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Model Examining Factors Affecting Purchase Intention and the Assessment of Actual Purchase Behavior toward Organic Food Products

โมเดลที่ใช้ในการตรวจสอบปัจจัยที่มีผลต่อความตั้งใจซื้อและการประเมินพฤติกรรมการซื้อที่เกิดขึ้นจริงที่มีต่อสินค้าอาหารอินทรีย์

- มันทนากรณ พิพิธธีรฤการ
- กรรมการผู้จัดการบริษัทเอ็มเบสท์คอร์ปอเรชั่นจำกัด
- ที่ปรึกษาทางธุรกิจบริษัทบุญเจริญโภคภัณฑ์ จำกัด
- ที่ปรึกษาทางการตลาดบริษัท เต้นชาลาเปา และ หจก ซีเจ แลนด์รอยัล
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บทคัดย่อ

การวิจัยครั้งนี้มีวัตถุประสงค์ คือ การค้นหารูปแบบโมเดลโดยการระบุปัจจัยที่มีผลต่อความตั้งใจซื้อของผู้บริโภค และการประเมินปัจจัยที่เกี่ยวข้องต่อการซื้อผลิตภัณฑ์อาหารอินทรีย์ที่เกิดขึ้นจริงในประเทศไทย ผลการวิจัย พบว่า ปัจจัยด้านความรู้มีผลในเชิงบวกต่อทัศนคติที่มีการบริโภคอาหารอินทรีย์ ส่วนปัจจัยที่มีผลในเชิงบวกต่อความตั้งใจซื้อสินค้า คือ ปัจจัยด้านทัศนคติ การรับรู้ถึงการควบคุมพฤติกรรมของตนเอง การคล้อยตามคนรอบข้างหรือบุคคลอ้างอิง และการเอาใจใส่ด้านสุขภาพงานวิจัยนี้ยังคง พบว่า ปัจจัยด้านความตั้งใจซื้อ ปัจจัยทางด้านประชากรศาสตร์ (การศึกษาและรายได้)

ปัจจัยทางด้านการรับรู้คุณสมบัติของผลิตภัณฑ์ (ราคาพรีเมียม ความไว้วางใจ ความหลากหลายและความพร้อมของผลิตภัณฑ์) สามารถนำมาใช้ในการอธิบายและทำนายพฤติกรรมของผู้บริโภคในการซื้อที่เกิดขึ้นจริง ข้อเสนอแนะของงานวิจัยนี้ คือ บริษัทควรมุ่งเน้นการสร้างกลยุทธ์ทางการตลาดที่มีอิทธิพลต่อปัจจัยส่วนบุคคล โดยใช้ร่วมกับปัจจัยทางประชากรศาสตร์และคุณลักษณะของผลิตภัณฑ์ โดยเฉพาะอย่างยิ่งการพัฒนาและขยายตลาดอาหารอินทรีย์ในอนาคตที่บริษัทควรมุ่งเน้นการปรับเปลี่ยนทัศนคติของกลุ่มผู้บริโภคในตลาดมวลรวมโดยใช้แคมเปญทางการตลาดที่ช่วยเพิ่มความรู้เกี่ยวกับการเกษตรอินทรีย์ที่เกี่ยวข้องกับประโยชน์ต่อสุขภาพแล้วจึงตามด้วยผลประโยชน์ทางด้านสิ่งแวดล้อมและสังคม

คำสำคัญ: พฤติกรรมผู้บริโภค ความตั้งใจซื้อ การซื้อที่เกิดขึ้นจริง สินค้าอาหารอินทรีย์

Abstract

The objective of this study was to explore the model by identifying factors affecting consumer's purchase intention and to assess the actual purchasing of organic food products in Thailand. The finding demonstrates that knowledge positively affects attitudes toward organic food consumption. The factors affecting the purchase intention are attitude, perceived behavioral control, subjective norm and health consciousness. The study also investigates if the purchase intention, demographic characteristics (income and education) and perceived product attributes (premium price, trust, variety and availability) can be used to explain and predict consumers' actual purchase behavior. The recommendation of this research is that firms should concentrate on creating marketing strategies which influence the personal determinants by combining the demographic and product attributes factors. In particular, to develop and expand organic food markets in the future, firms should aim to modify the attitudes of consumer segments in the mass market. This can be done by implementing marketing campaigns that enhance organic knowledge associated with the health benefits, followed by the benefits in terms of the environmental and societal way.

Keywords: Consumer Behavior, Purchase Intention, Actual Purchasing, Organic Food Products

Introduction

The purchase intention toward organic food products possibly becomes a good predictor of environmental and healthy food demands. However, there is a lack of explanatory models and theory building studies focusing on factors influencing purchase intention and behavior, especially for the organic food products in the Thai context. This research simultaneously provides the outcomes to make a significant contribution from the Theory of Planned Behavior (TPB) by applying relevant factors from the field of marketing concerning healthy and green related products. In addition, results from international researchers are quite different and difficult to compare, depending on their focus on various product categories. Therefore, some results cannot be used across all studies as the response toward organic food products changes according to different food habits, society, culture and national background. This research is expected to provide modern, reliable evidence in the area of organic food consumption, which marketers can use for assessing their strategy for green marketing. It is interesting to study how consumer behavior changed from the past decade.

1. Research Objective

To explore a model of consumer's purchase intentions and to assess factors affecting actual purchasing of organic food products in Thailand.

2. Research Hypotheses

H1: Knowledge has a significant positive effect on attitude toward purchasing organic food products.

H2: Attitude, perceived behavioral control, subjective norm, health consciousness and environmental concern have significant positive effects on purchase intention of organic food products.

H3: Purchase intention, demographic characteristics and perceived product attributes significantly affect actual purchasing of organic food products.

Literature Review

1. Organic Agricultures and Products

The organic product market can be considered an emerging market. Currently, the world market demand for organic food products is increasing and focuses on food quality and safety. Organic food products are manufactured and handled according to organic standards set by national governments and international organizations. However, there is a barrier for doing marketing and supporting

this trend and demand for organic products. The literature reviews show that people are interested in organic food, but there is less actual purchasing due to the limited number of distribution channels, the lack of knowledge, and the confusion about organic standards, the price premium, and the low consumer confidence level with organic declarations.

2. The Theory of Planned Behavior (TPB)

The Theory of Planned Behavior (TPB) has been widely applied in many business fields, primarily for consumer behavior. The key concept of the theory is the prediction of individual behavioral intentions (Ajzen and Fishbein, 1980). TPB comprises three general constructs: attitude, subjective norm and perceived behavioral control. TPB suggests that a person's behavioral intention depends on the combination of these three constructs that finally lead to individual behavior. TPB is also consistent in explaining consumer behavior when applying theories in organic food consumption (Aertsens, et al., 2009; Chen, 2007; Dean, Raats, and Shepherd, 2008).

3. Model of the Ecological Behavior

Laroche, Bergeron, and Barbaro-Forleo (2001) have developed a conceptual model which concentrates on consumer's behaviors involving a willingness to pay more for

environmentally friendly products. Five factors in the model are demonstrated through literature as demographic characteristics, ecological knowledge, behavior, attitude and value that impact the willingness and decision making for purchasing environmentally friendly products. They proposed that these five factors are the critical factors in predicting green consumer behavior. Similarly, these factors are expected to be able to adjust in predicting the context of organic consumers.

4. Knowledge

People sometimes may not buy organic products because they do not know which organic products benefit them. In addition, people often have difficulty identifying the products because they do not understand the relevance or the engaging marketing (Pickett-Baker and Ozaki, 2008). Therefore, knowledge is the factor in understanding why consumers buy organic products. Knowledge represents the instrument that consumers have to differentiate the attributes of organic products from those of the convention (Gracia and de Magistris, 2007: 442). In particular, food knowledge has the largest significant impact on the probability reasons that consumers intend to buy organic food products (Zepeda and Li, 2007).

5. Value of Environmental Concern and Health Consciousness

Environmental concern and health consciousness are psychographic characteristics, which are significantly related to the purchase intentions of organic food (Salleh, et al., 2010). Environmental concern can be generated by individual experiences and communications in their social environments. Techasawat (2011: 151) states that people can show their individual responsibility concerning consumption by acting upon it immediately and continuously, since peoples' consumption led to a significant impact on the environment and they should perform the behavior as a green concept. Therefore, focusing on organic consumption is a good choice for the green concept. Previous research indicates that there is a significant influence of environmental concern in terms of organic food purchasing (Harper and Makatouni, 2002; Honkanen, Verplanken, and Olsen, 2006). Health consciousness also plays a major role in purchasing organic products. Health and food safety are found to be the main reasons for consumers' motivation to purchase organic food products (Chakrabarti and Baisya, 2007; Magnusson, et al., 2003).

6. Factors Affect on Actual Purchasing

Many studies (e.g., Gracia and de Magistris, 2007; Lodorfos and Dennis, 2008)

have found the link between the intent to purchase and the actual behavior, which are positive and significant. In addition, demographic characteristics are associated with the intention and behavior of organic consumption in terms of age, gender, education, income and marital status. As some relevant studies (Aertsens, et al., 2009; Lea and Worsley, 2005; Magnusson, et al., 2001; Radman, 2005; Smith, Huang, and Lin, 2009) show, there is a significant relationship between these variables and the purchasing behavior of organic food products. Pickett-Baker and Ozaki (2008) present that the appropriate perceived product attribute strategies are positively perceived in consumer's preference for products. Some studies suggest that perceived product attributes of food should consist of quality, nutrition, environment friendly, non-toxic, confidence in secure labeling, at a reasonable price and conveniently available (Fieldhouse, 1995; Straughan and Roberts, 1999). In particular, the attributes of organic food products should be promoted as the environmental information concerns, food safety, nutritional value and trustworthy labels (Lodorfos and Dennis, 2008; Tsakiridou, et al., 2008). Moreover, the price premium, the lack of product variety and the lack of product availability (Aertsens, 2011; Aertsens, et al., 2009) are important barriers for consumers in purchasing organic food products.

Research Methodology

This research design is divided into two stages. The first stage explores the model of purchase intention by using in-depth interviews and a field survey. The in-depth interview is designed by focusing on informants with at least three years experience working in various functions related to organic products

and consumers. Their opinions are used to support and confirm the hypotheses and findings. The field survey uses a self-report questionnaire with the questions measured by 5-point Likert scale. The second stage survey is longitudinal and based on the completed data collection from the first survey. In summary, the overview of research methodology is presented in Table 1.

Table 1 Overview of Research Methodology

Topic	First stage	Second stage
Objective	Explore the factors and model of purchase intention	Define factors and assess the actual purchase behavior
Sample	Customers who go shopping at the place where organic food products are available	Respondents who participated in answering the questionnaire in the first stage and left a contact address
Sample size	622 respondents	234 respondents
Data collection	Field survey at retail store, trade fair and exhibition	e-mail and telephone call
Statistical tools	Descriptive measures (SPSS) Structure Equation Model (LISREL)	Descriptive measures (SPSS) Binary logistic regression(SPSS)

Findings

1. Profile of Respondents

There were 622 copies collected from respondents. The vast majority of respondents were females, 65.1%, while 34.9% males participated. Most respondents, 38.9%, were in the range of 36 to 50 years old, while 28.8% of respondents were 51 to 65 years old, 21 to 35 years old were 22.2%, older than 65 years old were 7.7% and below 20 years old were 2.4%. In addition, 39.6% of respondents

had a Bachelor's Degree, followed by 26.2% with a Master's Degree, 20.7% who had a diploma, 10.1% who held a high school certificate, and 3.4% whose education was higher than a Master's Degree. Considering respondents' annual incomes, 26.8% of participants had annual incomes between 10,001 to 30,000 Thai baht, and 24.2% earned less than 10,000 Thai baht. Twenty-two point five percent of participants earned between 30,001-50,000 Thai baht, 14.8% earned between 50,001-70,000 Thai baht, and 11.7% earned more

than 70,000 Thai baht. According to marital status, 59% of respondents were single, 39.6% were married, and only 1.4% fell in the other category.

2. The Internal Consistency

The internal consistency and reliability of each construct was determined by using

Cronbach's alpha. The result shows that values of Cronbach's alpha for this research are robust, ranging from 0.70 to 0.87, which indicates high internal consistency among the variables within each factor. The value of Cronbach's alpha for each construct is presented in Table 2.

Table 2 Cronbach's Alpha of the Item Analysis

Items	Cronbach's Alpha
Objective Knowledge	0.80
Subjective Knowledge	0.83
Environmental Concern	0.70
Health Consciousness	0.73
Attitude toward Behavior	0.81
Perceived Behavioral Control	0.74
Subjective Norm	0.72
Perceived Product Attributes	0.82
Purchase Intention	0.87

Moreover, the principal components factor analysis with varimax rotation was used in this study. All factors have eigen values that are greater than 1, this is considered significant. Most of the factors loadings are of 0.40 or higher. The final factor analysis generated eight factors and accounted for 63.84 percent of the total variance.

3. The Model of Purchase Intention of Organic Food Products

All estimated parameters of the structure model are summarized in Table 3.

Table 3 Summary of Estimated Parameters from the Final Structure Model

Parameter and Relationship		Standardized Coefficient	t-value
<u>Exogenous Endogenous</u>			
Knowledge	—————→ Attitude	0.83	8.00***
Perceived behavioral control	—————→ Intention	0.11	2.11*
Subjective norm	—————→ Intention	0.21	4.73***
Health consciousness	—————→ Intention	0.18	3.27**
Environmental Concern	—————→ Intention	0.09	1.55
<u>Endogenous Endogenous</u>			
Attitude	—————→ Intention	0.50	6.76***
<u>Structure Equation</u>			
Construct	R²		
Attitude	69		
Intention	57		
<u>Summary Statistics</u>			
Chi square= 156.70, df = 153, p =0.40, RMSEA=0.006, GFI=0.98, AGFI=0.96, CFI=1, IFI=1			

Note: *significance at 0.05 level, 1.96 $p \leq 2.58$; **significance at 0.01 level, 2.58 $P \leq 3.28$; ***significance at 0.001 level, $P \geq 3.28$

Table 3 shows six relationships between exogenous and endogenous constructs. Knowledge has a positive direct effect on attitude at 0.83. Attitude, subjective norm, health consciousness, perceived behavioral control and environmental concern has a positive direct effect on behavioral intention at 0.50, 0.21, 0.18, 0.11 and 0.09, respectively.

The t-value indicates the significance of the data; the results show that the coefficient of each parameter is significant only under “environmental concern” does the t-value of 1.55 not reach the criteria of confidence at $p < 0.05$ ($t\text{-value} > 1.96$). R-square (R) represents the relative amount of variance of the independence variable Y explained

by the explanatory variable Xi. The R-square for attitude is 69, which implies that the explanatory variable knowledge explains 69% of the variance of attitude. Likewise, the explanatory variables of attitude, perceived behavioral control, subjective norm, health

consciousness, and environmental concern explain 57% of the variance of purchase intention. In summary, the modified structural equation model had good overall model fit indexes. The model is presented in Figure 1.

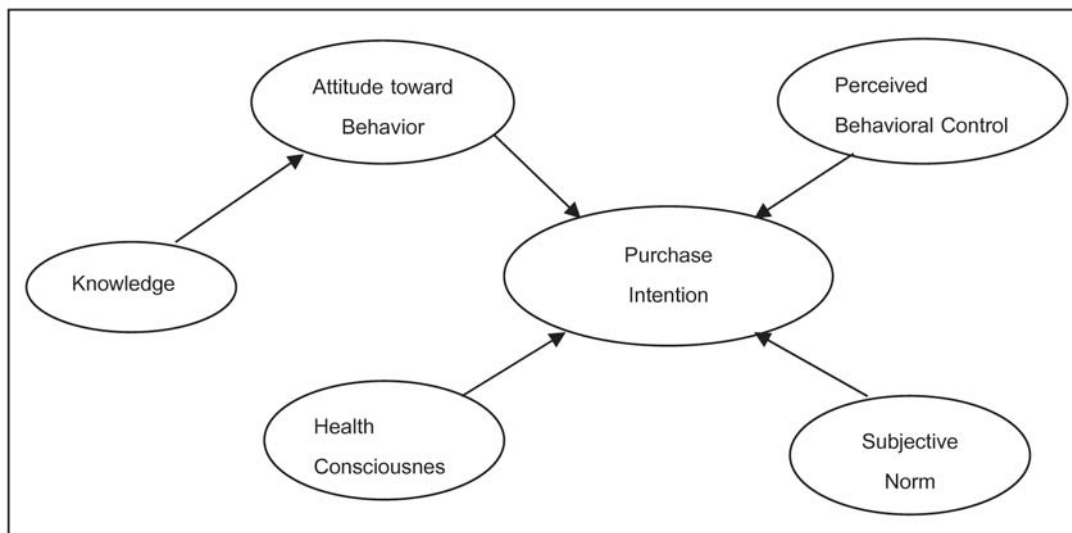


Figure 1 Model of the Purchase Intention toward Organic Consumption

4. The Assessment of Actual Purchasing

The results from the second survey show that about 80% of the respondents who have the intention to purchase, actually buy organic food products. In particular, the vast majority of respondents often buy organic food products 3-4 times per week. The response rate of 409 respondents is 65.75% of 622 respondents with valid contacts. Returned responses comprised 234, or 57.72% of 409 valid contacts. Data collection was completed by phone and e-mail in this second survey. The results from binary logistic regression

show the significant effect from three constructs of purchase intention, demographic characteristics and perceived product attributes on actual purchasing. The purchase intention had a significantly positive effect on actual purchasing. From among the demographic characteristics comprising age, gender, education, income and marital status, only education and income positively significantly affected the actual purchasing. Moreover, the result from the variable of perceived product attributes shows that the actual purchasing of organic food products is affected by price

premium, product trust, product variety and product availability.

Discussions

1. The Components of the Theory of Planned Behavior (TPB)

The results indicate that attitude, perceived behavioral control and subjective norms significantly explain the purchase intention. In particular, findings show these factors have a direct positive effect on purchase intention. This result has confirmed the consistency of the constructs in the TPB model and are similar to the findings from previous studies (Aertsens, et al., 2009; Gracia and de Magistris, 2007; Magnusson, et al., 2001). Besides, attitude is the most significant single factor among the three. Therefore, it can be implied that people who hold a positive attitude toward organic food products will have a strong purchase intention. The positive attitude is influenced by knowledge, which people have about organic products (objective knowledge) or they think they know about it (subjective knowledge). This finding is also supported from a prior study (Aertsens, et al., 2009).

2. Personal Value Orientation

Findings show the value of health consciousness and environmental concern play a role in predicting the purchase intention.

People who are health conscious intend to buy organic food products, based on the perception that organic food products are healthy. However, environmental concern has an insignificant effect on the purchase intention. It can be implied that people normally focus on the egoistic value orientation in terms of the health motives than altruistic value orientation which involves an environmental concern (Magnusson, et al., 2003; Salleh, et al., 2010). Thus we may conclude that an environmental concern has less influence than health consciousness. Moreover, findings from this research reveal that the different regions to some extent affect consumer's values and perceptions. Prior research conducted in a developed country mostly found that environmental concern played a significant role (e.g., Harper and Makatouni, 2002; Honkanen, Verplanken, and Olsen, 2006; Laroche, Bergeron, and Barbaro-Forleo, 2001). While a few research conducted in developing countries show less significance for the role of environmental concern in organic consumption (e.g., Birgit, et al., 2008; Salleh, et al., 2010).

3. The Model of Consumer's Purchase Intention toward Organic Consumption

In attempting to integrate all related factors from personal determinants in explaining the purchase intention, the result show that the added factors fit well in the modified model in Figure 1. This model

describes the relationships of factors influencing Thai consumers who have the purchase intention regarding organic food products. The variables of attitude, perceived behavior control, subjective norm and health consciousness have a direct effect on the purchase intention. Additionally, there is a significant direct effect of knowledge on attitude, and an indirect effect of knowledge on the purchase intention. The inclusion of factors significantly increases the predictive ability of consumers' purchase intention toward organic food products.

4. The Assessment of Factors Affecting Actual Purchasing

The purchase intention is strongly associated with actual purchasing. In addition, the income and education can be considered in predicting which consumers actually buy organic food products. In particular, respondents in this study, who have a higher level of education than a Master's Degree and have a higher income (50,001-70,000 baht), will be most likely to buy organic foods products. The high level indicates that purchasing power and ability to pay affect purchasing of organic food. The perceived product attributes, known as the marketing tools for marketers, play an important role in actual purchasing. The perceived product attributes of organic or other related products should be trustworthy, include a variety and be

available in the market. In addition, the important role of product variety and availability may indicate that there is a lack of organic food products offered in Thai market. The increasing demand is still not met by the increase of the supplied quantities, and the distribution channel does not support the consumer's demand. In addition, the factor of the price premium for organic food products must be considered carefully.

Recommendations

The recommendation for academicians or researchers who are interested in the field of consumer behavior is that they can apply and adapt this new model to support or explain their thesis in other contexts such as the green or fair trade products, or healthy activities. It is also recommended to measure the actual behavior by comparing the actual purchasing from respondents who have different levels of intention. It may be desirable to investigate the classification or levels of organic consumers. In addition, researchers should focus on or extend more and various variables, or the use of personal value and knowledge factor along with marketing mix strategy, which will help to understand and facilitate the development of new behavior patterns.

In terms of business, a firm can alter some strategies by investing in the development of the organic product segment. Firms may

also gain from new customers and the existing customers who potentially buy the additional products. The finding shows that most customers, when they purchase organic food products, will follow their intention with the help of knowledge and health consciousness rather than other reasons. Firms may launch a new marketing strategy by implementing the intention and behavior from factors in this finding. In addition, firms can gain an advantage by initially moving occupants of the organic market segment. Firms should use technological tools and focus on the role of Research and Development (R&D) function in order to develop new products with cheaper prices than competitors. Firms may try to use the new method in order to reduce costs and maximize resource efficiency. It is recommended that firms should work together with suppliers or farmers. Prior research (Glinubol, 2010: 15) shows that Thai farmers' goals are to reduce the cost of production. Therefore, firms and farmers can combine the organic method, environment management and the philosophy of sufficiency economy. Practicing the use of all renewable resources through the value chain in organic farming is also recommended. Moreover, firms must offer more product variety and availability of new product lines which still does not exist in the market. The type and size of the retailers may affect the product distribution channel. Firms may concentrate

on the large retailers, which can offer the space and branches for products. In addition, to provide the balance of supply and future demand, firms should have good planning regarding product inventory, forecast the order quantity in advance and carefully manage the logistic with suppliers. Firms must ensure that their products are widely available and offer enough variety to move consumers from the intention stage to actual purchasing. In terms of marketing activities, firms can reach different consumer segments by selecting the communication media, which is seen as the stimulus for enhancing the relationship between firms or products and consumers. Firms should focus on increasing knowledge by providing related information to consumers, such as the use of product tags, public administration or the reference information provided by organic farmers and scientists. Moreover, firms should explore which kind of reference or social groups has the most influential power in persuading consumers to adopt organic food products. Firms must ensure that the communication program should reach all these groups instead of the target markets only. Besides, it is also recommended that firms should add value and invite consumers to learn about the health and environmental benefits. Firstly, the health conscious factor is the main positive factor, which should be emphasized. Secondly, the environmental concern should

be offered as the additional choice and incorporated with marketing strategies. It is important that firms must focus on the advertising and promotion to increase the familiarity and image of this concept. Besides, to develop an organic food market in the future, firms must focus on modifying the attitudes of consumer segments in the mass market by implementing marketing campaigns that raise awareness and increase knowledge about organic production heavily associated with the health benefits, safety and then followed by environmental and societal benefits.

The suggestions for the government sector are that the government must focus on supporting and pushing for standard labeling of organic products to increase in value; the use of a certified organic unity that should not cause confusion; any regulations and laws to prevent and control organic farming; and supporting the agriculture facility to motivate and persuade farmers is also strongly recommended. Moreover, in order to promote the export capacity of organic products, the government should promote meetings, conventions or exhibitions, and to strongly develop the new image in order to present Thailand as a regional hub for the organic sector. A campaign for an organic food land will potentially motivate the target tourists all over the world. In terms of the organic knowledge, the government should

promote Thai consumers to become interested in and adopt more organic consumption. Furthermore, the Government should provide the availability of specialist information sources and set up an educational knowledge base related to sustainable consumption, organic agriculture through an academic institution.

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