



ORGANIC FOOD PURCHASING BEHAVIOR OF YOUNG CONSUMERS: THE ROLE OF ENVIRONMENTAL CONCERN

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Abstract: This study focuses on the factors that can affect purchasing behaviour of young customers regarding organic food. The results show that attitudes, perceived behavioral control, perceived consumer effectiveness (PCE) and concern for self-image positively impact the purchasing behaviour of highly-environmental concerned consumers. Those who do not concern environment do not care about these qualities. Subjective norms positively affect consumers' behaviour. However, the effect of subjective norms on the purchasing behaviour of low-environmental concerned consumers is greater than that of consumers with high environmental concern.

Keywords: Consumer behaviour, organic food, PCE, environmental concern, concern for self-image

1 Introduction

At present, the sustainable consumption trend is concerned by not only developed countries but also developing countries. The consumption of goods and services that are of a high quality for life and do not pollute the environment nor affect the needs of future generations is considered as sustainable consumption. Green consumption is an integral part of sustainable consumption. Currently, the environmental quality issue tends to be severe due to global warming, air pollution and disasters such as tsunamis, floods, and droughts. Therefore, people including customers pay much more attention to environmental protection issues. When consumers, especially the young ones, are aware of their own responsibilities for the environmental protection related to consuming goods and products, they are willing to buy the pro-environment products (Chen, 2010).

Young people are highly educated, and they are aware of their responsibilities for the environment. Therefore, the green consuming behavior of young people is the subject of recent studies (Chen & Bottle, 2010; Kim, 2011; Lee, 2008; Lee, 2009). In Vietnam, sustainable consumption, in general, and green consumption, in particular, has not been much cared of. It is still a new study field. Vietnam has a population of over 90 million people with about 40 % young people aged 10 to 24. This means that Vietnam is a potential market for green or pro-environment products. The green growth trend of the economy has also been cared about by the Government in recent times. Therefore, enterprises' philosophy of green and sustainable production becomes necessary, and the green marketing strategy plays an important role at this

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time. It makes consumers better aware of the environmental issues and creates a competitive advantage in enterprises' green philosophy.

According to Lee (2009), green products are the products that are favorable for the environment and the behavior of buying products that are favorable for and friendly with the environment is referred to as green buying behavior. Schlegelmilch et al. (1996) divided green products into categories such as recyclable products, products that are not tested on animals, fruits and vegetables grown by organic methods, products that are not harmful to ozone and energy products. Vu Anh Dung et al. (2012) said that green products can be divided into categories such as organic food, household electrical appliances, means of travel, garment, stationeries, and other products. Thus, the consumption of organic food is one aspect of the green consumption. Some studies of reviewing the behavior of the organic food consumption are conducted in a number of different countries such as Chen (2007), Dean et al. (2008). In Vietnam, some studies have been conducted to review green consumption behavior as Pham Thi Lan Huong (2014), Vu Anh Dung et al. (2012). However, these studies only referred to the green consumption behavior in general without considering the consumption behavior in a specific field such as organic food, and they only review a certain aspect of the interpretation of green consumption behavior; thereby the generalizing level is not high. This study was performed to review the factors affecting young consumers' intention of buying organic food. Specifically, it reviewed the role of the factor pertaining to the environment in the interpretation of the organic food consumption intention.

2 Review of the literature

Theory of planned behavior (TPB) of Ajzen (1991) is widely used in various study fields such as advertising, health care, food choices including organic foods as the study of Chen (2007), Dean et al. (2008), Gracia & Magistris (2007), Saba & Messina (2003), and Thogersen (2007). According to TPB, intention (I) was explained by factors such as attitude toward behavior (A), subjective norms (S) and perceived behavioral control (PBC). An attitude towards behavior is a positive or negative assessment level when behaviors are performed (Ajzen & Fishbein, 1980). Ajzen & Fishbein (2005) showed that the attitude is an important predication factor of behavioral intentions. The results are also confirmed in many different studies. The studies in the field of organic food done by Chen (2007), Dean et al. (2008), Saba & Messina (2003), and Thogersen (2007) also showed that the attitude towards behavior has a positive relationship with consumers' intention of buying organic food. Gracia & Magistris (2007) said that there is a positive relationship between the attitude and the intention of buying organic food-related aspects of health and environmental benefits.

A subjective norm is a social pressure from the perception of whether or not to perform the behavior (Ajzen, 1991). The pressure from society includes the one from family, friends,

media, schools and other surrounding objects. For young people, the social pressure is one of the strongest factors that explain behavioral intentions, especially the pressure from friends (Bindah & Othman, 2012). In the organic food sector, Vermeer & Verbeke (2006) said that the pressure of surrounding people might explain a strong intention of buying sustainable dairy products whether that person has a low attitude. Chen (2007) showed a positive relationship between subjective norms with the intention of buying organic food. The study done by Gotschi et al. (2007) showed that standards and learning values in family positively influence the attitude development in terms of consuming organic food, while school environment will less impact the attitude formation. It is thought that people often follow subjective norms because not only are they afraid of the pressure from surrounding people but also get information the behavior of which is most appropriate and beneficial (Bamberg et al., 2007).

The perceived behavioral control is the ease or difficulty that a person is aware of the performance of a particular behavior. In other words, PBC is related to personal feelings of the ability to perform a certain behavior (Ajzen, 1991). Dean et al. (2008) indicated a positive relationship between PBC and the consumers' intention of buying organic apples. Similarly, Thøgersen (2007) also reported that the role of PBC in explaining the intention of buying fresh tomatoes and organic tomato sauce.

In addition to variables in the TPB model, the studies in the field of green consumption also refer to the factors related to the ecological environment, such as the factor of perceived consumer effectiveness (PCE), environmental concerns (EC), and concern for self-image (CI). According to Taylor & Ahmed (1974), PCE is understood as consumers' confidence that they can contribute effectively in solving environmental issues. Many studies have used PCE to explain the intention of buying green products, and the results showed that the consumers who have high PCE will have positive behavior on the environment (Lee, 2008; Vermeir & Verbeke, 2007). Environmental concerns express anxiety, passion, and attention to environmental consequences. Lee (2008), Kim & Choi (2005) showed that the factor of environmental concerns positively affected green consumption intentions of consumers. The concern for self-image is said to be all the ideas, thoughts and feelings that individuals themselves have compared with others in a particular context. The concern for the self-image of consumers is reflected through their consumption of goods. In other words, the goods used by consumers will increase concern for self-image, highlight individual's images, which is especially important for young consumers. Lee (2008) reported that CI strongly impacts young consumers' green consumption intentions.

Basing on TPB theory and some study results in the field of organic food, this study reviewed the impact of the components of TPB on the intention of buying organic food and also included PCE, CI components into the model to consider their impact rate in accordance with

the change of the environmental concern factor. Therefore, the study model is proposed as shown in Figure 1.

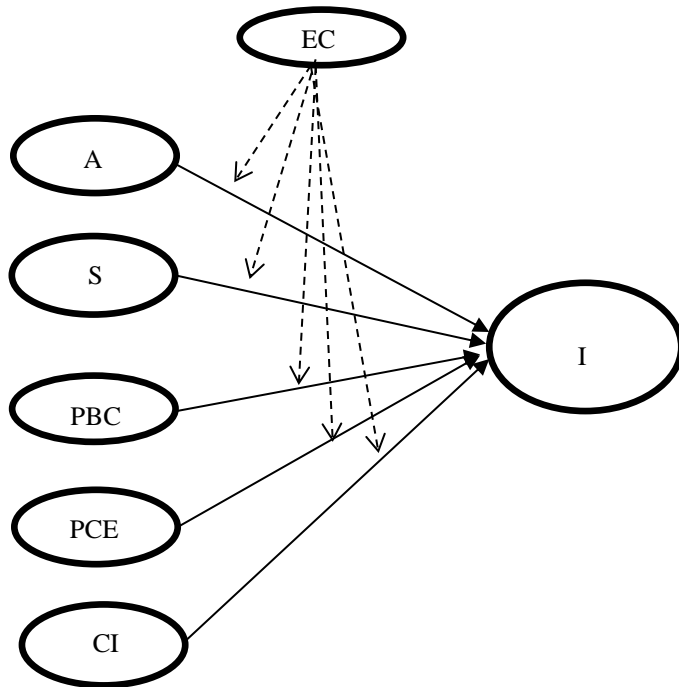


Figure 1. The conceptual model

3 Research methodology

This study used a quantitative research method based on a convenient sample of 458 young consumers in Ho Chi Minh city. The study was carried out by surveying with a questionnaire based on a 5-level Likert scale: strong disagreement is at level 1 and strong agreement is at level 5. The scale and questions in the study were based on the previous studies in the field of green consumption (Linh, 1997; Lee, 2008; Taylor & Todd, 1995; Vermeir & Verbeke, 2007). The attitude scale (A) consists of 3 questions related to support the idea of organic food consumption and general attitudes with organic food consumption. The subjective norms scale (S) consists of 3 questions related to the pressures of family, friends, and environmental organizations to the organic food consumption. The perceived behavior control scale (PBC) with 4 questions related to the easy or difficult control when consuming organic food. The perceived consumer effectiveness scale (PCE) consists of 2 questions related to the effective personal contribution to the environment. The environmental concern scale (EC) including 4 questions expressing consumers’ anxiety, passion, and attention to environmental issues. The concern for the self-image scale (CI) consists of 3 questions reflecting their outstanding image when engaging in the environmental protection and the scale of the intention of buying consists

of 3 questions expressing the intention of buying organic food in the coming time. After collecting and selecting, the data were analyzed by using the SPSS 16.0 software to make the statistical and descriptive analysis, correlative analysis, reliability test of scale with Cronbach's alpha tool, and exploratory factor analysis. Then, the clustering analysis according to EC factor was made, and the clustering analysis results were used to make regression analysis.

4 Results and discussion

4.1 Descriptive statistics

The results of the statistical and descriptive analysis showed that males accounted for 21.2 % and females for 78.8 % in the study sample. The average value of PCE and EC variables is equal to 4.2587 and 4.0611, respectively – the highest among the variables (Table 1). This shows that young consumers are most interested in environmental issues as well as the belief that their actions can contribute effectively to solving environmental issues. The average value of CI variable is, however, equal to 3.1994 – the lowest compared with that of the others. It can be seen that the assessment level of concern for the self-image in the environmental protection has not greatly been appreciated by the youth. Maybe, young consumers are interested in the environment and believe that their actions will contribute positively to the environment, but they do not concern their self-image. This is relatively consistent with the characteristics of Vietnam where environmental issues have not been properly aware of, concerned nor highly appreciated by society.

Table 1. Descriptive statistics of the variables

Variables	N	Mean	Std. Dev.
PCE	458	4.2587	0.7434
EC	458	4.0611	0.5672
A	458	3.8923	0.7973
I	458	3.5596	0.6415
S	458	3.5247	0.7811
PBC	458	3.2309	0.6857
CI	458	3.1994	0.8472

4.2 Cronbach's alpha and EFA analysis

To assess the reliability of the scales, the study tested the Cronbach's alpha. The test result of the scales meets the reliability requirements, and the coefficient of Cronbach's alpha is between 0.628 and 0.899 (Table 2). The correlation coefficient of the variable sum is greater than 0.3.

After the scales were checked for reliability, the analysis of exploratory factor was performed using the Promax rotation. The procedure enabled to extract 6 factors including A, P,

S, PEC, CI, PCE with the variance equal to 67.265 %; KMO coefficient of Bartlett is equal to 0.8 with a sig. = 0.000, and the minimal load coefficient of the factor is 0.442.

Table 2. Cronbach' alpha of variables

Variables	Cronbach's alpha
PCE	0.693
EC	0.701
A	0.899
I	0.712
S	0.840
PBC	0.742
CI	0.628

4.3 Correlation analysis, cluster analysis, and regression

The correlation analysis result showed that the independent variables are correlated with the dependent variable at the 5 % significance level. The impact of the independent variables on the dependent variable was assessed. Firstly, the study used the method of ordinary least squares (OLS) through original TPB model. The results showed that the attitudes, subjective norms, and perceived behavioral control positively affect the intention of buying organic food at 5 % significance. The model explains about 20.5 % of the variation of the dependent variable. As discussed above, the study continued to perform the expanded regression model by adding the variables related to the environment such as PCE and CI. The results are shown in Table 3.

Table 3. Regression analysis

Variables	β	<i>p</i> -value	VIF
A	0.144	0.001	1.668
S	0.178	0.000	1.787
PBC	0.098	0.019	1.151
PCE	0.093	0.016	1.161
CI	0.068	0.039	1.086
constant	1.445	0.000	

$R^2 = 22.5\%$
 Durbin-watson = 2.008
 Sig. = 0.000

The expanded model showed that all the independent variables positively affect the dependent variable at the 5 % significance level. The model explanation level gained 22.5 %. In both models, the attitude and subjective norms remain the two most powerful explaining factors of young consumers' intention of organic food consumption; the perceived consumer

effectiveness and concern for the self-image explain the intention of organic food consumption at a lower level than the remaining variables.

To assess the role of the environmental concern in explaining the impact of the independent variables on the dependent variable, the study conducted the clustering analysis for this factor. The EC variable is included to analyze the clusters by K-means with 2 set of clusters. The analysis results of the EC component cluster with a sig. = 0.000 showed that the clustering is appropriate, and the EC component result was classified into 2 clusters: high level of environment concerns (ECH) and low level of environment concerns (ECL) with average value of 4.26 and 3.18, respectively. After conducting cluster analysis, the variables were put into the regression using the OLS method. The regression results clusters analysis are shown in Table 4.

Table 4. Regression analysis clusters ECH and ECL

Variables	Clusters ECL		Clusters ECH	
	Beta	<i>p</i> -value	Beta	<i>p</i> -value
A	0.020	0.826	0.197	0.000
S	0.363	0.000	0.163	0.001
PBC	0.011	0.913	0.090	0.049
PCE	0.053	0.598	0.104	0.012
CI	0.119	0.242	0.070	0.040
	<i>R</i> ² = 21 %		<i>R</i> ² = 26.4 %	
	Sig. = 0.002		Sig. = 0.000	
	Durbin-watson = 2.008		Durbin-watson = 2.039	

It is obvious that when a person has high attitudes towards behavior, perceived behavioral control, perceived consumer effectiveness, and concern for self-image, their intention of buying organic foods is higher. However, this was only true when they had the high level of environmental concerns. For those who had the low level of environmental concerns, although their attitudes, perceived behavioral control, perceived consumer effectiveness and concern for self-image are high, they do not intend to perform the behavior. Only the subjective norms affect the intention of buying with the statistical significance in both clusters. This means that whether young consumers with the high or low level of environmental concerns, the pressure of surrounding people as family, friends, and environmental organizations still significantly influences their intention of buying organic products.

According to Ajzen & Fishbein (2005), the attitude was the most important prediction factor for the behavioral intention. However, this study showed that the subjective norms were the only factor which affects the consumption behavior of organic food the most with the group of the low level of environmental concerns. Based on these results, it might be suggested that organic food was still quite a new product for consumers, and the environmental issues had not

been cared by consumers in a developing country like Vietnam. Therefore, the pressure of surrounding people becomes more important for consumers to buy products. However, for the group of consumers with the high level of environmental concerns, the attitude was the strongest explanation factor for their consuming intention.

Basing on the theoretical background of the planned behavior theory, Ajzen (1991) reviewed the factors affecting young consumers' consuming intention of organic food and the potential consumers in the future. Organic food is a kind of green product, thus it is necessary to expand the TPB model by merging factors such as perceived consumer effectiveness, environmental concerns, and concern for the self-image. The results of this study indicated that young consumers appreciate the perceived consumer effectiveness and the environmental concerns with an average rating at 4.2587 and 4.0611, respectively. This is appropriate in terms of the awareness of young people with the higher education level. However, the concern for the self-image rating was at a relatively low level and the average rate was 3.1994. This indicates that the environmental protection activities of young people to express concern for self-image is not really important.

The attitude, perceived behavioral control, perceived consumer effectiveness, and concern for the self-image positively affect the consumers' intention for the group of people with the high level of environmental concerns. However, for the group of people with the low level of environmental concerns, the attitudes, perceived behavioral control, perceived consumer effectiveness and concern for the self-image do not influence the intention of buying. The subjective norms component positively affects the behavior intention regardless the level of environmental concerns. This suggests that young consumers are subjected to pressure or influenced by their surrounding people such as families, friends, environmental organizations no matter their level of environmental concerns is high or low. However, the impact of the subjective norms on the intention of buying of the group of consumers with the low level of environmental concerns is higher than that of the group of consumers with the high level of environmental concerns.

5 Conclusion

The results of this study showed that in addition to the factors in TPB model, those related to the environment such as perceived consumer effectiveness, concern for self-image, and environmental concerns significantly contributed to the explanation of young consumers' intention of buying organic food in Vietnam. However, the contribution of such variables had not been prominent compared with that of the original variables in the theory of planned behavior model. The study also found that, in a country where environmental issues have not been emphasized and appreciated, the subjective norms factor significantly contributes to the explanation of the consuming intention of buying organic food. The consuming intention to

organic food can be influenced by many factors, but this study only referred to the factors related to the environment, so further studies should expand to other factors related to health problems to increase the explanation level to the model.

References

1. Ajzen, I. (1991), The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211.
2. Ajzen, I. and Fishbein, M. (2005), "The influence of attitudes on behaviour", in *The Handbook of Attitudes*, Albarracin, D., Johnson, B. T. and Zanna, M. P. (Eds), Mahwah, NJ: Erlbaum.
3. Ajzen, I. and Fishbein, M. (1980), *Understanding attitudes and predicting social behaviour*. Englewood Cliffs, NJ: Prentice-Hall.
4. Bamberg, S., Hunecke, M. and Blobaum, A. (2007), Social context, personal norms and the use of public transportation: two field studies, *Journal of Environmental Psychology*, 27(3), 190–203.
5. Bindah, E. V. and Othman, M. N. (2012), The effect of peer communication influence on the development of materialistic values among young urban adult consumers. *International Business Research*, 5(3), 2.
6. Chen, M. F. (2007), Consumer attitudes and purchase intentions in relation to organic foods in Taiwan: Moderating effects of food-related personality traits. *Food Quality and Preference*, 18(7), 1008–1021.
7. Chen, T. B. and Chai, L. T. (2010), Attitude towards the environment and green products: Consumers' perspective. *Management science and engineering*, 4(2), 27–39.
8. Chen, Y. S. (2010), The drivers of green brand equity: green brand image, green satisfaction, and green trust. *Journal of Business Ethics*, 93(2), 307–319.
9. Dean, M., Raats, M. M. and Shepherd, R. (2008), Moral concerns and consumer choice of fresh and processed organic Foods1. *Journal of Applied Social Psychology*, 38(8), 2088–2107.
10. Gotschi, E., Vogel, S. and Lindenthal, T. (2007), *High school students' attitudes and behaviour towards organic products: survey results from Vienna*. Institute for Sustainable Economic Development, DoE aSS, University of Natural Resources and Applied Life Sciences, Vienna.

11. Gracia, A. and de Magistris, T. (2007), Organic food product purchase behaviour: a pilot study for urban consumers in the South of Italy. *Spanish Journal of Agricultural Research*, 5(4), 439–51.
12. Kim, Y. (2011), Understanding green purchase: The influence of collectivism, personal values and environmental attitudes, and the moderating effect of perceived consumer effectiveness. *Seoul Journal of Business*, 17(1), 65–92.
13. Kim, Y. and Choi, S. M. (2005), Antecedents of green purchase behavior: An examination of collectivism, environmental concern, and PCE. *Advances in Consumer Research*, 32, 592.
14. Lee, K., (2009), Gender Differences in Hong Kong Adolescent Consumers' Green Purchasing Behavior. *Journal of Consumer Marketing*, 26(2), 87–96.
15. Lee, K. (2008), Opportunities for Green Marketing, Young Consumers. *Marketing Intelligence & Planning*, 26 (6), 573–586.
16. Ling-Yee, L. (1997), Effect of collectivist orientation and ecological attitude on actual environmental commitment: the moderating role of consumer demographics and product involvement. *Journal of International Consumer Marketing*, 9(4), 31–53.
17. Pham Thi Lan Huong (2014), Predicting green purchasing behavior intention among young consumers: Effect of cultural and psychological factors. *Journal of Economics & Development*, 200, 66–78.
18. Saba, A. and Messina, F. (2003), Attitudes towards organic foods and risk/benefit perception associated with pesticides. *Food quality and preference*, 14(8), 637–645.
19. Schlegelmilch, B. B., Bohlen, G. M. and Diamantopoulos, A. (1996), The link between green purchasing decisions and measures of environmental consciousness. *European Journal of Marketing*, 30(5), 35–55.
20. Taylor, J. R. and Ahmed, S. A. (1974), Ecologically concerned consumers: who are they?. *The Journal of Marketing*, 20–24.
21. Taylor, S. and Todd, P. (1995), Understanding household garbage reduction behavior: a test of an integrated model. *Journal of Public Policy & Marketing*, 192–204.
22. Thøgersen, J. (2007), *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.
23. Vermeir, I. and Verbeke, W. (2006), Sustainable food consumption: Exploring the consumer “attitude–behavioral intention gap”. *Journal of Agricultural and Environmental Ethics*, 19(2), 169–194.

24. Vermeir, I. and Verbeke, W. (2007), Sustainable food consumption among young adults in Belgium: Theory of planned behaviour and the role of confidence and values. *Ecological Economics*, 64(3), 542–553.
25. Vu Anh Dung, Nguyen Thu Hien, Nguyen Thi Ngoc Anh (2012), Cognitive assessment and green consumer behavior: The case of Hanoi consumer. *Journal of Economics & Development*, 184, 46–55.