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Research Article

Factors Influencing Consumers' Purchase Intention for Organic Food Products in Thailand

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Abstract

Although organic food is increasingly popular globally, as a consumer market Thailand has been slow to adopt the organic movement. This research aimed to investigate factors in Thai consumer's choice of organic food. An online consumer survey (n = 385) was conducted, collecting data about these factors and about consumers' purchase intention of organic food. Results were analyzed using a regression approach. The findings showed that environmental awareness, environmental concern, institutional trust, perceived risk, and perceived availability had a positive effect on consumers' purchase intention for organic food, while price sensitivity had a negative effect. All effects were significant at $p < .05$. The study findings imply that there are ways to improve consumers' purchase intention of organic food in Thailand, namely improving environmental education, clarifying the role of organic certification, and increasing availability and reducing cost of organic food.

Keywords: Consumer decision making, Consumers' purchase intention, Environmental awareness, Environmental concern, Institutional trust, Organic food, Perceived risk, Perceived availability, Thailand

Introduction

The organic food movement began as a counter-movement to the Green Revolution in the 1960s and 1970s, during which time agricultural practices were modernized and rapidly industrialized in many countries (Reed, 2010). Although the organic movement began in the United States and Europe, it has since spread globally to both developed and developing countries (Francis, 2011). Since the early 2000s, the global organic food market has grown dramatically. As of 1999, global sales were estimated at $15.2 billion, while by 2017 these sales had reached $97 billion, representing an average growth of 29.9% per annum (Statista, 2019a). However, the growth of the organic food market has not been equally distributed. North America accounted for 47% of global organic sales in this year, while Europe accounted for approximately 42% (Statista, 2019b). In contrast,

Asia and Africa accounted for only approximately 6% of total organic food sales. Thus, it is worth investigating conditions in different markets to identify differences in adoption rates for organic food.

The objective of this research is to investigate the factors that contribute to the consumers' purchase intention of organic food rather than equivalent non-organic food in Thailand. Thailand has low market penetration of organic food, with a market size of $15.2 million in 2017, equivalent to $0.23 per capita spending on organic food (Organic Trade Association, 2019). The market is growing, with an estimated growth rate of 6.6% compound annual growth rate (CAGR) (2017 to 2022), but this is still slower than the average of 13% growth in this market for the Asia Pacific region. This relatively slow growth rate, despite Thai consumers' relatively high buying power (Organic Trade Association, 2019), raises the question of why Thai consumers have been slow to adopt organic food. Several studies have investigated this question, finding various factors that have influenced consumers' purchase intention of organic food ranging from knowledge to price sensitivity to perceived risk and institutional trust (Roitner-Schobesberger et al., 2008; Sangkumchaliang & Huang, 2012; Nuttavuthisit & Thøgerson, 2017). However, these studies have focused on different aspects of the consumers' purchase intention, whereas in fact consumers may be influenced by a range of different factors, some of which will not come into play unless others are also present. For example, would it be likely that a consumer would consider the perceived risk of organic food if they did not view it as available in the first place? To date, none of the studies conducted in Thailand has taken on an integrative model that addresses both environmental and consumer attitudes surrounding organic food. This research uses an integrative approach to identify the relative effect of these factors, thus filling this research gap.

Literature Review

Six factors have been identified in the literature that influence consumers' purchase intention of organic foods, both in general markets and in Thailand. These factors include environmental awareness, environmental concern, price sensitivity, institutional trust, perceived risk, and perceived availability.

Environmental Awareness

Environmental awareness refers to consumer knowledge about the environment and the impact of personal choices on the environment (Paul & Rana, 2012). Dimensions of environmental awareness are "environmental knowledge, environmental values, environmental attitudes, willingness to act, and actual action (Paul & Rana, 2012, p. 413)." There is evidence that environmental awareness influences consumers' purchase intention of organic food. Paul and Rana (2012) showed that environmental benefits were among the overall benefit of organic food, although the perceived health of the product was more important. A study of Chinese consumers also showed that environmental awareness was a significant factor in the choice of organic food (Zhu et al., 2013). A similar relationship of environmental awareness and organic food consumption was shown in a study of Malaysian consumers (Mohamad et al., 2014). Studies of Thai consumers have showed that environmental awareness with regard to organic food is relatively low (Roitner-Schobesberger et al., 2008; Sangjumchaliang & Huang, 2012), which one study has shown is also the case with Malaysian consumers (Mohamad, et al., 2014). The first hypothesis states:

Hypothesis 1: Environmental awareness has a positive influence on consumers' purchase intention for organic food.

Environmental Concern

Environmental concern is a personal attitude of concern about the impact of consumption or other activities on the environment (Shafie & Rennie, 2012). Environmental concern extends beyond awareness or environmental knowledge and into a feeling of personal responsibility for the environment. Environmental concern was identified by Paul and Rana (2012) as a factor in frequent organic food purchase. Shafie and Rennie (2012) also identified environmental concern as a critical factor in the choice of organic food, explaining that consumers viewed organic food as a way to contribute to care for the environment, for animals and for sustainability. It has also been noted as one of the historical motivations behind the organic movement, with consumers beginning to choose organic food because of deep concern about the environment and their role in environmental protection (Pearson et al., 2011). There is no direct evidence from Thai consumers, but these studies indicate that environmental concern has historically been a factor in the growth of the organic market. Therefore, hypothesis 2 states:

Hypothesis 2: Environmental concern has a positive influence on consumers' purchase intention for organic food.

Price Sensitivity

Price sensitivity refers to the consumer's prioritization of the price of products in their purchase decision (Ramirez & Goldsmith, 2009). Price sensitivity is to some extent cultural, but it is also determined by individual socioeconomic factors, brand loyalty, and other factors related to a specific purchasing decision (Ramirez & Goldsmith, 2009). Price sensitivity is a factor in organic food consumption because organic foods tend to be more expensive than conventional equivalents, which increases resistance to purchase in price-sensitive consumers (Kavaliauske & Ubartaite, 2014). Previous studies have indicated that Thai consumers are price-sensitive when it comes to organic food, perceiving organic food to be much more expensive than conventional equivalents and unaffordable (Roitner-Schobesberger et al., 2008; Sangkumchaliang & Huang, 2012). Other studies have found that price sensitivity may prevent purchase of organic food or limit it to higher-income consumers (Pearson et al., 2011; Paul & Rana, 2012; Shafie & Rennie, 2012; Zhu et al., 2013), although some consumers are willing to pay (Mohamad et al., 2014). Therefore, Hypothesis 3 states.

Hypothesis 3: Price sensitivity has a negative influence on consumers' purchase intention for organic food.

Institutional Trust

Institutional trust is the consumer's belief that the public and private institutions tasked with oversight of organic food production are reliable and providing the service they claim (Sønderskov & Daugbjerg, 2011). This factor is essential because organic foods are credence goods, or goods where consumers cannot validate claims about production values on their own and instead have to rely on eco-labeling certifications or other external evidence (Nuttavuthisit & Thøgerson, 2017). Sønderskov and Daugbjerg (2011) showed that consumers in countries like Denmark, where there is high state involvement in eco-labeling, had stronger institutional trust, which influenced their willingness to purchase organic foods. Countries that used market-based certifications showed much lower trust levels. Nuttavuthisit and Thøgerson (2017)'s study reported very low institutional trust in Thai eco-label certifications, which were viewed as both confusing and lacking full control and oversight of the organic market. This had one of the strongest negative effects on trust in organic products (Nuttavuthisit & Thøgerson, 2017). Therefore, hypothesis 4 states:

Hypothesis 4: Institutional trust has a positive influence on consumers' purchase intention for organic food.

Perceived Risk

Perceived risk refers to the consumer's perception that a particular product poses an unknown danger (Teng & Wang, 2015). In this study, perceived risk is evaluated specifically in the context of food safety, or the perception that conventional food is safe in general or that organic food is safer than conventional food (Liu et al., 2013). Liu et al. (2013) and Zhu et al. (2013) found that the perceived risk associated with food safety in China is one factor in consumers' purchase intention of organic food. The perception of food safety risks has also been shown to be a reason for organic food choice by Thai consumers (Roitner-Schobesberger et al., 2008; Sangkumchaliang & Huang, 2012). However, there is also a problem of confusion in the Thai market, with several different certifications featuring 'safe' or 'food safety' as credence claims in addition to organic labels (Sangkumchaliang & Huang, 2012). Thus, these findings are not certain. To test the relationship between the perceived risk of existing food safety systems and organic food purchase, hypothesis 5 states:

Hypothesis 5: Perceived risk has a positive influence on consumers' purchase intention for organic food.

Perceived Availability

Perceived availability refers to the consumer's perception that they can find organic food easily (Roitner-Schobesberger et al., 2008). Perceived availability varies widely between countries, because of differences in organic distribution and inclusion in mainstream retail supply chains, according to a study of five countries (USA, Canada, Germany, Russia and Ukraine) (Soyez et al., 2012). Simply, consumers cannot purchase what they do not have available (Pearson et al., 2011). Previous studies have demonstrated that perceived availability of organic food has a positive effect on consumers' purchase intention to buy organic food in different markets according to studies in Canada, China, Germany, Italy, Lithuania, Malaysia, Ukraine, and the United States, as well as reviews of studies conducted in multiple markets (Pearson, et al., 2011; Paul & Rana, 2012; Soyez, et al., 2012; Zhu, Li, Geng, & Qi, 2013; Annunziata & Scarpato, 2014; Kavaliauske & Ubartaite, 2014; Mohamad et al., 2014). This is also the case for consumers in Thailand, who often view organic food as unavailable or inconvenient to purchase (Roitner-Schobesberger et al., 2008; Sangkumchaliang & Huang, 2012; Nuttavuthisit & Thøgerson, 2017). These studies all indicate that consumers do consider availability, or in some cases convenience, in their choice of organic food in retail purchases. Therefore, the final hypothesis is:

Hypothesis 6: Perceived availability has a positive influence on consumers' purchase intention for organic food.

Conceptual Framework

In conclusion to the literature review, it can be stated that environmental awareness, environmental concern, price sensitivity, institutional trust, perceived risk and perceived availability are very likely to influence consumers' purchase intention for organic food in Thailand, as they have been shown to have an influence in other markets. The conceptual framework (**Figure 1**) demonstrates the relationships tested using the methodology presented in the next section.

Methods

Data was collected using an online survey of Thai consumers (n = 387). A minimum sample size of 385 members was set using a standard sampling formula (Krejcie & Morgan, 1970), since the exact population size was not known but expected to be very large. The sample was selected using a convenience sample of respondents to Facebook-based survey invitation. This approach was selected because of high use of Facebook by Thai consumers 93% of Thai Internet users use Facebook (Statista, 2019c), which meant that it would be possible to reach consumers in different cities and in the provinces. A sampling frame was applied to restrict

respondents to age 18+ for ethical reasons, thereby avoiding child research.

The questionnaire was developed based on previous studies (Roitner-Schobesberger et al., 2008; Ramirez & Goldsmith, 2009; Sangkumchaliang & Huang, 2012; Shafie & Rennie, 2012; Zhu et al., 2013; Nuttavuthisit & Thøgerson, 2017) as there is no single instrument or accepted measure that addresses these measures. According to **Table 1**, each of the variables was measured using five-point Likert scales (1 = strongly disagree, 5 = strongly agree). Cronbach's alpha ($\alpha \geq .700$) was used to assess internal consistency of the scales (Bryman & Bell, 2015). Alpha scores were measured using the first 30 items, to ensure the scale could be adjusted if required.

Data was analyzed in SPSS. Analysis was conducted using multiple linear regression. Multiple regression was chosen as the analysis tool because this allows the researcher to identify the overall relationship of the predictor factors and the outcome variable (Hair et al., 2011). The significance of individual factors was accepted at $p < .05$ for the t-test, indicating that this factor was significant in the regression (Hair et al., 2011).

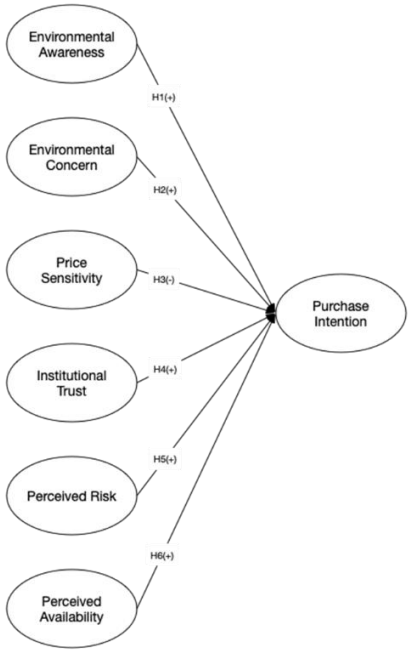

Figure 1 Conceptual framework

Table 1 Questionnaire reliability

Scale	Items	Sample Item	α
Environmental Awareness	3	Agriculture can have a negative effect on the environment.	.784
Environmental Concern	3	I am worried about the state of the planet.	.755
Price Sensitivity	3	Price is a factor in what I buy.	.848
Institutional Trust	3	Organic labels can usually be trusted.	.702
Perceived Risk	3	Conventional food can be dangerous.	.730
Perceived Availability	3	I know where to buy organic food.	.911
Behavioral Intention	3	I plan to buy organic food products.	.896

Findings and Discussion

Findings

A respondent profile is provided in **Table 2**. This shows that most respondents were female, relatively young (age 18 to 35), and educated to a tertiary level.

Table 2 Demographic profile

Demographic Profile	n	%
Gender		
Female	261	67%
Male	114	29%
Other/Prefer not to say	12	3%
Total	387	
Age		
18-25 years	138	36%
26-35 years	142	37%
36-45 years	83	21%
46-55 years	15	4%
55+ years	9	2%
Total	387	
Education		
High School or Lower	15	4%
Vocational Diploma	22	6%
Bachelor	202	52%
Master	100	26%
Higher than Master	48	12%
Total	387	

Table 3 summarizes the descriptive statistics for the variables. The skewness and kurtosis indicated that the variables are normally distributed, meeting the assumptions of linear regression.

Measures for reliability (CR > .700), convergent validity (AVE > .500), discriminant validity (MSV < AVE) and collinearity (VIF < 10) are shown in **Table 4**. As this shows, the variables passed the required checks for reliability and validity. Furthermore, the model did not show a high degree of collinearity between variables.

Discussion

The regression model was significant (F = 168.320, p < .001). The model was well fitted (R2 = .726, adj. R2 = .722). This indicates that 72.2% of the variance in Purchase Intention was caused by variance in the six factors identified as potential determinants. The coefficients (**Table 5**) identify the effect of each of the factors.

The findings show that all six of the determinant factors were significant at p < .05 or lower, including Environmental Awareness (t = 4.122, p = .036); Environmental Concern (t = 6.959, p < .001), Price (t = -3.708, p < .001), Institutional Trust (t = 3.338, p = .018), Perceived Risk (t = 6.619, p < .001), and Availability (t = 3.367, p = .002). The standardized coefficients indicate that the strongest effect was seen from Environmental Concern, followed by Perceived Risk, Institutional Trust, Environmental Awareness, Price Sensitivity, and Perceived Availability. Of these factors, five were positive, and only price sensitivity was negative.

The findings allowed all six of the hypotheses to be accepted, as there were five significant positive factors (Environmental Awareness, Environmental Concern, Institutional Trust, Perceived Risk, and Perceived Availability) and one negative factor (Price Sensitivity). These findings were as expected given the conceptual framework, which was developed from a literature review on the previous factors identified both in Thailand and elsewhere. Thus, the discussion focuses on how organic food can be promoted in Thailand given the role of these factors.

Table 3 Descriptive statistics

	Environmental Awareness	Environmental Concern	Price Sensitivity	Institutional Trust	Perceived Risk	Perceived Availability	Buying Intention
Mean	2.80	2.91	2.12	2.64	3.06	2.51	3.05
S.D.	1.347	1.310	0.965	1.367	1.367	1.118	1.445
Kurtosis	-1.205	-1.180	0.643	-1.115	-1.257	-1.359	-1.378
Skewness	0.153	0.033	0.799	0.339	-0.032	-0.017	-0.054

Table 4 Reliability, validity and collinearity measures

Variable	CR	AVE	MSV	VIF
Environmental Awareness	.718	.516	.505	1.020
Environmental Concern	.802	.602	.597	.895
Price Sensitivity	.765	.605	.584	1.195
Institutional Trust	.782	.580	.566	1.802
Perceived Risk	.720	.591	.542	1.862
Perceived Availability	.793	.600	.501	2.202

Table 5 Coefficient table

	Coefficients	S.E.	t	p
Intercept	.110	.140	.788	.431
Environmental Awareness	.180	.067	4.122	.036
Environmental Concern	.338	.077	6.959	<.001
Price Sensitivity	-.168	.045	-3.708	<.001
Institutional Trust	.187	.061	3.338	.017
Perceived Risk	.270	.056	6.619	<.001
Perceived Availability	.148	.035	3.367	.002

Environmental concern and environmental awareness were among the strongest factors in the decision to purchase organic food. This suggests that consumer education about organic food and the environmental impact of conventional agriculture could increase consumer willingness to buy organic. This has been identified as a possible solution in previous studies in Thailand, given the low levels of environmental awareness and environmental concern (Roitner-Schobesberger et al., 2008; Sangjumchaliang & Huang, 2012). Thus, a first step for improving organic sales is to promote environmental awareness and concern, for example through schools or a public information campaign. Perceived risk findings also indicate it is important for retailers to indicate where organic food is safer than conventional food. This type of indication could help consumers understand the difference between organic and conventional food, by demonstrating that in some cases organic food may be safer. However, care would need to be taken to not imply that conventional food is unsafe, which in most instances would not actually be true. Thus, any educational campaign should be designed very carefully.

A second observation relates to the effect of the retail supply chain. These studies show that consumers are less likely to buy organic food if it is perceived as very expensive, which has been supported by several previous studies (Paul & Rana, 2012; Pearson et al., 2012; Shafie & Rennie, 2012; Zhu et al., 2013). This implies that lowering the cost of organic food could increase consumers' purchase intention. At the same time, consumers' responsiveness to perceived availability, which is also frequently a factor in organic purchase (Pearson et al., 2011; Paul & Rana, 2012; Soyez et al., 2012; Zhu et al., 2013; Annunziata & Scarpato, 2014; Kavaliauske & Ubartaite, 2014; Mohamad et al., 2014), indicates that consumers will not buy organic food unless it is available. Thus, the role of the supply chain is to provide wide, convenient, and less expensive organic food.

A third observation is the role of institutional trust, which was also strong. Institutional trust in eco-labels in Thailand is weak, because of perceived poor management of eco-label certifications and a wide and confusing array of private labelling programs (Nuttavuthisit & Thøgerson, 2017). One other study has shown that strong government control of eco-label programs increases institutional trust and consumer acceptance of organic food (Sønderskov & Daugbjerg, 2011). Thus, a final way to improve the consumer perceptions and choice of organic food in Thailand is for the government to take an active role in eco-label certification programs. However, producers should also play an active role in these programs, to make sure that the certifications are balanced between government oversight and accountability and grower ethics and practices.

Overall, this research has contributed to the literature by identifying factors that have an influence on consumer behavioral intentions toward organic food in Thailand. These factors are consistent with those that have been identified in other markets, but investigation of the holistic model shows that some of these factors, especially price sensitivity, had a more substantial effect than others.

Conclusion

This study has investigated the factors that influence consumers' purchase intentions for organic food in Thailand. The study found that there were several factors that influenced consumers' purchase intention. For example, knowledge and attitudes such as environmental awareness and environmental concern, which promoted purchase intentions. Price sensitivity had a negative effect, which was not unexpected given that organic food has a premium price compared to most food in Thailand. Finally, there were three factors that are related to the organic retail industry in Thailand, including institutional trust, perceived risk of the conventional food supply

chain, and perceived availability of organic food. These findings offer guidance for organic food businesses and government to improve consumers' purchase intention of organic food, for example through education, supply chain investment, and government oversight of eco-label programs and other institutions.

There are some limitations to this study. One of these limitations is that the sample may not be representative, especially as online research does not reach all consumer groups. Another limitation is that the respondents were not asked about specific products or product categories, but instead were asked about organic food in general. Furthermore, because the study was conducted via Facebook, it cannot be guaranteed that the sample is representative and there may be sampling bias. Additionally, only six possible factors were selected based on the weight of evidence, but other factors could also influence choice.

These limitations offer some opportunities for additional research into organic food consumers in Thailand. One of these opportunities is more detailed consumer segmentation research, which could help identify what types of consumers buy organic food and the barriers that are faced by non-buyers. Another opportunity is investigation of what benefits Thai consumers perceive for organic food, which promotes or prevents purchase.

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