THE INFLUENCE OF PERCEIVED RISKS ON CUSTOMER LOYALTY OF ENVIRONMENT-FRIENDLY ELECTRONICS PRODUCTS IN THAILAND

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The forces of going green are now extending to the Thailand region, where environmental threats are alarming local governments and citizens. Environment knowledge may help to cause more understanding, motivation, eco-friendly attitude, and perceive of environmental problems. Consumer perception is very important factor concerning green marketing management, as well as building conscious mild of being responsible and encouraging participation in environmental activities for the benefit of social. Consumer perception is viewed to be motivational constructs, influencing subsequent consumer behaviors, as well as extensiveness of the decision-making process. Perceived risks are that level of risk a consumer believes exists regarding the purchase of a specific product. Prior literature found that perceived risks influenced on customer loyalty. There was evidence to support a negative relationship between perceived risks and customer loyalty. Consequently, the independent variable in this research suggested a six-dimension construct of consumer-perceived risk : functional risk, performance risk, physical risk, psychological risk, social risk and financial risk. Although the literature about the relationship of mentioned variables are rich, no work has been focused on the customer loyalty of environment-friendly electronics products. It is necessary to investigate the influence of these variables in Thailand context. This research employs an empirical study by means of the questionnaire survey method to verify the hypotheses. Data will be collected from customers who buy and use environment-friendly electronics products in Thailand sectors. The data will be analyzed using multiple regression analysis. Results from multiple regression analysis showed the negative association between the six factors mentioned previously with customer loyalty.

Keywords: Consumer Perception, Perceived Risk, Customer Loyalty, Green Marketing, Environment-friendly Electronics Product.

Introduction

With the increasing concern about environmental issues from customers, the companies have been developing green products such as eco-technology and green brand. Thus, green marketing is important because it helps to promote environment friendly products. It also helps to reduce the causes of global warming and other environmental problems or issues. Due to stricter environmental regulations, the public and governments around the world, environmental policy are becoming part of strategic planning and implementation in organizations. The public has

increasingly noticed environmental issues by reason of the disastrous environmental pollution arisen from industrial manufacturing activities in the world (Chen, 2011).

Because of the attention of the society, more and more companies are willing to accept the environmental responsibility (Chen et al., 2006) With this increasing concern, the companies have been developing green products such as eco-technology and green brand. Thus, green marketing is important because it helps to promote environment friendly products. It also helps to reduce the causes of global warming and other environmental problems or issues.

Green marketing more important opportunities such as new market, new target customers, sustain competition, sustain government pressure, social responsibility of firm and cost reduction. Because the consumers become more concerned about the environment and are more willing to purchase green products, companies have been developing a number of environmentally friendly programs and green products. Before going to green industry, must to study the market or consumer for these product.

A review of prior studies indicates that researchers tend to consider the consumer behavor especially customer loyalty. The concept of customer loyalty has received much research attention in recent years. In the consumer marketing community, customer loyalty has long been regarded as an important goal. (Reichheld and Schefter, 2000) Reichheld and Sasser (1990) find that loyal customers are willing to

1. re-buy products despite the fact that there are attractive competitive alternatives to cause switching,
2. spend money on trying products across the firm's product line offerings,
3. recommend the firm's goods or services to other consumers, and
4. give the company sincere suggestions (feedback) as to their needs and expectations.

Customer loyalty is all about attracting the right customer, getting them to buy, buy often, buy in higher quantities and bring you even more customers. Loyal customers build business by buying more, paying premium prices, and providing new referrals through positive word of mouth over time (Ganesh et al., 2000) Many customers are inclined to forgive customer-service mishaps, display decreasing sensitivity to price, and disseminate positive word-of-mouth about the business to others. As a result, customer loyalty can be a major source of sustained growth and profit and a strong asset (Anderson and Mittal, 2000). In order to obtain competitive advantages, companies should utilize green marketing strategies to enhance consumer perceived quality and reduce consumer perceived risk with respect to consumer environmental concern (Chen, 2010).

Perceived risk is very important factors concerning green marketing management. A review of prior studies indicates that researchers have studied the relationship between perceived risk on customer loyalty. According to Chen and Chang (2012) explored the influences of green perceived risk on green purchase intentions. They summarized the literature on green marketing and relationship marketing into a new managerial framework of green purchase intentions. They found that green perceived risk would negatively influence green purchase intentions. Hu (2012) explored the relationship between perceived risk and customer involvement, brand equity and customer loyalty as mediators. The findings indicated brand equity, perceived risk, and customer loyalty have significant and positive relationship to customer involvement. The findings also support the hypotheses that brand equity and customer loyalty partially mediate the relationship between perceived risk and customer involvement, while customer loyalty has slightly stronger mediating effect on customer involvement than brand equity. Chen et al. (2012) explored the

relationship between perceived risk on hydrogen-electric motorcycle purchase intention. They found that perceived risk and hydrogen-electric motorcycle purchase intention has no relation. However, its influence through the mediating consumption attitude is supported.

Although the literatures about the relationship between perceived risk and customer loyalty are rich, however no work has been focused on the relationship of mentioned variable on customer loyalty of environment-friendly electronics products in Thailand. The forces of going green are now extending to the Asian region, where environmental threats are alarming local governments and citizens. Consequently, consumers pay more attention to the rise of environmental protection activities and green consumption has gained more momentum for environmental protection. It is necessary to investigate the relationship of these variables in Thailand context.

This study presents a review of the literature and the theoretical framework with an analysis of the empirical literature to support this framework and summarizes the literature on green marketing into a new managerial framework on customer loyalty. Specifically, perceived risk and customer loyalty have been selected after an extensive marketing review of literature and the proposed model was formed. The perceived risk variable suggested a six-dimension construct: functional risk, performance risk, physical risk, psychological risk, social risk and financial risk.

The objectives of this research was to study the relationships of 6 factors affecting customer loyalty. More specifically :

- · To examine the association between functional risk and customer loyalty
- · To examine the association between performance risk and customer loyalty
- · To examine the association between physical risk and customer loyalty
- · To examine the association between psychological risk and customer loyalty
- · To examine the association between social risk and customer loyalty
- · To examine the association between financial risk and customer loyalty

The paper is organized as follows. First, the literature review is presented, followed by the conceptual framework of the study, research hypotheses, methodology used and results. Finally, the conclusion of the study are presented.

Literature Review

In literature review, we are going to discuss the six independent variables of perceived risk (functional risk, performance risk, physical risk, psychological risk, social risk and financial risk) and one dependent variable (customer loyalty) from the past study done by other researchers. We will define and describe in details on each variable with the supporting literature done by others.

Prior literature argues that the reduction of perceived risk leads to the rise of purchase probability, so the decrease of perceived risk is useful for the increase of customer trust (Wood and Scheer, 1996; Corritore et al., 2003; Chang and Chen, 2008). Perceived risk has been measured by (1) functional risk (Chen and Chang, 2012; Jacoby and Kaplan, 1972; Murphy and Enis, 1986; Sweeney et al.,1999; Chen et al.,2012; Chen and Chang, 2013; Hu, 2012), (2) performance risk (Roselius,1971; Brooker, 1984; Chen and Chang, 2012; Jacoby and Kaplan, 1972; Sweeney et al.,1999; Crisp et al., 1997; McCorkle, 1990; Chen et al.,2012; Chen and Chang, 2013), (3) psychological risk (Brooker, 1984; Jacoby and Kaplan, 1972; McCorkle, 1990;), (4) social risk (Roselius,1971; Brooker, 1984; Chen et al.,2012; Chen and Chang, 2013;

Hu, 2012), (5) financial risk (Roselius,1971; Brooker, 1984; McCorkle, 1990; Jacoby and Kaplan, 1972; Crisp et al., 1997; Chang and Chen, 2008; Hu, 2012) and (6) physical risk (Chen and Chang, 2013). Jacoby and Kaplan (1972) defined the dimension of perceived risk including functional risk**,** performance risk, psychological risk, social risk, financial risk, safety and time**.** This research suggested a six-dimension construct of perceived risk : functional risk, performance risk, physical risk, psychological risk, social risk and financial risk**.**

Customer loyalty is defined as a deeply held commitment to rebuy or repatronize a

preferred product or service consistently in the future, despite situational influences and marketing efforts having the potential to cause switching behavior (Oliver, 1997) With loyal customers, companies can maximize their profit by which these customers are willing to purchase more frequently, spend money on trying new products or services, recommend products and services to others, and give companies sincere suggestions (Reichheld & Sasser, 1990). Oliver (1997) defines loyalty as a deeply held commitment to repurchase a preferred product or service in the future. Combinations of past frequent behaviour and intention to repurchase (Nijssen et al., 2003; Pritchard et al., 1999 in Tuu et al., 2011) are also used to assess a global and cumulative loyalty measure. Tuu et al.(2011) defined customer loyalty as a cumulative construct including both the act of consuming (action loyalty) and expected consumption (future repurchasing). Most studies measure customer loyalty outcomes by behavioral loyalty dimensions such as word-of-mouth communication, purchase intentions, price insensitivity, and complaint behavior (Bloemer, de Ruyter, and Wetzels, 1999; Bloemer and Odekerken-Schröder, 2002; Ibrahim and Najjar, 2008). Another, customer loyalty can be measured by repurchase intention (Li and Green, 2011; Li, 2011; Cengiz and Yayla, 2007; Haelsig et al.,2007; and Reichheld and Sasser, 1990).

Previous research indicates that there is a negative relationship between perceived risk and customer loyalty (Yen, 2010; Tuu et al., 2011; Hu, 2012; Tuu and Olsen, 2009; Tam, 2012), Hence, this study implies the following hypothesis :

- *H_1* : There is a significant association between functional perceived risk and customer loyalty.
- *H_2* : There is a significant association between performance perceived risk and customer loyalty.
- *H_3* : There is a significant association between physical perceived risk and customer loyalty.
- *H_4*: There is a significant association between psychological perceived risk and customer loyalty.
- *H_5*: There is a significant association between social perceived risk and customer loyalty.
- *H_6* : There is a significant association between financial perceived risk and customer loyalty.

Methodology

Research Framework

The purpose of this study is to exmine the association between perceived risk, and customer loyalty of environment-friendly electronics products in Thailand. Based on the hypothesis, the causal relation between the potential variables is analyzed by using multiple regression analysis. The research framework is as following.
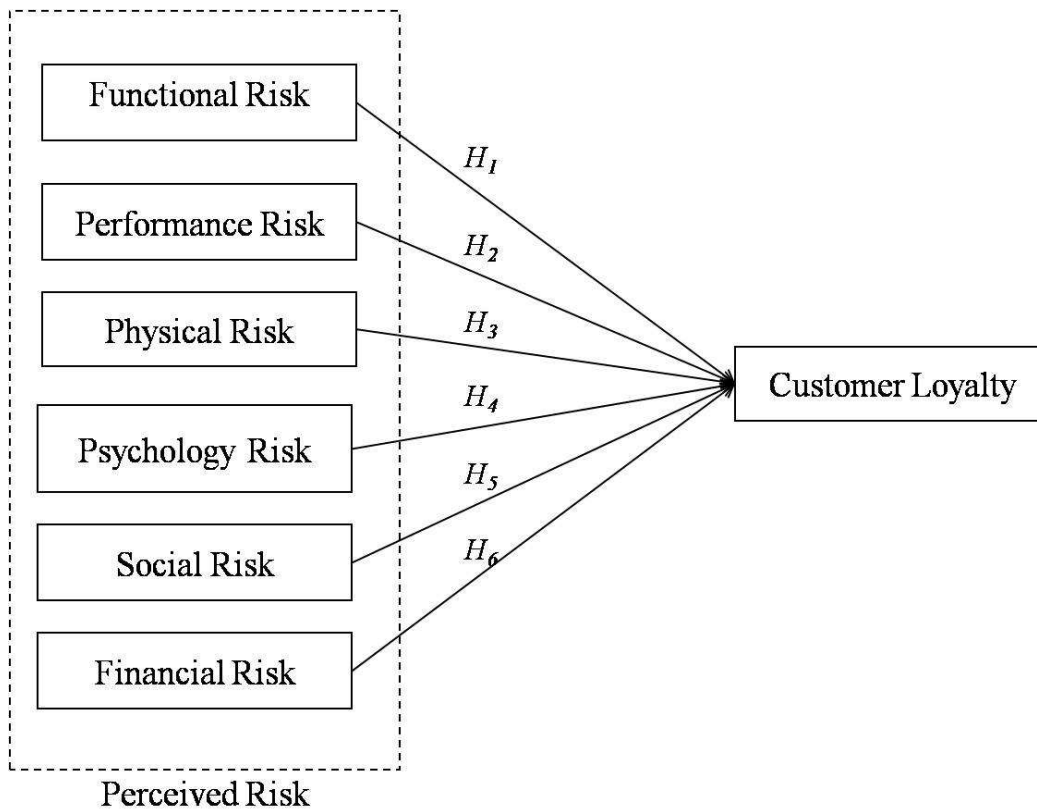
Figure.1 Research Framework.

Measurement Design

Questionnaire survey method was used to collect data for this research study. The questionnaire structure consists of 3 sections

1　Background : the questions cover research variables including gender, age, education, occupation, income, buying experience, type of products, basic knowledge about green product and etc; the purpose is to have further understanding on the investigated subjects.
2　Perceived risk : there covered 6 dimensions including functional perceived risk, performance perceived risk, physical perceived risk, psychological perceived risk, social perceived risk and financial perceived risk. ; the reference was made on Chen and Chang (2012), Chen and Chang (2013), Jacoby and Kaplan (1972), and Sweeney et al. (1999).
3　Customer loyalty : the reference was made on Li (2011), Li and Green (2011)

　　Questionnaires using 7-point Likert scale with anchor of (1) 'strongly disagree' to (7) 'strongly agree' can reduce variability in the results that may be differences and enhances reliability of the responses.

Data Collection

Data will be collected from customers who buy and use environment-friendly electronics products in Thailand sectors in the past three months. 70 people will be included in the survey. Roscoe (1979) proposed that the rules of thumb for determining the sample size which more than 30 and less than 500 are appropriate for the most research.

Data Analysis

The data will be analyzed using descriptive statistical analysis and multiple regression analysis.

Results and Discussion

As shown in Table 1, based on Cohen's rules for effects sizes, the coefficient of determination (R^2) was 0.971, which means that 97.1% of customer loyalty can be explained by the six independent variables.

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	β	Std. Error	β		
1(Constant)	-42.750	2.183		-19.586	.000
Functional Perceived Risk	.499	.012	1.032	40.690	.000**
Performance Perceived Risk	-.014	.005	-.072	-2.921	.005**
Physical Perceived Risk	-.027	.019	-.035	-1.390	.169
Psychological Perceived Risk	.016	.012	.032	1.318	.192
Social Perceived risk	-.005	.005	-.022	-.944	.349
Financial Perceived risk	-.028	.015	-.042	-1.828	.042**
R^2	.971				
Adjusted R^2	.968				
Sig. F	0.000				

**Notes: **p-value<0.05 (two-tailed); dependent variable : Customer Loyalty

H_1 : There is a significant association between functional perceived risk and customer loyalty.

According to Table 1, significant value for functional perceived risk is 0.000** (β = 0.499), which indicates that functional perceived risk towards customer loyalty is more than 99.95% (p-value<0.05). Therefore, H_1 is supported and this indicates that functional perceived risk has direct association with customer loyalty. This mean if customers' functional perceived risk is higher, customer loyalty will be higher and will have high loyalty to purchase.

H_2 : There is a significant association between performance perceived risk and customer loyalty.

According to Table 1, significant value for performance perceived risk is 0.005** (β = -0.014), which indicates that performance perceived risk towards customer loyalty is more than 99.95% (p-value<0.05). Therefore, H_2 is supported and this indicates that performance perceived risk has indirect association with customer loyalty. This mean if customers' performance perceived risk is higher, customer loyalty will be lowerer.

H_3 : There is a significant association between physical perceived risk and customer loyalty.

According to Table 1, significant value for physical perceived risk is 0.169 (β = -0.027), which indicates that physical perceived risk towards customer loyalty is less than 99.95% (p-value>0.05). Therefore, H_3 is not supported and this indicates that physical perceived risk has no association with customer loyalty.

H_4: There is a significant association between psychological perceived risk and customer loyalty.

According to Table 1, significant value for psychological perceived risk is 0.192 (β = 0.016), which indicates that psychological perceived risk towards customer loyalty is less than 99.95% (p-value>0.05). Therefore, H_4 is not supported and this indicates that psychological perceived risk has no association with customer loyalty.

H_5: There is a significant association between social perceived risk and customer loyalty.

According to Table 1, significant value for social perceived risk is 0.349 (β = -0.005), which indicates that social perceived risk towards customer loyalty is less than 99.95% (p-value>0.05). Therefore, H_5 is not supported and this indicates that social perceived risk has no association with customer loyalty.

H_6 : There is a significant association between financial perceived risk and customer loyalty.

According to Table 1, significant value for financial perceived risk is 0.042** (β = -0.028), which indicates that financial risk towards customer loyalty is more than 99.95% (p-value<0.05). Therefore, H_6 is supported and this indicates that financial perceived risk has indirect association with customer loyalty. This mean if customers' financial perceived risk is higher, customer loyalty will be lowerer.

Conclusion

The influence of functional, performance and financial perceived risk on customer loyalty (H_1, H_2 and H_6, respectively) are supported. This means that consumers' believe and require right green information to develop customer loyalty. But the influence of physical, psychological and social perceived risk on customer loyalty (H_3, H_4 and H, respectively) are not supported.

The research suggested future research recommendations : the future studies may try to indentify more significant factors to affect customer loyalty, and may extend the research through larger random selection.

Acknowledgement

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