

## **The Factors Affecting Healthy Lifestyle and Attitude Towards Organic Foods: A Case Study of People Living in Bangkok, Thailand**

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### **Abstract**

Nowadays, people worldwide are more aware of agricultural residues in foods. Consumers start to find an alternative way in food purchase. Health and wellness are the new lifestyle status for Asian consumers who are more health-conscious and interested in organic foods. China and India are two of the fastest growing markets for organic foods. Thailand is known as food basket of Asia and kitchen of the world due to an abundance of natural resources, and has increasingly emphasized on organically grown foods. The Thai government has introduced regulations and standards for organic agriculture and food, and encouraged Thai farmers to do organic farming. This opens a market opportunity for organic foods that are free from chemicals. Knowing the consumers' attitudes towards organic foods and factors affecting the attitudes are necessary for product development to meet the demands, increase customer satisfaction, and gain the market share in this sector. This study targeted people living in Bangkok who have experienced organic foods. There were 400 respondents of the survey. The result reveals that health consciousness, environmental concern, food safety concern, and subjective norm have positive impacts on the attitude towards organic foods. On the other hand, healthy lifestyle does not have an impact on an attitude. Raising an awareness of chemical-free foods and the environmentally friendly practice of an organic farming will be key strategies to develop the food market in Thailand's urban society.

**Keywords:** organic foods, attitude towards organic foods, food safety, health consciousness, healthy lifestyle, subjective norms, environmental concern

### **Introduction**

The massive increase in population leads to the growing demands of consumers. In the food processing industry, the agricultural sector has focused to improve production techniques and increase the crop yields for sufficient supply. One of the common ways is using chemical fertilizers and pesticides which can increase the yield and reduce the crop losses from weeds, diseases, and insect pests. However, people have raised concerns about the levels of chemical used which increases chemical residues or pesticide contamination in the crops and have a direct impact on humans, environment, and society as a whole. (Akaichi, Nayga, and Gil, 2012) An awareness of food processing is increasing and consumers demand for food safety, higher quality, and sustainability.

Consumer preferred Organic foods because they are free from chemical fertilizers and pesticides. Moreover, organic agriculture and farming use a sustainable system that can preserve the environment. In the same way, the livestock breeding, does not use of chemicals, hormones, or any antibiotics.

Haden (2016) revealed that the demand for natural products and organic foods increases exponentially. The Nielsen's research shows 69 percent of Asian consumers have awareness about health, and consider it as key priority for their food purchase decisions. Grand View Research has projected that Asia-Pacific region will become the fastest-growing global market for organic foods and beverages with annual growth rate (CAGR) of 28.5 percent from 2014 to 2020.\

In the same way, the sales of organic foods in Thailand increase 7% annually (EIC, 2017) which indicate that Thai people are more concerned about their health. Farmers themselves that want to avoid health hazard issues. This is an opportunity to emphasize on chemical-free foods. The Ministry of Agriculture and Cooperatives intends to make Thailand as a leader in organic food production by awareness, raising farmers to do organic farming, and expanding the market. In Bangkok, people tend to have more sophisticated lifestyle than other provinces and there are many organic stores and supermarkets that offer organizer foods at an affordable price.

This research aims to study the factors affecting attitude of people living in Bangkok towards e.g. food. This study will support about the consumer market and improve the products to meet the demands.

### **Review of Literature**

Organic foods are the products from organic farming which uses the integrated techniques between modern scientific methods and the art technologies as a sustainable food solution (Lockie, Lyons, Lawrence, and Grice, 2004). Organic farming not only prolongs the natural biological cycles but also meets the animal welfare standards requirement. The restriction rules that are used to qualify the product as organic or conventional foods vary among countries, however, the common restriction in the organic foods is that genetically-modified organisms and antibiotics are strictly prohibited (Soil Association, 2000). The purchase of organic foods is increasing and this is an interesting topic to gain a better understand the attitude of consumers towards organic foods in Bangkok Thailand.

#### **Health Consciousness (HC)**

The study of Magnusson, Arvola, Koivisto Hursti, Aberg, and Sjoden, (2001), Wandel and Bugge (1997) revealed that people who are health conscious perceive food safety risks as a parameter for food purchase. They tend to have positive attitudes toward organic products because they apparently believe that organic foods can benefit their health better than the conventional foods. (Beharrel and MacFie, 1991; Jolly, Schutz, Diez-Knauf, and Johal, J. 1989)

Health consciousness can be used to study the attitude of consumers toward organic foods because it represents the level of concern of an individual about their health. Oude Ophuis (1989);

Schifferstein and Oude Ophuis (1998) believed that when an individual wants to be healthier and is ready to take an action in order to benefit their own health, then the attitude should be positive towards organic foods. Roitner-Schobesberger, Darnhofer, Somsook, and Vogl (2008) stated that health consciousness was a factor that affected the intention of selecting organic foods in Thailand. In the same time, it can be assumed that this factor may lead to have a positive relationship with attitude towards organic foods.

#### Environmental Concern (EC)

There is an increasing number of consumers who are more aware of environment (Schifferstein and Oude Ophuis, 1998; Williams and Hammit, 2001). They tend to consume food products that have less impact on the environment which organic agriculture is perceived as more environmentally friendly and preserves the fertility of the land. Apart from health consciousness of their own selves, environmental concern is considered as another factor that is related to a positive attitude towards organic foods (Beharrel and MacFie, 1991; Schifferstein and Oude Ophuis, 1998; Williams and Hammit, 2001). There is also a solid support from many studies stating that both health consciousness and the concern of on the environmental impact on food production are two of the major factors for a positive attitude towards organic foods (e.g. Baker and Crosbie, 1993; Chumpitaz and Keslemont, 1997; Grunert and Juhl, 1995; Jolly, Schutz, Diez-Knauf, and Johal, 1989; Jordan and Elnaghebb, 1991; Viaene and Gellynck, 1996).

#### Food Safety Concern (FSC)

Food safety concern is one the attributes that has been mentioned in several studies (e.g. Lee and Hwang, 2016; Mutlu, 2007; Gineikiene, Kiudyte, and Degutis, 2017). Food safety is directly related to organic foods which considered organic farming and food processing are free from any additives, or chemical ingredients. Thus, this attribute represents the concern of consumers on the residues on the food which can be caused by agricultural farming methods, such as any chemical sprays or additives, fertilizers, and preservatives (Michaelidou and Hassan, 2008). The study from Swanson and Lewis (1993) revealed that food safety concern and other concerns about pesticide residue were factors that people normally considered in the decision-making process of purchasing organic food.

#### Subjective Norm (SN)

Ajzen (2002) showed that subjective norm is a factor wherein an individual's beliefs were affected by the expectation of the people such as family, friends. Ajzen and Fishbein (1980); Ha (1998) indicated that subjective norm is a critical factor that impacts social influences on the behavioral intentions. Previous studies also revealed that there is a significant relationship between attitude and subjective norms (e.g. Chang, 1998; Shimp and Kavas, 1984; Vallerand, Deshaies, Cuerrier, Pelletier, and Mongeau, 1992; and Tarkiainen and Sundqvist, 2005). Chen (2009); Dean, Raats, and Shepherd (2008) indicated that there is a significant relationship between organic food purchase intention and subjective norm.

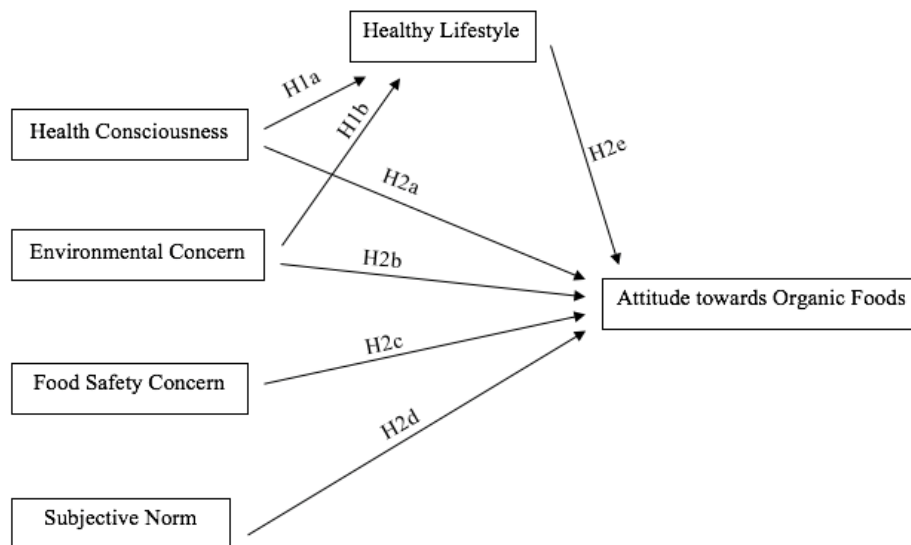
#### Healthy Lifestyle (HL)

Lifestyle is an action of an individual's behavior and how they can adapt their behaviors through the change of time and environment. This indicates that the lifestyle of an individual can be changed over time and this change occurs in the systematic paths which can help an individual to balance the changes and their own basic value systems. The increasing income and more busy lifestyles of people nowadays have shifted their dietary lifestyle to maintain healthy and being healthier as well as to preserve the environment due to the global warming issue. The research from Brunsø and Grunert (1995) defined of healthy lifestyle as the behavior related to health activities; for example, the consumption of natural food products, the health care and the balance of life. Chen (2009) had conducted a research and found that healthy lifestyle was an intermediate attribute between health consciousness and environmental attitudes, and consumer attitudes toward organic foods.

#### Attitude towards Organic Foods (AOF)

An attitude is a result of an experience that have a significant influence on emotions, beliefs, and behaviors of people and acts as building blocks attitude. (Eagly and Chaiken, 1995; Verplanken and Holland, 2002). An individual has their own beliefs, or behaviors toward a particular object, event, or people which forms different attitudes. Thøgersen (2009) and Michaelidou and Hassan (2008) showed that people believe that organic foods are tastier, healthier and more environmentally friendly than the conventional foods. These lead to the positive attitude of consumers towards organic foods.

### Research Framework and Methodology



*Figure 1* Conceptual Framework (developed by the researcher of this study)

The conceptual framework of this research has been developed to determine the impact of

consumers' attitude towards organic foods and the factors that have influences on this consumers' attitude. These factors comprise of Health Consciousness, Environmental Concern, Food Safety Concern, Subjective Norm, and Healthy Lifestyle. Furthermore, the study also aimed to find the impact of the mediating factor which is Healthy Lifestyle on the relationships between Health Consciousness and Environmental Concern and the consumers' attitude towards organic foods.

The hypotheses in this study are:

**H1:** Health Consciousness (H1a) and Environmental Concern (H1b) have positive significant impacts on healthy lifestyle

**H2:** Health Consciousness (H2a), Environmental Concern (H2b), Food Safety Concern (H2c), Subjective Norm (H2d), and Healthy Lifestyle (H2e) have positive significant impacts on Attitude towards Organic Foods

### *Research Methodology*

The research used two sources of primary and secondary to collect the data. The primary data was collected from target respondents of the online survey. Non- probability convenience sampling was employed and a questionnaire using the Five-point Likert scale, ranging from 1 as "strongly disagree" to 5 as "strongly agree", was used as a measure of the hypotheses in the questionnaires. The secondary data were collected from public preference books, journals, electronic sources, case studies. Data from both preferences was analyzed for the research findings. The Multiple Linear Regression was used to determine the significant impact of the independent variables on the dependent variables (H1 and H2).

### *Measurement of variables*

The target respondents of this survey are people living in Bangkok and have an awareness of organic foods .

### *Population and sample*

In this study, an online survey was distributed to 400 respondents who live in Bangkok using convenience and snowball sampling.

### *Reliability test*

Cronbach's Alpha Coefficient was applied to determine the reliability of the questionnaire. The Cronbach's alpha must be greater than 0.7 to be acceptable (Cronbach, 1951). The result shows that the Cronbach's alpha values from all variables exceed 0.7 (Table 1).

Table 1

*Consistency of Scales Test (N = 30)*

Variables	Cronbach's alpha	Number of items
Health Consciousness	0.747	4
Environmental Concern	0.824	4

Healthy Lifestyle	0.711	4
Food Safety Concern	0.755	3
Subjective Norm	0.833	4
Attitude towards Organic Foods	0.794	7

## Results and Discussion

### Data Analysis

Multiple Linear Regression was employed to analyze the data and test the research hypotheses (H1 and H2).

### Descriptive Analysis

Demographic factors were conducted to describe the basic information from 400 target respondents who an awareness of about organic foods (Table 2).

Table 2

*Demographic Information of the target respondents (N = 400)*

Demographic	Frequency	Percentage (%)
<b>Gender</b>		
Male	117	29.25%
Female	283	70.75%
<b>Age</b>		
18 - 25	169	42.25%
26 - 35	93	23.25%
36 - 45	48	12.00%
46 - 55	78	19.50%
56 - 65	12	3.00%
<b>Education Level</b>		
High-school	27	6.75%
Undergraduate	249	62.25%
Graduate	104	26.00%
PhD	16	4.00%
Others	4	1.00%
<b>Occupation</b>		
Student	97	24.25%
Employee	218	54.50%
Business owner	49	12.25%
Unemployed	14	3.50%
Others	22	5.5%
<b>Monthly Income (THB)</b>		
0 – 15,000	95	23.75%

15,001 – 25,000	75	18.75%
25,001 – 40,000	88	22.00%
40,001 – 60,000	64	16.00%
60,001 – 80,000	28	7.00%
Over 80,000	50	12.50%

Table 2 shows the demographic information which indicate that male and female respondents were 29.25% and 70.75%, respectively. Moreover, it shows 42.25% were between 18-25 years. The majority group obtained a Bachelor's degree as the highest education level. Majority of the respondents 54.5% are employees. The respondents who earn less than 15,000 baht were majority 23.75%.

### Descriptive Research and Correlation Matrix

The five-point Likert scale was used to test the variables ranging from 1, refers to strongly disagree to 5, refers to strongly agree.

Table 3

#### *Correlation Matrix for H1*

Variables	Mean	SD	HL	HC	EC
<b>HL</b>	3.1244	0.78080	1		
<b>HC</b>	3.8175	0.65667	0.609*	1	
<b>EC</b>	3.8831	0.75961	0.320*	0.412*	1

Note: \* = Correlation is significant at 0.05 level (1-tailed)

Table 4

#### *Correlation Matrix for H2*

Variables	Mean	SD	AOF	HC	EC	HL	FSC	SN
<b>AOF</b>	3.8808	0.54660	1					
<b>HC</b>	3.8175	0.65667	0.482*	1				
<b>EC</b>	3.8831	0.75961	0.513*	0.412*	1			
<b>HL</b>	3.1244	0.78080	0.352*	0.609*	0.320*	1		
<b>FSC</b>	3.8708	0.70621	0.522*	0.624*	0.473*	0.505*	1	
<b>SN</b>	3.4513	0.80906	0.479*	0.422*	0.424*	0.385*	0.434*	1

Note: \* = Correlation is significant at 0.05 level (1-tailed)

Table 3 and 4 reveal that there is a positive relationship between variables at p-value < 0.05

Table 3 shows the strength of correlation and a positive moderate relationship between health consciousness (HC) and healthy lifestyle (HL) at 0.609 while environmental concern (EC) has a positive weak relationship with healthy lifestyle (HL) at 0.320.

Table 4 shows that healthy lifestyle (HL) has a positive weak relationship at 0.352 with attitude towards organic foods (AOF), the rest, including health consciousness (HC), environmental concern (EC), food safety concern (FSC) and subjective norm (SN), have positive moderate relationship with attitude towards organic foods (AOF) at 0.482, 0.513, 0.522, and 0.479 respectively.

#### Inferential Analysis

Table 5

*Result of regression for H1; Dependent Variable: Healthy Lifestyle (HL)*

Variables	(Standardized Coefficients) Beta	VIF
HC	0.574*	1.205
EC	0.083	1.205
<b>R Square</b>	<b>0.376</b>	
<b>Adjusted R Square</b>	<b>0.373</b>	

Note: Beta coefficients are reported, \*  $p < 0.05$

Table 5 shows that the result of  $R^2$  was 0.376 which means that 37.6% of the dependent variable which is healthy lifestyle (HL) could be explained by these two independent variables; health consciousness (HC) and environmental concern (EC) at 0.05 significant levels. The p-value of healthy consciousness (HC) is less than 0.05 and environmental concern (H1b) is greater than 0.05, which mean that H1a is supported while H1b is not supported. As a result, health consciousness has a significant impact on healthy lifestyle at level of 0.574 (beta) while environmental concern has no significant impact on healthy lifestyle at level of 0.083 (beta).

The Multicollinearity problem has been tested via VIF, both of the independent variables show an equal value of 1.205 which is less than 5.00 and it indicates that Multicollinearity problem is not a critical problem in this study (Studenmund, 1992).

Table 6

*Result of regression for H2; Dependent Variable: Attitude towards Organic Foods (AOF)*

Variables	(Standardized Coefficients) Beta	VIF
HC	0.162*	2.084
EC	0.259*	1.414
HL	-0.021	1.687
FSC	0.216*	1.903



SN	0.216*	1.401
<b>R Square</b>	<b>0.420</b>	
<b>Adjusted R Square</b>	<b>0.412</b>	

Note: Beta coefficients are reported, \*  $p < 0.05$

Table 6 shows the result of  $R^2$  that indicates that 42% of the dependent variable which is attitude towards organic foods (AOF) could be explained by these five independent variables; health consciousness (HC), environmental concern (EC), healthy lifestyle (HL), food safety concern (FSC), and subjective norm (SN) at 0.05 significant levels. The p-value of healthy lifestyle (HL) is greater than 0.05, which mean that H2e is not supported while the rest have p-value less than 0.05, H2a, H2b, H2c, and H2d are supported. As a result, health consciousness, environmental concern, food safety concern, and subjective norm have significant impacts on attitude towards organic foods.

The beta coefficient value shows that the environmental concern has a highest level of impact on attitude towards organic foods at 0.259, following by food safety concern and subjective norm at 0.216, and health consciousness at 0.162 while healthy lifestyle has no significant impact on attitude towards organic foods at level of -0.021.

The Multicollinearity problem has been tested with VIF. All of the independent variables show values less than 5.00 and it indicated that Multicollinearity problem is not a critical problem in this study.

### Conclusion and Recommendation

This study determined the attitude towards organic foods of 400 respondents. The independent variables for H1 are health consciousness (H1a) and environmental concern (H1b), while the independent variables for H2 are health consciousness (H2a), environmental concern (H2b), food safety concern (H2c), subjective norm (H2d), and healthy lifestyle (H2e).

Multiple Linear Regression has been applied for the data analysis and the results for H1 show that only health consciousness has a positive significant impact on healthy lifestyle. This is contrast to the research of Chen (2009) which indicated that both health consciousness and environmental concern have positive relationships with healthy lifestyle. This can be explained by the reason that consumers who are health-conscious are ready to do something good for their health than normal consumers which lead to adjust their behavior to have healthy lifestyle while it may not engage with the environmentally friendly behavior that leads to environmental concern. This is also supported by the study of Lee and Goudeau (2013) that health consciousness directly involves consumers' health while environmental concern has no relation in the development of consumers' health. It is said to be related to positive feelings, so called hedonic attitudes, rather than the utilitarian attitudes.

The result for H2 showed that all the factors have a positive significant impact on the attitude towards organic foods, except healthy lifestyle which is different with the research of Chen (2009) which revealed that healthy lifestyle has a positive impact on attitude towards organic

foods. Krystallis and Chrysosoidis (2005) stated that when consumers objectively cannot perform the healthy physical activities due to busy lifestyle or subjectively do not undertake these healthy physical-related activities, they do not tend to have a healthy lifestyle even though they are health-conscious and select to consume healthy foods. It can be concluded that health consciousness and healthy lifestyle are correlated, however it is possible to have unhealthy lifestyle while concerned about their health. Environmental concern has highest beta coefficient value at 0.259 which indicate that it has the highest level of positive impact on attitude towards organic foods. This aligns with the previous studies (e.g. Baron and Kenny, 1986; Chen, 2009; and Basha, 2015) that environmental concern is able to influence the consumers' attitude towards organic foods. Food safety concern and subjective norm have the same level of positive impacts at 0.216 on attitude towards organic foods. Tsakiridou (2008) and Nasir (2014) indicated that food safety is very important in affecting the consumers' attitude because organic foods directly involve with the quality and more safety foods. This is also supported by Xie, Wang, Yang, and Zhang (2015) who stated that the food safety is not only about the quality of foods that affect the physical health, but also about the mental health of the consumers. They are likely to be satisfied if the products are organic. Davies, Titterington, and Cochrane (1995) revealed that organic food buyers are more health-concerned and also conscious in food risks. Subject norm has a positive influence on attitude and as supported by prior studies of Fishbein and Ajzen (1975) and Chang (1998).

### **Recommendation and Implication for future research**

In this study, the factors affecting attitude towards organic foods were determined which can benefit the organic food producers in Bangkok to study about the consumers' attitude. The finding in this study indicated that environmental concern has the highest impact on the attitudes, thus the producer can emphasize on this point to create more awareness, such as implementing on the sustainability concepts of the process over the long-term environmental benefits and transmit to the consumers, which can result in better positive consumer attitude towards organic foods, and further lead to higher intention to organic food purchase.

Nevertheless, people living in Bangkok recently concern more about food safety due to the healthy food trend. The producer can emphasize on food labeling which is also more stringent in Thailand. At this point, the producer can use this as a marketing tool and gain trust from consumers. For the subjective norm factor, the marketing team can use the healthy influencer who are good-looking and well-known for healthy lifestyle to promote organic foods through social media channel and also provide some guidelines for the new consumers who are health-conscious on how benefits on their health, environment, and society can be obtained from consuming organic foods so they can shift their mindset to turn to eat organically.

Apart from implementation of those factors, there are 58% more of other factors that impact the attitude towards organic foods. In this case, it is suggested to further study about other factors. For example, Perrini, Castaldo, Misani, and Tencati (2010) studied about the effect of *trustworthiness* on the consumers' attitude in Italy and the result was positively significant. On the other hand, *consumers' perception* is said to impact on consumers' attitude (Soler, Gil, and Sanchez, 2002; Saba and Messina, 2003; and Lea and Worsley, 2005) which can be further hypothesized whether they are correlated or not.

Additionally, there are several research studies about the matter of *age and gender* through the attitude which can be studied in the next step. For example, Lockie, Lyons, Lawrence, and Grice (2004) found that females tend to have more positive attitude towards organic foods and higher significant number in purchase decisions. Cranfield and Magnusson (2003) revealed that older people tend to change their lifestyle to be healthier and they are more willing to consume organic foods.

The relationship between consumers' attitude and purchase intention can be further studied to be more applicable which is confirmed by many researches that they have a positive and significant relationship between each other (e.g. Gifford and Bernard, 2006; Honkanen, Verplanken, and Olsen, 2006; Padel and Foster, 2005; and Saba and Messina, 2003)

To conclude, this research can help the organic food producers to understand more about consumers, however, the trend is shifting to be healthier and the aging population is increasing in Bangkok. Thus, the further research could be studied to follow the market trend and what consumers need.

### References

- Ajzen, I. (2002). Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior. *Journal of Applied Social Psychology*, Vol. 32 No. 4, pp.1-20.
- Ajzen, I. and Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Prentice-Hall, Englewood-Cliffs, NJ.
- Akaichi, F., Nayga, R.M.J., and Gil, J.M. (2012). Assessing consumers' willingness to pay for different units of organic milk: evidence from multiunit auctions. *Canadian Journal of Agricultural Economics*, Vol. 60 No. 4, pp.469-494.
- Baker, A. and Crosbie, P. (1993). Measuring food safety preferences: identifying consumer segments. *Journal of Agricultural and Resource Economics*, Vol. 18 No. 2, pp.277-287.
- Baron, R.M. and Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, Vol. 51 No. 6, pp.1173-82.
- Basha, M.B., Mason, C., Shamsudin, M.F., Hussain, H. I., and Salem, M. B. (2015). Consumers attitude towards organic food. *Procedia Economics and Finance*, Vol. 3, pp.444 – 452
- Beharrel, B. and MacFie, J.H. (1991). Consumer attitudes to organic foods. *British Food Journal*, Vol. 93 No. 2, pp.25-30.
- Brunso, K. and Grunert, K.G. (1995). Development and testing of a cross-culturally valid instrument: food-related lifestyle. *Advances in Consumer Research*, Vol. 22, pp.475-480.
- Chang, M.K. (1998). Predicting unethical behavior: a comparison of the theory of reasoned action of the theory of planned behavior. *Journal of Business Ethics*, Vol. 17 No. 16, pp.1825-1833.

- 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. *British Food Journal*, Vol. 111 No. 2, pp.165-178.
- Chumpitaz, R. and Keslemont, M.P. (1997). *Consumer's perception of the environmental issue: a challenge for the green European marketer*, paper presented at the 26th EMAC Conference, Warwick Business School, Warwick, May.
- Cranfield, J. A., and E. Magnusson. (2003). Canadian consumers' willingness-to-pay for pesticide free food products: An ordered probit analysis. *International Food and Agribusiness Management Review*. Vol. 6 No. 4, pp.14–30.
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, Vol. 16, pp.297-334
- Davies, A., Titterington, A.J. and Cochrane, C. (1995). Who buys organic food? A profile of the purchasers of organic food in Northern Ireland. *British Food Journal*, Vol. 97 No. 10, pp.17-23.
- Dean, M., Raat, M.M., and Shepherd, R. (2008). Moral concerns and consumer choice of fresh and processed organic foods. *J. Applied Soc. Psychol*, Vol. 38, pp.2088-2107.
- Eagly, A.H. and Chaiken, S. (1995). *Attitude strength, attitude structure and resistance to change*. in Petty, R.E. and Krosnick, J.A. (Eds), *Attitude Strength: Antecedents and Consequences*, Ohio State University Series on Attitudes and Persuasion, Vol. 4, Lawrence Erlbaum Associates, Hillsdale, NJ.
- EIC | Economic Intelligence Center. (2017). Thailand's production of organic foods has healthy growth potential. *Bangkok Post/Asia In Depth: Asia Focus section*. Retrieved from <https://www.scebic.com/en/detail/product/3362>, 15 Nov 2017
- Fishbein, M.A. and Ajzen, I. (1975). *Belief, attitude, intention and behavior: An introduction to theory and research*. Addison-Wesley, Reading, MA.
- Gifford, K. and Bernard, J.C. (2006). Influencing consumer purchase likelihood of organic food. *International Journal of Consumer Studies*, Vol. 30 No. 2, pp.155-163.
- Gineikiene, J., Kiudyte, J., and Degutis, M. (2017). Functional, organic or conventional? Food choices of health conscious and skeptical consumers. *Baltic Journal of Management*, Vol. 12 Issue: 2, pp.139-152.
- Grunert, S. and Juhl, J.H. (1995). Values, environmental attitudes, and buying of organic foods. *Journal of Economic Psychology*, Vol. 16 No. 1, pp.39-62.
- Ha, C.L. (1998). The theory of reasoned action applied to brand loyalty. *Journal of Product and Brand Management*, Vol. 7 No. 1, pp.51-61.
- Haden, L. (2016). Growing naturally and organically. *Economic Development Board (EDB) Singapore*, Retrieved from <https://www.singaporebusiness.com/2016/growing-naturally-and-organically.html>, 2 Dec 2017.

- Hill, H. and Lynchehaun, F. (2002). Organic milk: attitudes and consumption patterns. *British Food Journal*, Vol. 104 No. 7, pp.526-542
- Honkanen, P., Verplanken, B. and Olsen, S.O. (2006). Ethical values and motives driving organic food choice", *Journal of Consumer Behaviour*, Vol. 5 No. 5, pp.420-430.
- Jolly, D., Schutz, H., Diez-Knauf, K., and Johal, J. (1989). Organic foods: Consumer attitudes and use. *Food Technology*, Vol. 43 No. 11, pp.61-66.
- Jordan, J.L. and Elnaghebb, A.H. (1991). Public perception of food safety. *Journal of Food Distribution Research*, Vol. 22 No. 3, pp.13-22.
- Lea, E. and Worsley, T. (2005). Australians' organic food beliefs, demographics and values. *British Food Journal*, Vol. 107 No. 11, pp.855-869.
- Lee, H. J. and Goudeau, C. (2014). Consumers' beliefs, attitudes, and loyalty in purchasing organic foods: The standard learning hierarchy approach. *British Food Journal*, Vol. 116 Issue: 6, pp.918-930.
- Lee, H. J. and Hwang, J. (2016). The driving role of consumers' perceived credence attributes in organic food purchase decisions: A comparison of two groups of consumers. *Food Quality and Preference*, Vol. 54, pp.141-151
- Lockie, S., Lyons, K., Lawrence, G., and Grice, J. (2004). Choosing organics: A path analysis of factors underlying the selection of organic food among Australian consumers. *Appetite*, Vol. 43 No. 2, pp.135-146.
- Magnusson, M.K., Arvola, A., Koivisto Hursti, U.K., Aberg, L., and Sjoden, P.O. (2001). Attitudes towards organic foods among Swedish consumers. *British Food Journal*, Vol. 103 No. 3, pp.209-226.
- Michaelidou, N. and Hassan, L.M. (2008). The push and pull towards organic: Clarifying the roles of health consciousness, food safety concern and ethical identity. *International Journal of Consumer Studies*, Vol. 32 No. 2, pp.163-170.
- Mutlu, N. (2007). *Consumer attitude and behavior towards organic food: Cross-cultural study of Turkey and Germany. Institute for agricultural policy and markets*. Retrieved from <http://orgprints.org/13727/1/MasterThesis-ConsumerStudy-TR-DE.pdf>, 10 Oct 2017.
- Nasir, V.A. and Karakaya, F. (2014). Consumer segments in organic foods market. *Journal of Consumer Marketing*, Vol.31 Issue: 4, pp.263-277.
- Oude Ophuis, P.A.M. (1989). Measuring health orientation and health consciousness as determinants of food choice behavior: development and implementation of various Attitudinal Scales. *Marketing Thought and Practice in the 1990s*, EMAC XVIII, Athens School of Economics and Business, Athens, pp.1723-1725.
- Padel, S. and Foster, C. (2005). Exploring the gap between attitudes and behavior understanding why consumers buy or do not buy organic food. *British Food Journal*, Vol. 107 No. 8, pp.606-625.

- Perrini, F., Castaldo, S., Misani, N., and Tencati, A. (2010). The impact of corporate social responsibility associations on trust in organic products marketed by mainstream retailers: A study of Italian consumers. *Business Strategy and the Environment*, Vol. 19 No. 8, pp.512–526.
- Roitner-Schobesberger, B., Darnhofer, I., Somsook, S., and Vogl, C.R. (2008). Consumer perceptions of organic foods in Bangkok, Thailand. *Food Policy*, Vol. 33 No. 2, pp.112-121.
- Saba, A. and Messina, F. (2003). Attitudes toward organic foods and risk/benefit perception associated with Pesticides. *Food Quality and Preference*, Vol. 14 No. 8, pp.637-645.
- Schifferstein, H.N.J. and Oude Ophuis, P.A.M. (1998). Health-related determinants of organic foods consumption in the Netherlands. *Food Quality and Preference*, Vol. 9 No. 3, pp.119-133.
- Shimp, T.A. and Kavas, A. (1984). The theory of reasoned action applied to coupon usage. *Journal of Consumer Research*, Vol. 11 No. 3, pp.795-809.
- Soil Association. (2000). Organic farming, food quality and human health: A review of the evidence. *Soil Association*, Bristol
- Soler, F., Gil, J.M. and Sa'nchez, M. (2002). Consumers' acceptability of organic food in Spain. *British Food Journal*, Vol. 104 No. 8, pp.670-687.
- Stanton J. V., and Guion, D. T. (2010). Consumer attitudes toward organic foods: An exploration of U.S. market segments. *Research in Consumer Behavior*, Vol. 12, pp.5-41.
- Swanson, R.B. and Lewis, C.E. (1993). Alaskan direct-market consumers: Perception of organic produce. *Home Economics Research Journal*, Vol. 22 No. 2, pp.138-155.
- Swidi, A. A., Huque, S. M., Hafeez, M. H., and Shariff, M. N. (2014). The role of subjective norms in theory of planned behavior in the context of organic food consumption. *British Food Journal*, Vol. 116 Issue: 10, pp.1561-1580.
- Tarkiainen, A. and Sundqvist, S. (2005). Subjective norms, attitudes and intentions of Finnish consumers in buying organic food. *British Food Journal*, Vol. 107 Issue: 11, pp.808-822.
- Thøgersen, J. (2009). Consumer decision making with regard to organic food products. In Vaz, M.T.D.N., Vaz, P., Nijkamp, P. and Rastoin, J.L. (Eds), *Traditional food production facing sustainability: A European Challenge*, Ashgate, Farnham, pp.173-194.
- Truong, T. T., Yap, M. H. T., and Ineson, E. M. (2012). Potential Vietnamese consumers' perceptions of organic foods. *British Food Journal*, Vol. 114 Issue: 4, pp.529-543.
- Tsakiridou, E., Boutsouki, C., Zotos, Y., and Mattas, K. (2008). Attitudes and behaviour towards organic products: An exploratory study. *International Journal of Retail & Distribution Management*, Vol. 36 Issue: 2, pp.158-175.
- Tung, S. J., Shih, C. C., Wei, S. and, Chen, Y. H. (2012). Attitudinal inconsistency toward organic food in relation to purchasing intention and behavior: An illustration of Taiwan consumers. *British Food Journal*, Vol. 114 Issue: 7, pp.997-1015.

- Vallerand, R.J., Deshaies, P., Cuerrier, J.P., Pelletier, L.G., and Mongeau, C. (1992). Ajzen and Fishbein's theory of reasoned action as applied to moral behavior: A confirmatory analysis. *Journal of Personality and Social Psychology*, Vol. 62 No. 1, pp.98-109.
- Verplanken, B. and Holland, R.W. (2002). Motivated decision making: Effects of activation and self-centrality of values on choices and behavior. *Journal of Personality and Social Psychology*, Vol. 82 No. 3, pp.434-447.
- Viaene, J. and Gellynck, X. (1996). Consumer behavior towards light products in Belgium. paper presented at the 47th EAAE Seminar, Wageningen, March.
- Wandel, M. and Bugge, A. (1997). Environmental concern in consumer evaluation of food quality. *Food Quality and Preference*, Vol. 8 No. 1, pp.19-26.
- Williams, P.R.D. and Hammit, J.K. (2001). Perceived risks of conventional and organic produce: Pesticides, pathogens, and natural toxins. *Risk Analysis*, Vol. 21 No. 2, pp.319-330.
- Xie, B., Wang, L., Yang, H., Wang, Y., and Zhang, M. (2015). Consumer perceptions and attitudes of organic food products in Eastern China. *British Food Journal*, Vol. 117 Issue: 3, pp.1105-1121.