq 0.01$). H1 through H5 is therefore accepted. For the Cambodian data, among the five factors two variables were not significant predictors of organic food purchase intention: Attitude ($\beta = 0.032, p = 0.551$ not significant) and subjective norm ($\beta = -0.015, p = 0.799$ not significant). Thus, H1 and H2 are rejected. The predictability of the other three variables fell in the following descending order: Health consciousness ($\beta = 0.430, p \leq 0.01$), environmental concern ($\beta = 0.151, p \leq 0.01$) and perceived behavioral control ($\beta = 0.150, p \leq 0.01$). Therefore, H3, H4 and H5 are accepted.

Table 5 provides a summary of the findings for Thai and Cambodian data.

DISCUSSION

TPB implies that a stronger attitude toward a certain behavior will lead to a stronger intention to perform that behavior. The results of this study indicate that Thai consumers hold a rather positive attitude with respect to organic food purchase intention. This finding is consistent with previous studies (Robinson and Smith, 2002; Choo *et al.*, 2004; Tarkiainen and Sundqvist, 2005; Lea and Worsley, 2005; Chen, 2007; Vermeir and Verbeke, 2008; Lodorfos and Dennis, 2008; De Magistris and Gracia, 2008; Lada *et al.*, 2009; Shaharudin *et al.*, 2010). This suggests that attitude does influence organic food purchase intentions; however, for Cambodian consumers, this hypothesis was not supported. The results demonstrated that no relationship exists between attitude towards organic food and purchase intention.

Subjective norm theory assumes that important reference individuals or groups approve or disapprove of certain behavior (Ajzen, 1991). In line with previous studies (Vermeir and Verbeke, 2006; Chen, 2007; Thogersen, 2007b; Dean *et al.*, 2008), the findings of the current study demonstrate that Thai consumers have a strong relationship between subjective norm and purchase intention. Increasing support from reference groups, such as family, friends and important people, may strengthen individual's intention to purchase organic food. For Cambodian consumers, however, this hypothesis was not supported by the results.

Perceived behavioral control refers to the degree of capability and control that individuals perceive themselves as possessing over their performance of a specific behavior (Ajzen, 1991). Based on the present findings on Thai and Cambodian consumers, perceived behavioral control has a significant effect on organic food purchase intention, consistent with the studies of Dean *et al.* (2008) and Thogersen (2007a). Perhaps, the role played by perceived behavioral control is important role because organic food as a sustainable product is not a new concept for consumers in this area; however, due to the government's role in promoting, labeling and certifying organic food as well as innovatively produced organic food, consumers may rely more on their perceptions

of behavioral control than on their attitudes or subjective norms since a premium price for organic food in this area is almost non-existent. Therefore, consumers do not perceive that the price of the product affects their intention to purchase.

Based on these findings, health consciousness had a positive impact and was the top predictor of organic food purchase intention for both Thai and Cambodian consumers. This indicates that people intend to purchase organic foods for its health benefits, which is in line with previous studies (Magnusson *et al.*, 2003; Baker *et al.*, 2004; Padel and Foster, 2005; Chinnici *et al.*, 2002).

In terms of the influence of environmental concern, organic food purchase intention is found to be positive and significant for both Thai and Cambodian consumers. This suggests that consumers who have more environmental concern also have greater positive intention to purchase organic food. This finding is consistent with Werner and Alvensleben (2011).

To enhance positive intention to purchase organic food, it might be necessary to strengthen attitudes toward organic foods and subjective norms. Both Thai and Cambodian consumers have strong intentions to purchase organic food that are affected by health consciousness and environmental concern. The perceived price does not affect consumer's purchasing decision since organic foods are produced and promoted in this area, so there is no significant difference in price from conventional food.

CONCLUSION

The purpose of this study was to examine the determinants influencing consumer's intention to purchase organic food and the correlation among the purchase intention and actual purchase behavior of Thai-Cambodian cross-border consumers. For Thai consumers, the empirical results demonstrated that attitude, subjective norms, perceived behavioral control, health consciousness and environmental concern all had a significant relationship with organic food purchase intention. Health consciousness and subjective norms had a positive impact and were the top two predictors of organic food purchase intention for Thai consumers. It was found that most Thai respondents were aware of food safety, beneficial nutrition and healthy living. This also revealed that, in Thai society, influential people and social media play a major role in influencing individual's organic food purchase intentions. Similarly, health consciousness had the most influence on Cambodian consumer's intention to purchase organic food. The second most significant factor was environmental concern. It was found that Cambodian consumers have a high level of concern about environmental issues and favor environmentally conscious products, including organic food. In contrast, for Cambodian consumers, attitude and subjective norms had an insignificant influence on organic food purchase intention. This can be explained by the fact that Cambodian consumers tend to have the same attitude toward organic and conventional food; both types of food are locally produced and the prices are not significant different. Subjective norms seem to have no positively significant affect on Cambodian's purchase intention. Consumers did not feel that their intention to purchase organic food was affected by other people or social media; rather, it depended on each individual's motivation. However, if more consumers begin to purchase organic food, their behavior may be imitated by others. Health consciousness, environmental concern and perceived behavioral control can be used to predict organic food purchasing intention of Cambodian consumers. The most related beliefs are that organic food is healthy, environmentally friendly and safer than conventionally grown foods.

The current research could be used as guidance for organic farming business entrepreneurs and marketers to continually promote consumer's positive attitude towards organic food through various

forms of media. It would be beneficial to provide an efficient campaign with an influential person or group and to stimulate organic food consumption through governmental policies and health programs in order to motivate actual purchase behavior and increase purchasing frequency. Since, the trend of sustainable consumption is increasing, commercial opportunities for organic food products are rather high.

REFERENCES

- Ajzen, I., 1991. The theory of planned behavior. *Org. Behav. Human Decis. Process.*, 50: 179-211.
- Ajzen, I., 2002a. Constructing a TpB questionnaire: Conceptual and methodological considerations. <http://www.uni-bielefeld.de/ikg/zick/ajzen%20construction%20a%20tpb%20questionnaire.pdf>
- Ajzen, I., 2002b. Perceived behavioral control, self-efficacy, locus of control and the theory of planned behavior. *J. Applied Soc. Psychol.*, 32: 665-683.
- Baker, S., K.E. Thompson, J. Engelken and K. Huntley, 2004. Mapping the values driving organic food choice: Germany vs the UK. *Eur. J. Market.*, 38: 995-1012.
- Barr, S., N.J. Ford and A.W. Gilg, 2003. Attitudes towards recycling household waste in exeter, devon: Quantitative and qualitative approaches. *Local Environ. : Int. J. Justice Sustainability*, 8: 407-421.
- Boccaletti, S. and M. Nardella, 2000. Consumer willingness to pay for pesticide-free fresh fruit and vegetables in Italy. *Int. Food Agribus. Manage. Rev.*, 3: 297-310.
- Chen, M.F., 2007. Consumer attitudes and purchase intentions in relation to organic foods in Taiwan: Moderating effects of food-related personality traits. *Food Qual. Preference*, 18: 1008-1021.
- Chen, M.F., 2009. Attitude toward organic foods among Taiwanese as related to health consciousness, environmental attitudes and the mediating effects of a healthy lifestyle. *Br. Food J.*, 111: 165-178.
- Chinnici, G., M. D'Amico and B. Pecorino, 2002. A multivariate statistical analysis on the consumers of organic products. *Br. Food J.*, 104: 187-199.
- Choo, H., J.E. Chung and D.T. Pysarchik, 2004. Antecedents to new food product purchasing behavior among innovator groups in India. *Eur. J. Market.*, 38: 608-625.
- Conner, M. and C. Armitage, 1998. Extending the theory of planned behavior: A review and avenues for further research. *J. Applied Soc. Psychol.*, 28: 1429-1464.
- De Magistris, T. and A. Gracia, 2008. The decision to buy organic food products in Southern Italy. *Br. Food J.*, 110: 929-947.
- Dean, M., M.M. Raats and R. Shepherd, 2008. Moral concerns and consumer choice of fresh and processed organic foods. *J. Applied Soc. Psychol.*, 38: 2088-2107.
- Fishbein, M. and I. Ajzen, 1975. *Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research*. 1st Edn., Addison-Wesley, Reading, MA., USA., Pages: 578.
- Fotopoulos, C. and A. Krystallis, 2002. Organic product avoidance: Reasons for rejection and potential buyers' identification in a countrywide survey. *Br. Food J.*, 104: 233-260.
- Godin, G. and G. Kok, 1996. The theory of planned behavior: A review of its applications to health-related behaviors. *Am. J. Health Promot.*, 11: 87-98.
- Grankvist, G. and A. Biel, 2001. The importance of beliefs and purchase criteria in the choice of eco-labeled food products. *J. Environ. Psychol.*, 21: 405-410.
- Grunert, S.C. and J.H. Juhl, 1995. Values, environmental attitudes and buying of organic foods. *J. Econ. Psychol.*, 16: 39-62.

- Hair, J.F., W.C. Black and B.J. Babin, 2010. *Multivariate Data Analysis: A Global Perspective*. 7th Edn., Pearson Education Limited, Upper Saddle River, New Jersey, ISBN-13: 9780135153093, Pages: 800.
- Hill, H. and F. Lynchehaun, 2002. Organic milk: Attitudes and consumption patterns. *Br. Food J.*, 104: 526-542.
- Lada, S., G.H. Tanakinjal and H. Amin, 2009. Predicting intention to choose halal products using theory of reasoned action. *Int. J. Islamic Middle Eastern Finance Manage.*, 2: 66-76.
- Lea, E. and T. Worsley, 2005. Australians' organic food beliefs, demographics and values. *Br. Food J.*, 107: 855-869.
- Lin, B.H., S. Payson and J. Wertz, 1996. Opinions of professional buyers toward organic produce: A case study of mid-Atlantic market for fresh tomatoes. *Agribusiness*, 12: 89-97.
- Lockie, S., K. Lyons, G. Lawrence and J. Grice, 2004. Choosing organics: A path analysis of factors underlying the selection of organic food among Australian consumers. *Appetite*, 43: 135-146.
- Lodorfos, G.N. and J. Dennis, 2008. Consumers' intent: In the organic food market. *J. Food Prod. Mark.*, 14: 17-38.
- Magnusson, M.K., A. Arvola, U.K. Hursti, L. Aberg and P. Sjoden, 2001. Attitudes towards organic foods among Swedish consumers. *Br. Food J.*, 103: 209-227.
- Magnusson, M.K., A. Arvola, U.K.K. Hursti, L. Aberg and P.O. Sjoden, 2003. Choice of organic foods is related to perceived consequences for human health and to environmentally friendly behaviour. *Appetite*, 40: 109-117.
- Mainieri, T., E.G. Barnett, T.R. Valdero, J.B. Unipan and S. Oskamp, 1997. Green buying: The influence of environmental concern on consumer behavior. *J. Soc. Psychol.*, 137: 189-204.
- Makatouni, A., 2002. What motivates consumers to buy organic food in the UK?: Results from a qualitative study. *Br. Food J.*, 104: 345-352.
- Mason, C.H. and W.D. Perreault Jr., 1991. Collinearity, power and interpretation of multiple regression analysis. *J. Market. Res.*, 28: 268-280.
- McEachern, M.G. and P. McClean, 2002. Organic purchasing motivations and attitudes: Are they ethical? *Int. J. Consum. Stud.*, 26: 85-92.
- Milfont, T.L. and J. Duckitt, 2004. The structure of environmental attitudes: A first- and second-order confirmatory factor analysis. *J. Environ. Psychol.*, 24: 289-303.
- Miller, K., 2005. *Communications Theories: Perspectives, Processes and Contexts*. 4th Edn., McGraw-Hill, New York, USA.
- Mostafa, M.M., 2007. Gender differences in Egyptian consumers' green purchase behaviour: The effects of environmental knowledge, concern and attitude. *Int. J. Consum. Stud.*, 31: 220-229.
- Mullet, G.M. and M.J. Karson, 1985. Analysis of purchase intent scales weighted by probability of actual purchase. *J. Market. Res.*, 22: 93-96.
- Newberry, C.R., B.R. Klemz and C. Boshoff, 2003. Managerial implications of predicting purchase behavior from purchase intentions: A retail patronage case study. *J. Ser. Market.*, 17: 609-620.
- Padel, S. and C. Foster, 2005. Exploring the gap between attitudes and behaviour: Understanding why consumers buy or do not buy organic food. *Br. Food J.*, 107: 606-625.
- Radman, M., 2005. Consumer consumption and perception of organic products in Croatia. *Br. Food J.*, 107: 263-273.
- Rimal, A.P., W. Moon and S. Balasubramanian, 2005. Agro-biotechnology and organic food purchase in the United Kingdom. *Br. Food J.*, 107: 84-97.

- Robinson, R. and C. Smith, 2002. Psychosocial and demographic variables associated with consumer intention to purchase sustainably produced foods as defined by the Midwest food alliance. *J. Nutr. Educ. Behav.*, 34: 316-325.
- Shaharudin, M.R., J.J. Pani, S.W. Mansor and S.J. Elias, 2010. Purchase intention of organic food: Perceived value overview. *Can. Soc. Sci.*, 6: 70-79.
- Sheeran, P. and S. Taylor, 1999. Predicting intentions to use condoms: A meta-analysis and comparison of the theories of reasoned action and planned behavior¹. *J. Applied Soc. Psychol.*, 29: 1624-1675.
- Smith, S. and A. Paladino, 2010. Eating clean and green? Investigating consumer motivations towards the purchase of organic food. *Aust. Marketing J.*, 18: 93-104.
- Squires, L., B. Juric and T.B. Cornwell, 2001. Level of market development and intensity of organic food consumption: Cross-cultural study of Danish and New Zealand consumers. *J. Consumer Market.*, 18: 392-409.
- Tarkiainen, A. and S. Sundqvist, 2005. Subjective norms, attitudes and intentions of Finnish consumers in buying organic food. *Br. Food J.*, 107: 808-822.
- Thøgersen, J., 2007a. Consumer Decision Making with Regard to Organic Food Products. In: *Traditional Food Production and Rural Sustainable Development*, De Noronha, V.T., P. Nijkamp and J.L. Rastoin (Eds.). Ashgate, Aldershot, pp: 173-192.
- Thøgersen, J., 2007b. The motivational roots of norms for environmentally responsible behavior. *Proceedings of the Nordic Consumer Policy Research Conference, October 3-5, 2007, Helsinki.*
- Thompson, G.D. and J. Kidwell, 1998. Explaining the choice of organic produce: Cosmetic defects, prices and consumer preferences. *Am. J. Agric. Econ.*, 80: 277-287.
- Tregear, A., J.B. Dent and M.J. McGregor, 1994. The demand for organically grown produce. *Br. Food J.*, 96: 21-25.
- Vermeir, I. and W. Verbeke, 2006. Sustainable food consumption: Exploring the consumer attitude-behavioral intention Gap. *J. Agric. Environ. Ethics*, 1: 169-194.
- Vermeir, I. and W. Verbeke, 2008. Sustainable food consumption among young adults in Belgium: Theory of planned behaviour and the role of confidence and values. *Ecol. Econ.*, 64: 542-553.
- Warshaw, P.R., 1980. Predicting purchase and other behaviors from general and contextually specific intentions. *J. Market. Res.*, 17: 26-33.
- Werner, J. and R.V. Alvensleben, 2011. Consumer attitudes towards organic food in Germany (F.R.). *Proceedings of the International Symposium on Horticultural Economics and Management*, July 2011, pp: 155.
- Williams, P.R.D. and J.K. Hammit, 2001. Perceived risks of conventional and organic produce: Pesticides, pathogens and natural toxins. *Risk Anal.*, 21: 319-330.
- Zanoli, R. and S. Naspetti, 2002. Consumer motivations in the purchase of organic food: A means-end approach. *Br. Food J.*, 104: 643-653.