

INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN ENVIRONMENT & GEOGRAPHY



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To Link this Article: <http://dx.doi.org/10.46886/IJAREG/v7-i1/7299>

DOI: 10.46886/IJAREG/v7-i1/7299

Received: 23 Mar 2020, **Revised:** 26 April 2020, **Accepted:** 16 May 2020

Published Online: 27 June 20

In-Text Citation: (Liwan, et. al., 2020)

To Cite this Article: Liwan, A., Victer, D., Corrado, R., Ubaidillah, N. Z. B., Hwang, J. Y. T., and Hamdan, R. (2020). Willingness to Pay for Environmental Goods in East Malaysia. *International Journal of Academic Research in Environment and Geography*. 7(1), 46-55.

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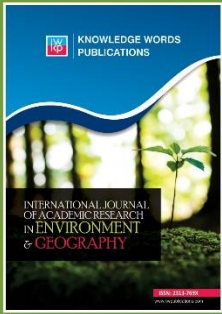
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Vol. 7, No. 1 (2020) Pg. 46 - 55

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Willingness to Pay for Environmental Goods in East Malaysia

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Abstract

This research has been conducted to investigate consumers' willingness to pay for environmental goods in East Malaysia, and specifically in Sabah and Sarawak. The data were collected from 250 respondents. The respondents' environmental awareness has been linked to their perceived behavioural control and willingness to pay for environmental goods. The key findings of this study indicate that attitude, and perceived behavioural have positive influence on the willingness to pay for environmental goods. It is anticipated that the findings of this research should lead to the introduction of widespread awareness programmes that highlight the benefits and the implications of green product towards environment. To encourage the consumption of environmental goods its recommended to introduce environmental education at an early age. In addition, social media also stands out as the best platform to reach the heaviest green consumers.

Keywords: Attitude, Environmental Goods, Normative Belief, Perceived Behavioural Control, Social Influence, Willingness to Pay.

Introduction

Environmental protection and eco-friendly products, also called 'green products' are currently part of a hot topic discussion worldwide. The dangerous effects on nature and environment of human habits and activities have caused an increasing concern and alert around environment-related issues, and thus, protecting the environment has become a major concern between societies and the researchers' community. In the past decade, Malaysia has been one of the world's fastest-growing countries in terms of carbon emission, and it is currently facing an increment in energy consumption. Malaysia is not alone and shares the same issue with other countries, such for example, Singapore. In the specific, following the National Environment

Agency (NEA), Singapore is currently facing a problem maintaining the relationship between economic demands and its natural resources.

There is a lack of data in the literature referring to Malaysian customers' willingness to pay for green products. Rafi et al. (2003) found that knowledgeable consumers on the East Coast of Peninsular Malaysia have little to no green product knowledge. Additionally, Berger (1992) asserted that people has a concern on the environment, but most of them will not pursue buying green products or use related services. Thus, the objective of this study is to examine the factors that influence consumer' willingness to pay for environmental goods. The outcomes can be used in design an effective programmes and policy aiming to raise the customers' awareness of environmental goods while enhancing their sensibility to environment-related issues.

Green consumers are typically aware of many issues related to the environment and are keen to recognize environmental care responsibilities. Various of research has been conducted on the green products consumption but mostly in developed countries (Hansia et al., 2008). Additionally, according to Galarraga et al. (2011), the inclination of consumers to pay a surplus price for a green product depends on its environmental credentials. More specifically, customers agree that environmental goods are more expensive than non-environmentally ones. However, due to environmental consciousness and health reasons specific consumers are willing to pay more for environmental good, prioritizing the environment over their finances.

Literature Review

Theoretical Background

Theory of Planned Behavior (TPB)

One of the relevant theories that can explain an individual's behavioral intentions is the Theory of Planned Behavior (TPB). This theory has been extensively used in past research to investigate environmental goods consumption behaviors (Chen et al, 2016 & Wu et al, 2014). TPB recommends that the level of behavioral intention that has been seen in an individual is the best predictor of her/his behavior. In relation, Cooper et al. (2004) found that attitudes and beliefs can describe an individual's willingness to pay (WTP) as indicator to behavioral intention. Hence, subjective norms and the ability to make a purchase need to be considered in profiling an individual's WTP.

Theory of Reasoned Action (TRA)

Theory of Reasoned Action is a theory used to estimate consumer behavior on purchase intention. TRA was introduced by Ajzen and Fishbein (1975). It defines that an intention to engage in a certain behavior is considered the best predictor of whether an individual will engage in that specific behavior. Furthermore, behavioral intention reflected the individual behavior based on their attitude, perceptions, and social pressure.

Theory of Rational Choice (TRC)

The rational choice theory focuses on consideration of costs and benefits in decision making. Rationality is widely used as an assumption of the behavior of individuals. Gary Becker a Nobel Prize in Economic Sciences in 1992 was an early proponent of applying rational actor models more widely. Some theorists affirmed that the same principle could be used to understand human interactions. They argue that time, information, approval, and prestige can be estimated.

In the specific, usually, human beings make their choice based on their objectives in life. Following the concept of rationality, an individual's choices are consistent because they are made according to personal preference, and thus, as rational individuals, human beings will choose the alternative that can provide them with the highest satisfaction.

Literature

Attitude

Attitude can be defined as an internal state that affects an individual's choice of personal action or a response tendency (Gagne & Medsker, 1996). However, in the traditional definition, attitude can be defined as the learned predisposition to respond in a way consistently favorable or unfavorable with respect to a given object. Many of the literature agreed that attitude is one of the most vital components in affecting customers' awareness of eco-friendly products (Chyong-Huey, 2006; Vanessa & Sainz, 2005). Gunne, Ulf and Anders (2004) suggested that the consumer's attitude and behavior towards green products rely on the trust and effectiveness of their existing green messages. Thus, first hypothesis was developed as following:

Hypothesis 1 (H1): There is a positive relationship between awareness and attitude towards environmental goods and willingness to pay for them.

Normative Belief

According to Chen et al. (2016), normative beliefs can be defined as the presupposition of significant others, such as family, friends, relatives, colleagues, and others who are expected to govern perceived social pressure over individuals. In the Malaysia context, Mei et al. (2012) identified that one of the most considerable antecedents influencing a 'green purchase' was peer pressure. Therefore, a second hypothesis can be formulated as follows:

Hypothesis 2 (H2): There is a positive relationship between normative belief and willingness to pay for environmental goods.

Perceived Behavioral Control

Perceived behavior control is conceptualized as the possession of opportunities and resources, such as particular skills and collaboration with others. Regarding the purchase of environmental goods, Maichum et al. (2016) discovered that consumers' perceived behavioral control has a significantly positive effect on purchase intention towards environmental goods. However, some scholars expressed reluctance on confirming that perceived behavioral control is significantly related to the willingness to purchase green products due to it hard to predict and control, such as limitations of skills, chances, the existence of restrictions, and external conditions. Therefore, this research hypothesizes:

Hypothesis 3 (H3): There is a positive relationship between behavioral control and willingness to purchase environmental goods.

Social Influence

Social influence means any noncoercive technique, device, procedure, or manipulation that relies on the social psychological nature of the organism, which can significantly affect and shape consumers' choices. Feick et al. (2003) found that social network and product involvement are closely related. More specifically, usually, people gain information from their media social

network, heavily influencing their pool of possibilities and their final choice. A second factor used for estimating a customer's intention is the social element, namely, subjective norm (Ajzen 1991). Following Ajzen (1991), people tend to purchase an eco-friendly product when their friends, family, or social media encourage them to buy it. Therefore, this research hypothesizes:

Hypothesis 4 (H4): There is a positive relationship between social influence and willingness to pay for environmental goods.

Methodology

Data Collection and Measurement

This study focusses on the state of Sabah and Sarawak. Random sampling was adopted in this study. Questionnaires were used as the primary instrument for data collection. There are several advantages of using questionnaires, the data is collected from a first-hand experience, thus resulting in being more reliable, authentic, and objective (Gulnazahmad, 2011). A pilot test was carried out to ensure the reliability of the questionnaire. The questionnaire was distributed by using Google Form web service and face-to-face survey. The initial sample of the collected questionnaire is 300 sets. However, after eliminating incomplete questionnaires, our final sample consists of 250 observations.

The questionnaire consisted of three main section (A, B and C). Section A investigated the respondents' demographic profile and collected information useful to obtain general statistics on the respondents. Section B focused on measuring the four independent variables and dependent variables targeted in this study, namely attitudes towards a green purchase, normative beliefs, perceived behavioral control, social influence between the independent variables, and willingness to pay towards environmental goods dependant ones. Finally, section C investigated the participants' general knowledge of green technologies and awareness about environmental products. The data were analyzed by using descriptive analysis, scale measurement, and inferential analysis.

Results and Discussion

This study revealed that 74.4% of respondents (186 respondents) purchased environmental goods before participating in this research. Another 25.6% (64 respondents) were reported has no purchase on environmental goods. This finding indicates that most of the citizens in East Malaysia are aware and use eco-friendly products.

Descriptive Statistic

Table 1: Descriptive Statistic of Independent Variables

Variable	Frequency (N)	Mean	Std Deviation
Attitude	250	4.06	0.67
Normative Beliefs	250	3.45	0.74
Perceived Behavioural Control	250	3.73	0.94
Social Influence	250	3.69	0.64

Table 1 shows that customers' attitudes towards environmental goods have the highest mean between all the independent variables (4.06). It shows that a positive attitude towards environmental goods plays a crucial role in the willingness to pay for green products. However, normative beliefs have the lowest mean among all the independent variables, which is 3.45. It is indicated that normative beliefs are less significant to the environmental goods purchase decision.

Reliability test

A reliability test measuring consistency, precision, repeatability, and trustworthiness of research work (Chakrabartty, 2013). The general rule of thumb for Cronbach's Alpha defines that coefficient must be equal or more than 0.7. Overall, all variables obtained a value more than 0.7. From table 2 it shows that perceived behavioural control obtained the highest coefficient value (0.87). On the other hand, social influence has the lowest score which is 0.78.

Table 2: Reliability Statistics

Variable	Cronbach's Alpha
Attitude	0.800
Normative Beliefs	0.824
Perceived Behavioral Control	0.869
Social Influence	0.797
Willingness to Pay	0.823

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	0.71*	0.50	0.49	0.47

Multiple Regressions

Multiple regression is a statistical process used to estimate the relationship between a dependent variable and independent variables. Table 3 shows about 49.6% of the respondents' willingness to pay for an environmental good was influenced by normative belief, social influence, perceived behavioral control, and attitude. For the other 50.4% of the respondents, they were affected by other factors capable of controlling the respondent's willingness to pay for green products.

Table 4: ANOVA

Model		Sum of Square	df	Mean Square	F	Sig.
1	Regression	55.36	2	13.84	62.26	0.00
	Residual	54.46	245	0.22		
	Total	109.81	249			

Table 4 represented the results of ANOVA test and the result shows that F value is 62.26. The overall regression model shows the independent variables could explain the variation of willingness to pay on environmental goods.

Table 5: Coefficients of Multiple Regression Analysis

Model	Unstandardized Coefficients		Standardized coefficient	T	Sig.
	B	Std. Error	Beta		
(Constant)	1.06	0.19		5.43	0.00
Attitude	0.50	0.07	0.50	7.35	0.00
Perceived Behavioural Control	0.08	0.04	0.12	2.13	0.034
Normative Belief	0.04	0.06	0.05	0.74	0.46
Social Influence	0.15	0.08	0.14	1.92	0.06

Table 6: Summary of Research Question, Hypothesis and Result

Hypothesis	Result	Supported
(H1): There is positive relationship between attitude and willingness to pay for Environmental goods	r= 0.69 (p<0.05) p= 0.00	Yes
(H2): There is positive relationship between normative belief and willingness to pay for Environmental goods	r= 0.49 (p<0.05) p= 0.46	No
(H3): There is positive relationship between perceived behavioral control and willingness to pay for environmental goods	r= 0.45 (p<0.05) p= 0.03	Yes
(H4): There is positive relationship between social influence and willingness to pay for Environmental goods	r= 0.60 (p<0.05) p= 0.06	No

Table 6 reported the summary of findings, based on results in table 5. The results show there is positive relationship between attitudes and willingness to pay for environmental goods. The finding is consistent with the previous study, for instance, Leonidao et al. (2010) stated that certain cultural, political, and ethical factors shape consumers' attitudes towards a green purchase. While normative belief has no significant effect on the willingness to pay for environmental goods. The finding is contrast with the previous finding such as (Adnan et al., 2017) revealed that social norms or normative beliefs has positive influence on behavioral intentions towards green purchase. The outcome of normative beliefs effect is inconclusive due to the different in the income background. On in the hand, Perceived behavioral control has positive influence on willingness to pay for green products. This result is consistent with the previous study, for instance, Maichum et al. (2016) found that perceived behavioral control has a positive relationship with the willingness to pay for environmental goods. It concluded that respondents perceived their engagement in green purchase is an effort to protect the environment. Based on table 6 it shows there is no significant influence of social influence on willingness to pay for green products. Its may due to different in term of, geographical and culture.

Conclusion

This study has shown that attitudes towards environmental goods and perceived behavioural control have a positive influence on willingness to pay for environmental goods. The findings contributed to the latest understanding on willingness to pay for environmental goods in east Malaysia. The development of green product strategies and framework can be developed by considering the determinants of the behavioural change. This study has shown how a certain level of information regarding the environmental goods may affect the citizen's willingness to pay for green product. This study utilized several theories, which are TPB, TRA and TRC in explaining people intention towards green purchase. In term of knowledge contribution, this study produce model that reinforce the understanding on the influence of attitude, normative belief, perceived behavioral control and social influence on green product purchase intention.

The new findings from the constructed model has contributed to theoretically part as well. The findings of this study have some implications for future recommendations for public policies. The first implication is about environmental education. The young generation should be exposed to environmental education from an early age. Coddington (1993) mentioned that the right method to develop environmental behaviour is through environmental education. The education systems must include the environment subjects in school, college, and university. Furthermore, by organise seminars, conferences, workshops, and campaigns can increase the public awareness on green products and related environmental issues. The second implication is to create awareness on environmental goods through social media. Environmental awareness campaigns have the ability to provide individuals with the knowledge, skills and attitude required to reduce environmental impact. In addition, social networks represent a powerful tool for influencing people. Jupiter (2007) stated that social network users are three times more likely to trust peer's opinion over advertisement messages in making a purchase decision.

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