

THE THEORY OF PLANNED BEHAVIOR TOWARD ORGANIC FOOD IN VIETNAM: THE MODERATION OF ENVIRONMENTAL CONCERN

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Abstract

With the increases in environmental concern, customers are more and more pay attention to purchase organic food. Despite purchase intention of customers toward organic food in many nations being commonly studied, there is a lack of research related to the moderation of environmental concern based on the Theory of Planned Behaviour (TPB). In this research, this study investigates the moderation of environmental concerns based on the theory of planned behaviour toward organic food in Vietnam. The methodology of mixed-methods of qualitative and quantitative is applied with a survey of 420 customers being conducted to collect data from three biggest cities in Vietnam: Ho Chi Minh, Da Nang and Ha Noi. The result shows that the customers have more environmental concern which increases their attitude to intention of purchasing organic food. This enriches the existing literature with the moderation of environmental concern to the relationship of attitude and purchase intention toward organic food in Vietnam based on the Theory of Planned Behaviour.

Keywords: environmental concern, theory of planned behaviour, organic food, moderation, purchase intention

1 INTRODUCTION

In recent decades the environmental concern (EC) has gradually increased (Han, Hsu, & Sheu, 2010). The ongoing and increasing overuse and depletion of natural resources like soil, land, and water is a major threat to human biodiversity. Consumers are aware of environmental issues in relation to their use, they are trying to buy products that are environmentally friendly (Paul, Modi, & Patel, 2016). Increased numbers of customers with various environmental problems start looking for and purchasing environmentally friendly products via alternatives, sometimes paying even more for these products (Laroche, Bergeron, & Barbaro-Forleo, 2001). In line with this trend, consumers' demand for green establishments has steadily increased in the lodging industry. Most consumers are aware of the damage to the community for the good of future generations. Although personal satisfaction remains central to consumer behaviour, preservation of the environment is also a key concern (Paul et al., 2016; Verbeke et al., 2007)

Empirical evidence is growing that environmental work focused on Theory of Planned Behaviour (TPB) is based on many dimensions, including tourism management (Han et al., 2010; Leelapattana et al., 2019; Wang et al., 2018), energy and waste (Li et al., 2019; Shen et al., 2019), green product consumption (Maichum, Parichatnon, & Peng, 2016; Paul et al., 2016; Yadav & Pathak, 2016). So far, scholars have published papers related to intention purchasing towards organic food. To have better understanding the purchasing intention used theory of planned behaviour, some studies have been investigated (Michaelidou & Hassan, 2008; Peighambari et al., 2016; Bonti-ankomah & Yiridoe, 2006) as well as empirical studies regarding factors influencing purchasing intention of organic food (Shaharudin et al., 2010; Singh & Verma, 2018); willingness to pay organic food (Aryal et al., 2009; Krystallis & Chryssohoidis, 2005; Zhang et al., 2018).

In the scope of expected Theory of Planned Behaviour (TPB) towards the purchasing of organic food, many researchers pay attention to the indirect and direct relationship between environmental concern (Chekima, Chekima, & Chekima, 2019; Pham et al., 2018; Yiridoe et al., 2014), but lacking of research related to how environmental concern impacts the relationship of personal attitude to purchase intention toward organic food. This study attempts to answer the following key research questions: the first question is whether the increase in environmental concern will increase the relationship of attitude to purchase intention toward organic food? The second is how is the influencing of factors in theory of planned behaviour to purchase intention? Therefore, research objectives of this study are: 1) to test the moderation of environmental concern in the Theory of Planned Behaviour (TPB) toward organic food in Vietnam, 2) to evaluate the relationship of personal attitude, subjective norms, and perceived behavioural control to purchase intention toward organic food in Vietnam.

The strength of this study to theory contribution is to update the moderation relationship of environmental concern based on theory of planned behaviour. In the practical fields, companies understand the importance of environmental concern of their customers. With launching many environmental activities, companies which producing organics food will increase the environmental concern of customers. It leads the raise in organic purchasing intention. The environment of the world and the health of human being would be better when using organic food. In the following section, Theory of Reasoned Action (TRA), TPB, and the conceptual framework that supports the research hypotheses are described. In the methodology section, measurement development, data collection and analysing are illustrated. Finally, study findings, implications, and conclusion are discussed in the results and conclusion sections.

2 LITERATURE REVIEW

2.1 Theory background

The theory of planned behaviour (TPB) is a cognitive model that targets to predict the intention and behaviour (Ajzen, 1991). This model has been widely used in various areas, such as health psychology (Walker, Grimshaw, & Armstrong, 2001; Zemore & Ajzen, 2014), environmental behaviour (Abrahamse & Steg, 2009), diet and food choice intention and actual behaviour (Arvola et al., 2008; Kim et al., 2013), green consumption (Al et al., 2018), intention of tourists and green hotel choices (Han et al., 2010; Wang et al., 2018).

From the Theory of Reasoned Action (TRA), The Theory of Planned Behaviour was developed (Fishbein & Ajzen, 1977). This model is a social psychological model describing behavioural intentions and actual behaviour based on attitude and subjective norm (Fishbein & Ajzen, 1977). For many factors, there are differences between actual behaviour and behavioural intention; in 1985, when the Theory of Planned Behaviour was written, Ajzen presented a further factor. The mediate variable is called "perceived behavioural control (PBC), which directly influences intention and behaviour.

In the Theory of Planned Behaviour, the first component of the model is intended to find out a "personal attitude" to the behaviour by determination of beliefs outcome and evaluation outcome. The outcome beliefs are related to what we believe to be the outcome of taking their behaviour and the outcome evaluation mentions how worthwhile we consider the outcome of the behaviour (Ajzen, 1991). The second part of the model aims to find out a person's "subjective norms" which is made of their normative beliefs and motivation to comply. The third part of the model looks at our personal control beliefs, which are made up of self- efficacy beliefs and perceived external barriers. The self- efficacy beliefs are about how confident we are we can achieve the change even in the face of barriers and the perceived external barriers

describe external factors that we perceive might prevent to achieve goals (Ajzen, 1991). Therefore, according to the Theory of Planned Behaviour (TPB), customers who have positive attitudes in regard to organic food, have normative support for using it, feel easy and comfortable to use this food, have strong intention to purchase this organic food.

2.2 Hypothesis development

In the Theory of Planned Behaviour, attitude refers to negative or positive evaluation related to behaviour investigation. There is an assumption that the more positive the attitude, the more possibly the intention (Nosi et al., 2017). Moreover, the more support of normative factor is, the more positive affect to purchase intention is. The normative support can be from parents, friends, or someone who has influences to. Besides, if customer feel comfortable to purchase organic food and it is easy for them to approach the purchasing this food, the relationship between perceived behavioural control and purchase intention is positive. There are many researches that prove the positive relationship between attitude of customer, subject norm, perceived behavioural control and purchase intention toward organic food (Arvola et al., 2008; Chen, 2007; Singh & Verma, 2018; Tsakiridou et al., 2008; Yazdanpanah & Forouzani, 2015). Thus, we posit that:

H1: Attitude toward organic food will be positively related to purchase intention

H2: Subject norm toward organic positively affects purchase intention

H3: Perceived behaviour control positively affects purchase intention

In this article, they argue that the relationship between attitude and purchase intention may depend on a number of boundary conditions that may alter the strength of this relationship. One constraint could be the extent or degree of environmental concern that may vary the strength of this relation. Firstly, according to Hu et al. (2010), environmental concerns is identified as "to the extent to which people are aware of environmental issues and endorse efforts to resolve them or to show their personal readiness to contribute to their solution" (Paul et al., 2016). Furthermore, researchers describe environmental concerns as being aware of environmental issues and their ability to tackle environmental challenges (Maichum et al., 2016). There are many researches proved the positive effect of environmental concern to purchase intention based on the theory of planned behaviour. For example, the study pointed out that the effect of ecological concerns and consumer purchase intentions for organic food (Pomsanam, Napompech, & Suwanmaneepong, 2014; Ragavan & Mageh, 2012); for the eco-friendly products and services (Aman, Harun, & Hussein, 2012; Han, Hsu, & Lee, 2009; Hartmann & Apaolaza-Ibáñez, 2012). Sang and Bekhet (2015) reported a significant positive impact of environmental concern on consumer intention to buy an electric vehicle (Yadav & Pathak, 2016). Mostafa (2009) identified environmental concern among the major variables which influences consumers' attitude as well as their intention to buy green products. Mostafa (2007) also reported that environmental concern positively influences the consumers' attitude towards green products which further influences their green purchase intention.

However, Diamantopoulos et al. (2003) observed that environmental concerns are a significant consumer decision-making variable. Aman et al. (2012) noted that the incentive to purchase green products would be enhanced by an increasing number of consumers with environmental concern. Additional studies also show that environmental issues not only impact the behavioural will but also influence behavioural attitudes; consumers with greater environmental concern tend to adopt a more positive environmental attitude, which in turn increases their willingness to act (Chen & Peng, 2012; Clark, Kotchen, & Moore, 2003; Kalafatis et al., 1999). From the above arguments, the following hypothesis can be stated that:

H4: The positive relationship between attitude and purchase intention will be stronger when environmental concern is high.

Based on the above discussion a theoretical model can be developed:

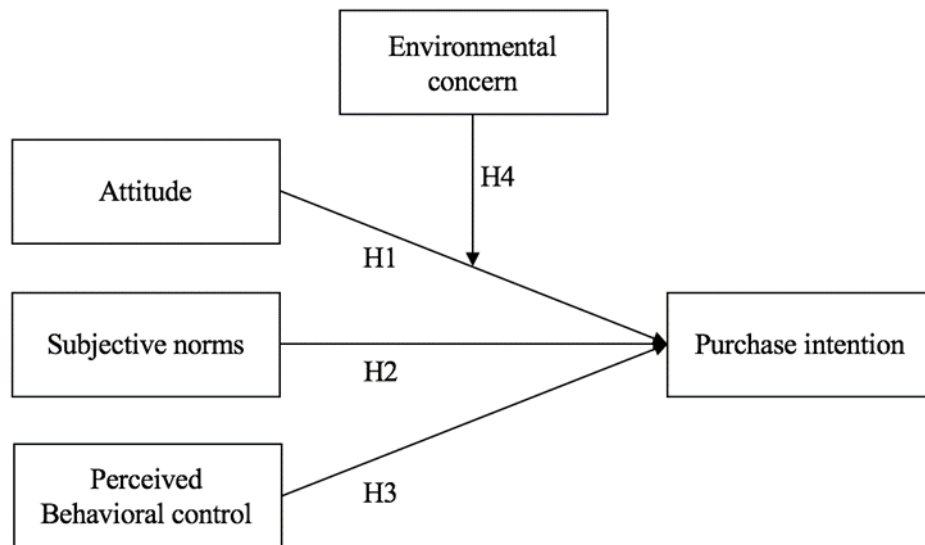


Fig. 1 – The proposed research framework. Source: own research

3 METHODOLOGY

3.1 Research design

The study is applicable to both investigation approaches, including inductive and deductive methods. First, the inductive approach is used. This method seeks to gain a better understanding of organic purchasing and environmental concern. According to Saunders, Lewis, & Thornhill (2009), the strength of the inductive approach is to develop an understanding of the nature of the problem.

This study applied mixed-methods to investigate. According to Creswell (2014), one of the best ways to have a clear understanding of research problem is using mixed-methods. The mixed-methods is to incorporate the qualitative and quantitative data collection and analysis procedures which are employed either simultaneously or sequentially in a single study (Pham, Tučková, & Chiappetta Jabbour, 2019)

Qualitative research

Qualitative research is often defined as a study which aims at creating models instead of testing hypotheses (Bryman & Bell, 2011). Saunders et al. (2009) have mentioned that qualitative research is interpretive since scientists should recognize the significance of the chosen event or theme. Similar approaches are included in a qualitative process, for example: comprehensive interviews with people, action research reflection and team focal interviews. The purpose of the qualitative approach is to have a deep knowledge of a scenario or problem. This research focuses on the qualitative methodology with 10 Vietnamese customers, to identify and gain more understanding on planned behaviour theory and environment variable constructs

Quantitative research

Research objectives of this study aim to explore the effect of environmental concern on theory of planned behaviour toward organic food in Vietnam. Thus, the quantitative method is required

to achieve these objectives. The research strategy used in this study is survey. The survey research is to apply quantitative data collection, and is applied to measure the relationship between variables and propose the model (Saunders et al., 2009).

3.2 Data collection

Object of analysis

The ideal sample of this research is adults (18 years of age or older). More capacity for comparing and evaluating available options is related to adults. In addition, highly educated customer can give better understanding the topic with discussion and accreted providing of information as opposed to less well-educated people. (Han et al., 2010; Han & Kim, 2010; Hedlund, 2011). Hence, the data collection will be collected from consumers who have high education of above high school qualification.

Qualitative study

For the qualitative study, the focus group is conducted to collection data. The semi-structured interview is suitable for this stage. The objects of this interview are 10 customers who their age is 18 or over. The customers can be purchased organic food in the past or never purchase organic food.

Quantitative study

First of all, the questionnaire is developed with for five constructs: attitude, subjective norms, perceived behavioural control, purchase intention, and environmental concern. The study used measurement scales established in previous studies. The type scale applied for the measurement uses Likert of 5-point. Originally, questionnaire was written in English. The first author and a further bilingual scholar worked on this initial questionnaire in Vietnamese before it was translated into English. The data is collected by online using google form of questionnaire and offline by meeting directly customers. Three biggest cities in Vietnam chosen for this study are Ho Chi Minh City, Da Nang City, and Hanoi City. At the first stage, pilot study is conducted with sample of 70-100 customers. The purpose of this stage is to get more understanding of customer preparing for full study at the second stage. Another target is to estimate effect size for the full study. At the second stage, the full study is implemented with sample size which based on effect size of the pilot study. Moreover, the sample size sufficient for this research was calculated based upon the recommendation of Hair et al., (2013) for a desired level of 15 to 20 observations per variable examined. Our study consists of five constructs (6 items for attitude, 4 items for subjective norm items, 2 items for PBC, 6 environmental concern items and 4 purchase intention items, total of 22 items) resulting in an optimal sample size of 420 respondents. Table 1 illustrates the measurement scales for all constructs.

Tab. 1 – Measures description and properties. Source: own research

Measures	Item description	Fact. Load
Attitude (ATT) (Ajzen, 2002; Arvola et al., 2008)	X1: I think that purchasing organic food is interesting	0.724
	X2: I think that purchasing organic food is a good idea	0.807
	X3: I think that purchasing organic food is important	0.770
	X4: I think that purchasing organic food is beneficial	0.855
	X5: I think that purchasing organic food is wise	0.875
	X6: I think that purchasing organic food is favorable.	0.775
Subjective Norms (SBN) (Ajzen, 2002; Arvola et al., 2008)	X7: My family thinks that I should buy organic food rather than non-organic food	0.724
	X8: Most people I value would buy organic food rather than non-organic food	0.881
	X9: People I value (such as my teacher) think you should buy organic food	0.871

	X10: My close friends, whose opinions regarding diet are important to me, think that I should buy organic food	0.753
Perceived Behavioral Control (PBC) (Ajzen, 2002; Arvola et al., 2008)	X11: If I wanted to, I could buy organic food instead of non- organic food	0.772
	X12: I think it is easy for me to buy organic food	0,721
Environmental Concern (EC) (Kilbourne & Pickett, 2008; Maichum et al., 2016; Paul et al., 2016)	X13: I am very concerned about the environment	0.862
	X14: Humans are severely abusing the environment	0.840
	IX15: I would be willing to reduce my consumption to help protect the environment	0.661
	X16: Major political change is necessary to protect the natural environment	0.519
	X17: Major social changes are necessary to protect the natural environment	0.650
	X18: Anti-pollution laws should be enforced more strongly	0.856
Purchase Intention (PI) (Ajzen, 2002; Arvola et al., 2008)	X19: I am willing to consume organic food if they are available for purchase	0.840
	X20: I intend to consume organic food if they are available for purchase	0.911
	X21: I plan to consume organic food if they are available for purchase	0.859
	X22: I will try to consume organic food if they are available for purchase	0.782

3.3 Data analysis

Quantitative study

In respect to data analysis, the accuracy and quality of the measurement device was evaluated first. Then, regression was used to analyse the effect on TPB of environmental concerns. The PROCESS model was primarily used for clarifying interactive factors. The PROCESS model for SPSS programs were developed and implemented (Hayes & Rockwood, 2017). This process makes it easier to estimate regression equations because of its convenience and ease of use (Hayes & Rockwood, 2017). Moreover, SMART- PLS is applied to analyse the relationship between variable as well as to calculate the reliability and validity.

4 RESULTS

The sample characteristics analysis of the study is illustrated in the Table 2.

Tab. 2 – Sample characteristics. Source: own research

Variable	Categories	Frequency	Percentage
Gender	Male	192	46%
	Female	228	54%
Age	Less than 20 years	37	9%
	20–35 years	196	47%
	36–50 years	159	38%
	More than 50 years	28	7%
Marital Status	Single	245	58%
	Married	170	40%
	Divorced/Widow	5	1%
Family size	1 person	42	10%
	2–3 persons	153	36%
	4–5 persons	185	44%
	More than 5 persons	40	10%
Employment status	Full-time job	184	44%
	Part-time job	52	12%
	Student	69	16%

	Housewife	49	12%
	Unemployed	15	4%
	Business	51	12%
Education	High school	31	7%
	Diploma	63	15%
	Graduate	124	30%
	Post-graduate	182	43%
	Doctorate	20	5%
Personal income-monthly (Million VND)	less than 5000000	5	1%
	5000000-15000000	53	13%
	15000000-25000000	149	35%
	25000000-35000000	130	31%
	More than 35000000	83	20%

Hair et al. (2013) suggests that Cronbach's Alpha should be 0.7 or higher with an appropriate loading of 0.5 or higher for such measurements. Furthermore, the proportion of variance explained must exceed 50 percent. Table 3 shows that this finding meets the measurement reliability and validity criteria. Average Variance Extracted values (AVE) are higher than 0.5. Moreover, we used the approach used by (Fornell & Larcker, 1981) to assess discrimination by comparing square of AVE with square correlations between constructs. In Table 4, the square of AVE exceeds the squared correlations indicating discriminant validity (Paul et al., 2016).

Tab. 3 – Expected Reliability of scales. Source: own research

Variable	Item	Corrected Item-to-total correlation	Cronbach's α	AVE	Composite Reliability
Attitude	ATT1	0.769	0.829	0.581	0.890
	ATT2	0.701			
	ATT3	0.789			
	ATT4	0.698			
	ATT5	0.739			
	ATT6	0.779			
Subjective norm	SBN1	0.749	0.761	0.656	0.883
	SBN2	0.641			
	SBN3	0.652			
	SBN4	0.761			
Perceived behavioral control	PBC1	0.743	0.689	0.635	0.694
	PBC2	0.656			
Environmental concern	EC1	0.718	0.787	0.504	0.853
	EC2	0.701			
	EC3	0.583			
	EC4	0.677			
	EC5	0.523			
	EC6	0.666			
Purchase intention	PI1	0.606	0.737	0.720	0.911
	PI2	0.597			
	PI3	0.666			
	PI4	0.557			

Tab. 3 – Expected discriminant validity. Source: own research

Construct	Attitude	Environmental control	Perceived behavioral control	Purchase intention	Subjective norm
Attitude	0.762				
Environmental control	0.375	0.710			
Perceived behavioral control	0.567	0.203	0.751		
Purchase intention	0.655	0.372	0.509	0.849	
Subjective norm	0.613	0.175	0.575	0.630	0.810

Tab. 4 – Evaluation of hypotheses testing. Source: own research

Hypotheses	Path	<i>t</i> -value	<i>p</i> -value	Hypotheses supported
H1	ATT → PI (+)	2.794	0.005	Yes
H2	SBN → PI (+)	2.336	0.020	Yes
H3	PBC → PI (+)	2.872	0.004	Yes
H4	ECxATT → PI (+)	2.454	0.005	Yes

Based on the analysis in Table 5, with $p\text{-value} < 0,05$, the analysis confirms the Theory of Planned Behaviour which illustrates the hypotheses supports of attitude, subjective norms and perceived behaviour control to purchase intention, supporting H1, H2, H3. Moreover, according to Table 5, the interaction of environmental concern and attitude ($p\text{-value} < 0.05$) positively and significantly influences purchase intention, supporting H4. With the moderation effect of environmental concern to the relationship of attitude and purchase intention, the effect show that when environmental concern increase the relationship between attitude and purchase intention increase.

5 DISCUSSION AND CONCLUSIONS

Our findings are highlighted and discussed with respect to the two research questions as follows. Regarding the first research question, the study illustrates the moderation effect of environmental concern to the relationship of attitude and purchase intention. This indicate that extended TPB has higher utility than TPB and TRA to predict organic food purchase intention in Vietnam. Moreover, according to second research question, this study confirmed relationships in TPB as a research model useful for explaining consumers' organic food purchase intention.

The study's main contribution is that the interactive effect of Environmental concern (EC) and attitude is significant and positive to purchase intention. When consumers' attitude is positive and they display higher concern for environment, they will more likely make efforts to reduce their environmental impact and have more intention to buy organic food. In the practical fields, companies understand the importance of environmental concern of their customers. Companies which have more marketing campaigns toward to environmental concern will increase purchase intention of customers. It leads to increase in revenue as well as environment protection.

Limitation and future research

The limitations of the study can be classified into two points. First, this study considers organic food only and this research model can be tested to another product in green area. Future research should test this proposed model in various green product settings, including recyclable products, green certified products, laundry and hotels. Second, more relevant variables like environmental knowledge, environmental awareness can be added to test model's sufficiency in predicting organic food purchase intentions.

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