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## The Implementation of Green Marketing Tools in Rural Tourism: The Readiness of Tourists?

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### ABSTRACT

Environmental sustainability is the key factor for the future development of the tourism industry, particularly in sensitive rural tourism destinations. Green tourism and green marketing are alternative practices that ensure the environmental sustainability of tourism destinations. However, green marketing has received little attention in the context of rural destinations. This is the first known study undertaken with the purpose of understanding the relationship between green marketing tools (eco-brand, eco-label, and environmental advertisement) and green purchasing behavior in rural tourism destinations from the perception of tourists. A sample of 252 respondents was selected to complete the questionnaires. To assess the developed model, SmartPLS (version 3.2.6) was applied based on path modeling, followed by bootstrapping. The results revealed that the three-dimensional constructs of green marketing tools were significantly and positively correlated with green purchasing behavior of rural tourism destinations from tourists' perspectives. Several implications, limitations, and directions for future research were further discussed.

### KEYWORDS

Green marketing tools;  
green purchasing behavior;  
Malaysia; rural tourism;  
Theory of Planned Behavior;  
tourists' perspectives

环境可持续性旅游业未来发展的关键因素，特别是在敏感的乡村旅游目的地。绿色旅游和绿色营销是确保旅游目的地环境可持续性的替代性实践。然而，绿色营销在农村地区却很少受到关注。这是第一次从游客感知的角度来了解绿色营销工具（生态品牌、生态标签和环境广告）与乡村旅游目的地的绿色购买行为之间的关系。选取252名被调查者作为样本，完成问卷调查。评估模型，SmartPLS（版本3.2.6）应用基于路径建模，其次是引导。研究表明，绿色营销工具的三维结构与游客视角下乡村旅游目的地的绿色购买行为呈显著正相关。进一步讨论了几个含义、局限性和今后研究的方向。

## Introduction

The tourism industry plays an imperative role as an economic contributor to most countries (Ramjit, 2015; Rosli, 2016). Among more rural communities, there is a growing trend of interest in engaging into rural tourism activities as an alternative source of income generation due to the decline of traditional agricultural sectors (Cai, Liu, & Huang, 2008; Hoang, 2015). Due to the lucrative income generated from tourism

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activities, the development of mass tourism has been the focus for a majority of the countries over the past decades (Meler & Ham, 2012). Nonetheless, the tremendous growth of the tourism industry has led to several detrimental impacts, especially to the non-renewable environment. These impacts include the destruction and degradation of natural and environmental resources that induce climate changes (Chekima, Wafa, Igau, Chekima, & Sondoh, 2016; Handriana & Ambara, 2016; Martinez, 2015; Rahbar & Wahid, 2011). The adverse impacts are not limited to the degradation of environmental resources, but also lead to an increase of non-recyclable waste as a result of littering during the tours (Chiu, Lee, & Chen, 2014). The strength of the tourism industry as an economic contributor has created an awareness among tourism stakeholders to ensure sustainable tourism development without threatening the needs of the future generation (Joshi & Rahman, 2015). Thus, previous researchers (e.g., Fotiadis, Vassiliadis, & Piper, 2014) have also elucidated the importance of destination management, especially in today's unstable economic environment.

The aforementioned factors have led to the emergence of sustainable tourism in today's tourism industry. Sustainable tourism covers a wide range of dimensions to measure the sustainability of tourism development, including the three dimensions of economic sustainability, socio-cultural sustainability, and environmental sustainability (Angelkova, Koteski, Jakovlev, & Mitrevska, 2012; Chand & Vivek, 2012; Yoon, 2002). Despite the growing importance of sustainable tourism, the environmental sustainability, which is said to be the panacea for economic sustainability, has grabbed major attention from most parties (Chekima, Wafa, Igau, & Chekima, 2015; Joshi & Rahman, 2015; Rahbar & Wahid, 2011). Past studies have also suggested that sustainability should be prioritized over economic profit (Jamrozy, 2007). Thus, rural tourism and green tourism act as alternative tourism practices to promote the sustainability of environmental resources (Fruqan, Mat Som, & Hussin, 2010; Handriana & Ambara, 2016). Past studies have also posited that the concepts of rural tourism and green tourism are similar to each other, as both are focused on the sustainability of environmental resources in the area (Arahi, 1998).

In prior literature, the relationship between "green" and "sustainability" in the hospitality and tourism industry has been revised. Past researchers have highlighted that the "green" concept is widely applied in the hospitality industry, specifically in the hotel sector (Chan, 2013, 2014; Fukey & Issac, 2014; Kim, Hlee, & Joun, 2016). A recent study by Law, Lacy, Lipman, and Jiang (2016) proposed a framework on the green economy in tourism destinations. In order to realize the potential of green marketing in the tourism sector, green marketing practices have been executed to ensure the sustainability of environmental tourism resources in different sectors, such as hoteliers (Chan, 2013; Punitha & Rasdi, 2013), manufacturers (Veleva & Ellenbecker, 2001), and also from consumers who opt for green purchasing behavior (Joshi & Rahman, 2015; Phuah, Rezai, Mohamed, & Shamsudin, 2012). Authors, Cai et al. (2008), have highlighted that rural tourism is well-known for its green product attributes, and these attributes have successfully attracted environmentally conscious customers to pay a visit to rural tourism destinations (Sarah & Claire, 2013).

Past researchers have propounded that the fundamental concept of marketing is to promote a particular product or place with the intention to enhance its value and increase consumption among consumers. Marketing also potentially acts as a vital tool to promote more eco-friendly consumption behavior among consumers (Aggrawal, 2010; Davari & Strutton, 2014; El Dief & Font, 2010). This has led to the emergence of green marketing.

Green marketing can be defined as the process of developing products or services and promoting them in a way that does not cause any negative impact on the environment (Aggrawal, 2010). One of the similar objectives between rural tourism and green tourism is the development of tourism industry that goes along with the concept of promoting environmental and ecological sustainability. In fact, green marketing tools have been revealed to be influential marketing tactics to boost green purchasing behavior. Studies in the past have confirmed that green marketing tools (e.g., eco-label, eco-brand, and environmental advertisement) are significant contributors to consumers' green purchasing behavior (Delafrooz, Taleghani, & Nouri, 2014; Delmas, Nairn-Birch, & Balzarova, 2012; Fruqan et al., 2010). To date, too few studies have investigated the application of green marketing tools in influencing tourists' green purchasing behavior in the rural tourism sector.

The concept of readiness was adopted in this study to illustrate the readiness of tourists to accept green purchasing behavior in the rural tourism industry. There are several definitions of readiness. One of them is defined as individuals who are prepared to participate in organizational development activities (Huy, 1999). Another definition by Armenakis, Harris, and Field (1999) is about employees' beliefs regarding the appropriateness of support for change and value for change. These concepts of readiness have been widely applied in previous studies, including studies on the readiness of change in an organization (Holt, Armenakis, Harris, & Field, 2007), the readiness to be involved in volunteer tourism (Suhud, 2015), e-readiness to measure a country's willingness to obtain benefits that arise from information and communication technologies (Piman & Poldee, 2016), and a sustainable cultural tourism destination from the local communities' view of Situ Babakan Betawi Cultural Village (Dinamayasari, 2016). In the present study, the concept of readiness was adopted and applied to the proposed framework. The authors intend to examine the readiness of tourists in the rural tourism industry to opt for green purchasing behavior under the influence of eco-brand, eco-label, and environmental advertisement. Before the actual implementation of green marketing strategies in rural tourism destinations, it is important to determine if tourists are ready to accept green marketing in the context of rural tourism. As Volo (2009) and Ozdemir et al. (2012) pointed out, if tourists are happy with the destinations, they will be motivated to revisit these destinations.

The findings of this study can be viewed as a preliminary step toward greater understanding of tourists' readiness in accepting green marketing and green marketing tools in the context of rural tourism. By using the Theory of Planned Behavior (TPB) (Ajzen, 1985) as the underlying basis, this study aimed to investigate the impacts of three-dimensional green marketing tools (e.g., eco-brand, eco-label, and environmental advertisement) and their influence on rural tourists' green purchasing behavior. Malaysia, a country that is well-known for its natural and cultural resources, was chosen as the study site. Hence, this paper is one of the foremost studies to examine the proposed framework undertaken in a developing country.

## **Conceptual background and hypotheses development**

### ***Rural tourism***

Rural tourism was introduced by the Malaysian Government during the Seventh Malaysia Plan (1996–2000) as an alternative strategy for rural development and income generation

for local communities. There are various definitions of rural tourism proposed by researchers around the world. For the purposes of this study, one of the relevant definitions is offered by Theirheimer (2009) who defines rural tourism as “being practical in rural areas, manifested by the stated tourism types, whose activities are taking place in rural hotels or motels, classic pensions from rural areas, recreation locations, camping and other touristic structures, all of them situated in rural villages or other rural places.” It is also highlighted as the potential connection between the physical natural environment that is less congested and more amenities for the purpose of relaxation (Brouder, 2013; Mohamad, Lo, Songan, & Yeo, 2012).

### ***Green marketing and green marketing tools***

Green marketing is part of the concept of sustainability (Sima, 2013). Polonsky (1999) defined green marketing as a holistic approach that involves anticipation, identification, and satisfaction of requirements for customers in an ecologically sustainable manner that utilizes optimum natural resources most effectively for the benefits of the society and also organizations. The promotion of products and services through green marketing encompasses a broad range of activities, including the environmental process of production, packaging, and distribution of products. Generally, green marketing aims to achieve the objective of waste elimination, the reinvention of product concepts, and also environmentalism profitability for firms (Pride & Ferrell, 2008). Meanwhile, Ashrafi (2014) provided another version of green marketing in the context of industry. He defined it as an organization’s efforts at designing, promoting, pricing, and distributing products aligned with environmentally friendly practices. Therefore, green marketing can be used as a tool for sustainable growth.

The three-dimensional constructs of green marketing tools, such as eco-brand, eco-label, and environmental advertisement, were adopted as the independent variables for this study. Past studies have highlighted the significant role played by the three-dimensional green marketing tools in influencing green purchasing behavior (Delafrooz et al., 2014; Delmas et al., 2012). According to the American Marketing Association, a brand is defined as “a name, term, sign, symbol, or design, or the combination of them, intended to identify the goods or services of one seller or group of sellers and to differentiate them from those of a competitor.” Likewise, an eco-brand is a name, symbol, or design of products that is environmentally harmless. The features of eco-brands allow consumers to differentiate them from other non-green products (Rahbar & Wahid, 2011).

Eco-labeling, has been used by many entities (e.g., governments, private companies, and communities) to protect the environment. Giridhar (1998) defined an eco-label as the product’s collective environmental performance. Eco-labels are often used to convey environmentally friendly messages apart from positioning and differentiating products (D’Souza, 2000). As indicated by D’Souza, Taghian, and Lamb (2006), environmental labels have been utilized widely by marketers to promote the identification of green products. In fact, eco-label is one of the green marketing tools that is important to facilitate decision making on environmentally friendly products besides allowing consumers to know how the products are made (Rex & Baumann, 2007). Eco-label also acts as a guide for consumers in the selection of green products (Proto, Malandrino, & Supino, 2007).

Environmental advertisement, also referred to as green advertising, is defined by Banerjee, Gulas, and Iyer (1995) as any advertisement that at least addresses explicitly or implicitly the relationship between a product or service and the biophysical environment, which promotes a green lifestyle with or without highlighting a product or service, or which reveals an environmentally responsible corporate image. The exponential growth of green advertising over the last two decades has increased public awareness on ecological issues, leading to an increasing demand for green products (Carlson, Grove, Laczniak, & Kangun, 1996). Most organizations have chosen environmental advertisements through the media or newspapers as green techniques in introducing their products to environmentally responsible consumers.

### ***Theory of Planned Behavior and rural tourism green purchasing behavior***

The TPB links beliefs and behavior in psychology as developed by Icek Ajzen with the purpose of improving the predictability of the Theory of Reasoned Action by including perceived behavioral control. Attitude toward behavior, subjective norms, and perceived behavioral control all play important role together in shaping behavioral intentions and behaviors of respective individuals as stated by TPB (Ajzen, 1991). Attitude toward behavior is defined as “the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question.” Subjective norms refer to “the perceived social pressure to perform or not to perform the behavior” while perceived behavioral control denotes “the perceived ease or difficulty of performing the behavior” and often refers to previous experience and expected impediments and obstacles (Ajzen, 1991, p.188).

As defined by Rashid (2009), green purchase intention is a person’s willingness to go for eco-friendly products compared to traditional products. The predictability model for green purchase intention has been improved by TPB, as shown by Jebarajakirthy and Lobo (2014). In fact, several studies on green consumer behavior have validated the TPB model (Barber, 2010; Chan & Lau, 2001; Chen & Tung, 2014; Gleim, Smith, Andrews, & Cronin, 2013; Han, Hsu, & Lee, 2009; Kim & Chung, 2011; Mostafa, 2007; Yazdanpanah & Forouzani, 2015). Instead of exploring the factors that contribute to the said green consumption behavior, previous literature was reviewed to identify the factors that determine the green purchasing behavior. Thus, TPB was adopted as the underlying theory to postulate the relationship of variables in the present study. The three-dimensional constructs of green marketing tools were subsequently adopted as the independent variables, that is, the factors that influence tourists’ green purchasing behaviors in rural tourism destinations.

To simplify, the TPB links attitudes to behavior by holding three types of beliefs. These beliefs include behavioral beliefs (beliefs about the good or bad of performing said behavior), normative beliefs (factors that motivate a person to comply with said beliefs), and control beliefs (beliefs in the existence of factors that facilitate a person to perform certain behavior). In short, the TPB underpinning the proposed framework links the three behavioral beliefs that affect the attitudes of tourists regarding green purchasing behavior. For instance, green marketing tools (eco-brand, eco-label, and environmental advertisement) were projected as eco-friendly instruments that influenced tourists’ green purchasing behavior (behavioral beliefs). In addition to that, green marketing tools acted as the motivators to encourage tourists’ green purchasing behavior (normative beliefs). Last but not least, green marketing tools were also the influencing factors that facilitated tourists’ green purchasing behavior (control beliefs).

## **Hypotheses development**

Malaysian consumers consider glass-based, household cleaning, aerosols, pesticides, and plastics as non-green products that tend to induce a high level of impact on the environment (Rahbar & Wahid, 2010). Chatterjee (2009) revealed that consumers prefer eco-friendly alternatives for these categories of products in order to avoid generation of high level of environmental impact. It can hence be expected that consumers will respond positively toward eco-branded products that emphasize on environmentally friendly features. Eco-branded products that have been commercially successful are mostly due to their positive public images that lead to consumer purchasing and consequently promote the growth of brand loyalty (Ginsberg & Bloom, 2004). Eco-brand is considered a new dimension of green marketing tools that has been found to possess a positive impact on consumers' purchasing behavior, as proven by Rahbar and Wahid (2011) and Delafrooz et al. (2014). Hence, the following hypothesis was developed:

H1: Eco-brand is positively related to green purchasing behavior in rural tourism destination.

The Massachusetts Department of Environmental Protection released a report in 2002 which stated that the effort required to recognize and locate green products is an obstacle for consumers to purchase environmentally friendly products. Such a barrier of asymmetrical information between buyers and sellers can be solved with eco-label (Sammer & Wustenhagen, 2006). In a study by Grankvist and Lekedal (2007), the system of eco-labeling was introduced in an effort to help consumers choose products that are less harmful to the environment and thus reduce the environmental impacts of consumption. Another study by Rashid (2009) showed that the awareness of eco-label generated a positive effect toward consumers' purchase intention of green products.

Market-based evidence proved that consumers responded positively to eco-labels and consequently contributed to the increased market share of the products concerned (Teisl, Roe, & Hicks, 2002). According to Hartmann and Ibanez (2006), most consumers prefer to buy green products with ecological packaging (Ansar, 2013). Similarly, Rex and Baumann (2007) revealed that eco-label played a crucial role in the process of purchasing environmentally free products (Zandhessami, Rahgozar, & Yaghoobi, 2016). The information about environmental outcomes provided by eco-label did affect product preference especially among groups with a strong concern for the environment, such as women, graduates, and young respondents (Grankvist, Dahlstrand, & Biel, 2004). Most consumers in developed countries were also found to be more willing to pay a higher premium for eco-labeled products (Loureiro & Lotade, 2005). Moreover, several studies have also confirmed the positive relationship between eco-labels with consumers' green purchase behavior and intention of green products (Chekima et al., 2015, 2016; Dekhili & Achabou, 2014; Delafrooz et al., 2014; Rahbar & Wahid, 2011; Tzivilivakis, Green, Warner, McGreever, & Lewis, 2012). As such, the following hypothesis was proposed:

H2: Eco-label is positively related to green purchasing behavior in rural tourism destination.

Green advertisements aim to influence consumers' purchase behavior toward products that are environmentally friendly besides directing their attention to the positive consequences of such purchasing behavior (Rahbar & Wahid, 2011). This is in line with Ansar's (2013) study which found that environmental advertisements led to green purchase intention among Pakistanis. Environmental advertisements also help to establish positive customer values that are then transformed into green purchasing behavior (Baldwin, 1993; Zandhessami et al., 2016), enhance knowledge of green products (Akehurst, Afonso, & Goncalves, 2012; Bagheri, 2014), and instill motivation toward buying them (Ansar, 2013). Chase and Smith (1992) discovered that environmental messages from advertisements were found to be influential in the green purchasing decisions of 70% of the respondents. The findings proved the existence of a positive relationship between environmental advertisements and green purchasing behavior. According to Grillo, Tokarczyk, and Hansen (2008), environmental advertisement plays an important role in portraying a pro-environmental image while creating eco-friendly awareness among consumers and organizations. As a matter of fact, familiarity with environmental products can be increased through environmental advertisements. Delafrooz et al. (2014) found that such methods had the most significant effect on consumer purchasing behavior. Chekima et al. (2015), too, provided positive evidence in the moderating role of environmental advertisement toward green purchase intention. Therefore, the following hypothesis was framed:

H3: Environmental advertisement is positively related to green purchasing behavior in rural tourism destination.

Based on the hypotheses developed, a research framework was proposed, as in Figure 1. Green marketing tools were conceptualized as three-dimensional constructs, consisting of

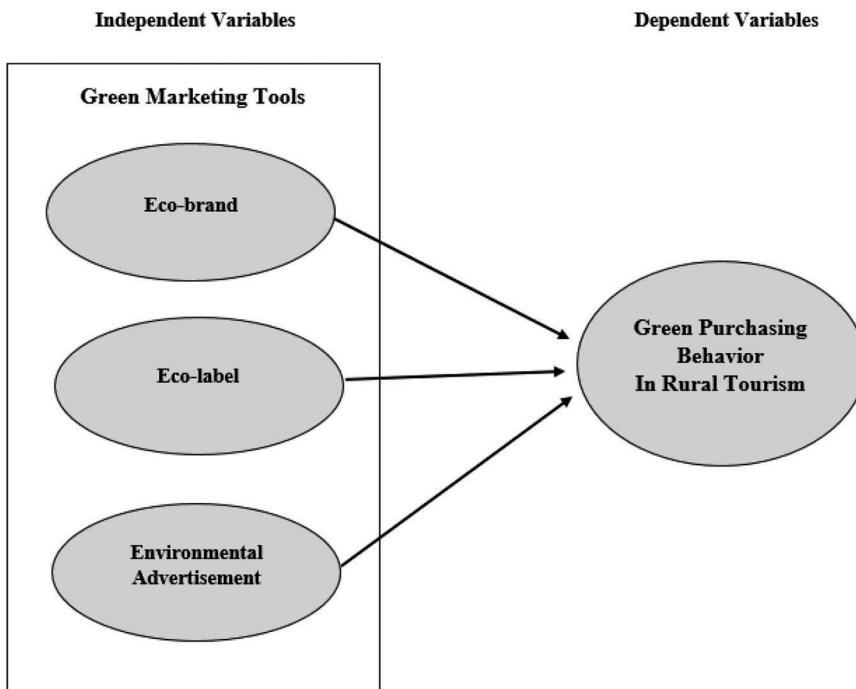


Figure 1. Proposed research framework.



eco-brand, eco-label, and environmental advertisement as the independent variables, whereas green purchasing behavior in rural tourism acted as the dependent variable.

## Methodology

The quantitative approach and survey questionnaires were used as the research instruments for data collection. The questionnaire comprised two sections. Section A served to collect demographic information of the respondents, whereas Section B consisted of multiple items to measure the green marketing tools and green purchasing behavior. A total of 28 items were adapted from previous studies and modified to fit the Malaysian context. These specifically involved the items for eco-brand, eco-label, environmental advertisement, and green purchasing behavior that took up seven, seven, eight, and six questions, respectively (Rahbar & Wahid, 2011). The details of the measurement items for the respective constructs are shown in [Appendix A](#). The technique of back translation as proposed by Brislin (1980) was applied in the development of the questionnaire. The questionnaire items were first developed in English and then translated into Bahasa Melayu. The translated questionnaire items in Bahasa Melayu were translated back into English by a lecturer from the Language School. The final version of the distributed questionnaires was prepared in two languages (English and Bahasa Melayu). The reason for this was because some of the local tourists who visited the rural destinations used Bahasa Melayu more as their main language. The respondents were asked to respond to each statement based on a seven-point Likert scale (ranging from 1 = *strongly disagree* to 7 = *strongly agree*). During the data collection process, a purposive sampling technique was applied, that is, the selection of any tourists visiting the study sites who were at least 16 years of age and above. Henceforth, both local and international tourists with a minimum age of 16 years and above were approached to be respondents.

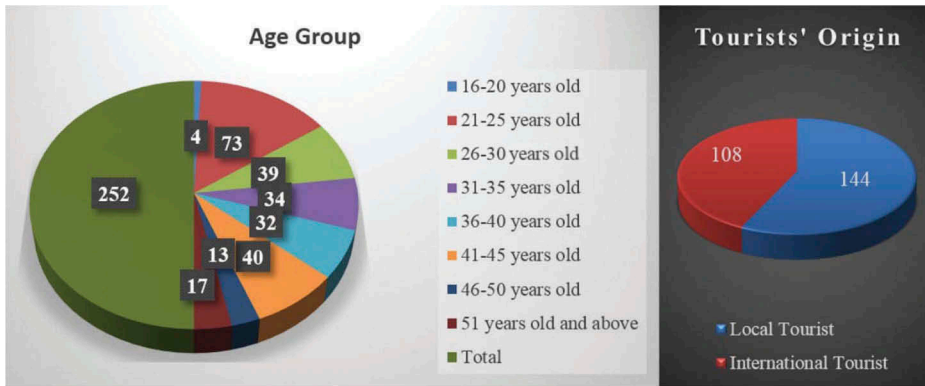
In this study, five rural tourism destinations in Kuching, Sarawak were selected. These included Annah Rais Bidayuh Longhouse, Kampung Bako, Kampung Telaga Air (Satang Island), Kampung Teluk Melano, and Kampung Semadang. These five study sites were selected based on several criteria (see [Table 1](#)). The criteria of selection mainly considered destinations with certain similarities: (i) the destinations were equipped with green environmental resources; (ii) the existence of local industry players as homestays or tour guides; and (iii) the popularity of the destinations among tourists. A total of 300 sets of questionnaires were distributed to the tourists who visited the study sites by a group of trained enumerators throughout the period of September 2016 to December 2016. The enumerators began by approaching the potential respondents to acquire their consent to participate in the survey. Only those willing to participate were briefed further on the overall objective of the study. Those who required further explanation on the questions were assisted by the enumerators. Out of the 300 distributed, only 268 sets were returned and proceeded to the analysis stage. The refusal rate was about 10.7%. The response rate was as high as 89%. The authors' initial expected response rate was set to a minimum of 70%, aligned to the response rate as suggested by Nulty (2008) in order to prove that it was free from response error. [Figure 2](#) highlights some basic information regarding the respondents.

Prior to measurement and structural analyses, the data first went through a series of preliminary analysis via Statistical Package for Social Science 23.0 (SPSS). This was to ensure that the collected data were free from missing values, issues of straight lining, and

**Table 1.** Information about study sites

Descriptions	Site(s)	Kampung Semadang	Kampung Telaga Air	Annah Rais Bidayuh Longhouse	Kampung Bako	Kampung Teluk Melano
Ethnicity		Bidayuh	Malay	Bidayuh	Malay	Malay
Natural Surroundings		Jungle, Flora, & Fauna	Jungle, Flora, & Fauna	Jungle, Flora, & Fauna	Jungle, Flora, & Fauna	Jungle, Flora, & Fauna
Accommodation Amenities		Homestays	Homestays	Homestays	Homestays	Homestays
Tour Guides		Yes	Yes	Yes	Yes	Yes
Open to Tourists' Visit		Yes	Yes	Yes	Yes	Yes

(Source: Authors' compilation based on interview with respective local communities).



**Figure 2.** Age group and tourists' origin.

fit to proceed for measurement and structural analysis. The final results revealed that a total of 16 sets of the questionnaires were discarded due to incomplete data and straight lining problems. The remaining 252 sets of questionnaires were used for measurement and structural analyses. SmartPLS (version 3.2.6, Ringle, Wende, & Becker, 2015) was used to perform the PLS-SEM analysis to assess the research model. The two-step analysis approach was used to analyze the data. Bootstrapping was conducted with 500 resamples to generate the standard errors of the estimation and *t*-values.

## Findings

### Assessment of the measurement model

First, confirmatory factor analysis (CFA) was conducted to test the item reliability, convergent validity, and discriminant validity of the measurement scales. As shown in Table 2, all the items loading exceeded the minimum cut off point of 0.50 (Bagozzi, Yi, & Philipps, 1991), thus internal consistency was achieved. In terms of convergent validity, all the composite reliability (CR) values were above the minimum cut off point of 0.7 (Chin, 2010) and all of the average variance extracted (AVE) values met the minimum criteria of 0.50 (Fornell & Larcker, 1981). The Cronbach's Alpha values for all the variables were also above the minimum cut off point of 0.7. For

**Table 2.** Results of measurement model

Construct	Items	Loadings	CR	AVE	Cronbach's Alpha
Eco-brand	EcoBrand_01	0.546	0.922	0.632	0.898
	EcoBrand_02	0.723			
	EcoBrand_03	0.823			
	EcoBrand_04	0.862			
	EcoBrand_05	0.870			
	EcoBrand_06	0.900			
	EcoBrand_07	0.784			
Eco-label	EcoLabel_01	0.831	0.896	0.554	0.866
	EcoLabel_02	0.799			
	EcoLabel_03	0.852			
	EcoLabel_04	0.749			
	EcoLabel_05	0.599			
	EcoLabel_06	0.671			
	EcoLabel_07	0.674			
Environmental Advertisement	EnvAdver_01	0.749	0.892	0.581	0.855
	EnvAdver_03	0.808			
	EnvAdver_04	0.796			
	EnvAdver_05	0.805			
	EnvAdver_07	0.662			
	EnvAdver_08	0.741			
Green Purchasing Behavior	GreenPB_01	0.856	0.906	0.623	0.874
	GreenPB_02	0.866			
	GreenPB_03	0.856			
	GreenPB_04	0.800			
	GreenPB_05	0.788			
	GreenPB_06	0.514			

Note:

<sup>a</sup>Composite Reliability (CR) = (square of the summation of the factor loadings)/((square of the summation of the factor loadings) + (square of the summation of the error variances))

<sup>b</sup>Average Variance Extracted (AVE) = (summation of the square of the factor loadings)/((summation of the square of the factor loadings) + (summation of the error variances))

\*EnvAdver\_02 and EnvAdver\_06 were deleted due to low loading.

**Table 3.** Discriminant validity of constructs

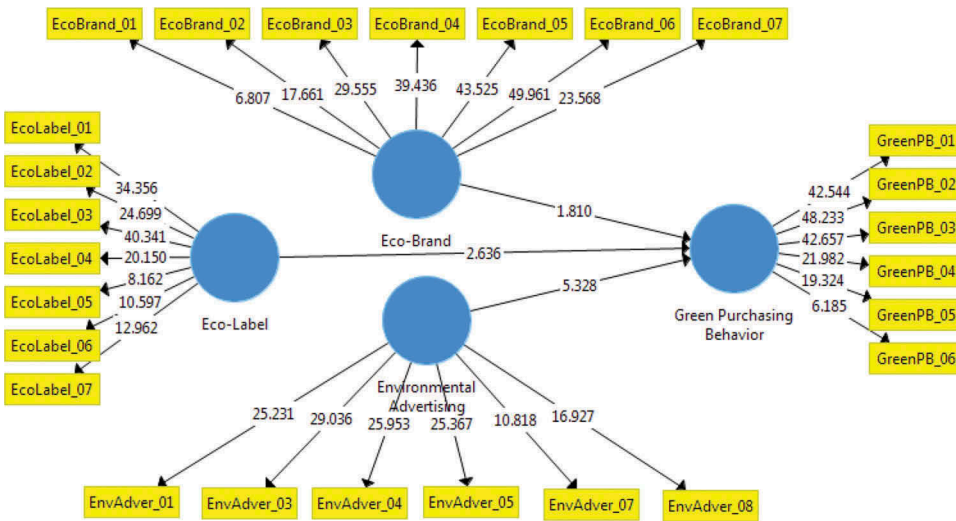
	Eco-brand	Eco-label	Environmental Advertisement	Green Purchasing Behavior
Eco-brand	<b>0.795</b>			
Eco-label	0.651	<b>0.744</b>		
Environmental Advertisement	0.615	0.439	<b>0.762</b>	
Green Purchasing Behavior	0.533	0.473	0.575	<b>0.789</b>

Note: Diagonals represent the square root of the average variance extracted (AVE) while the other entries represent the correlations.

discriminant validity (see Table 3), the value of AVE was square rooted and testified against the inter-correlation of the construct with other constructs in the research model and all the values noted as greater than each of the constructs' correlation (Chin, 2010). Hence, the measurement model was satisfactory and provided sufficient evidence in terms of reliability, convergent validity, and discriminant validity. The coefficient of determination ( $R^2$ ) was 0.404 for green purchasing behavior, which explained more than 40% of the construct. This was way above the 0.26 value as suggested by Cohen (1998), indicating a substantial model where the  $R^2$  was 0.67, moderate model where the  $R^2$  0.33, and weak model where the  $R^2$  0.19.

**Assessment of the structural model**

Next, Figure 3 and Table 4 present the results of the hypotheses testing. The statistical results showed that all three hypotheses proposed and tested were supported. The results revealed that the three-dimensional green marketing tools were positively significant in relation to green purchasing behaviour. Hence, H1, H2, and H3, were supported. Table 4 shows that the variation inflation factor (VIF) values were in the range of 1.615 and 2.264, which is less than 10. Therefore, it is confirmed that no multicollinearity exists among the constructs (Bock, Zmud, Kim, & Lee, 2005; Neter, Kutner, Nachtsheim, & Wasserman, 1996). A recent publication by Hair, Hult, Ringle, and Sarstedt (2016) suggested that both  $R^2$  and  $Q^2$  should be included in explaining the predictive relevance. Blindfolding procedures were performed to obtain the  $Q^2$  value. In this study, the  $Q^2$  value of the green purchasing behavior was 0.216, more than zero value, as shown in Table 5.



**Figure 3.** Research framework with t-value.

**Table 4.** Path coefficients and hypothesis testing

Hypothesis	Relationship	Standard Beta	Standard Error	t-value	Decision	VIF
H1	Eco-Brand → Green Purchasing Behavior	0.169	0.094	1.810*	Supported	2.264
H2	Eco-Label → Green Purchasing Behavior	0.193	0.073	2.636**	Supported	1.743
H3	Environmental Advertisement → Green Purchasing Behavior	0.387	0.073	5.328**	Supported	1.615

\* $p < 0.05$ , \*\* $p < 0.01$ .

**Table 5.** The results of the prediction values

	SSO	SSE	$Q^2$ (=1-SSE/SSO)
Eco-Brand	1,764.00	1,764.00	
Eco-Label	1,764.00	1,764.00	
Environmental Advertisement	1,512.00	1,512.00	
Green Purchasing Behavior	1,512.00	1,185.65	0.216

Notes: Blindfolding procedure only conducted for reflective constructs.

## Discussion

Environmental sustainability is one of the recent debates among tourism stakeholders in the tourism industry (Grimstad & Burgess, 2014; Harrill, 2004; Lloyd, Gilmour, & Stimpson, 2015; Reimer & Walter, 2013). Environmental sustainability of resources has been projected to be the main contributing factors for economic sustainability. The present study investigated the tourists' opinions on the impacts of the three-dimensional components of green marketing tools (e.g., eco-brand, eco-label, and environmental advertisement) on green purchasing behavior of rural tourism destinations. This study intends to explain the why and how of green marketing tools' effect on green purchasing behavior from the viewpoints of tourists who visited the rural tourism destinations. Moreover, the findings of this study were intended to reveal the attitudes and readiness of rural tourists who opted for green purchasing behavior that was influenced by green marketing tools. Interestingly, the findings of this study showed that all the three-dimensional components of green marketing tools have had significant positive impacts on rural tourism green purchasing behavior.

The present study also revealed that eco-brand is significantly and positively related to the green purchasing behavior in the context of rural tourism. The findings of this study were congruent with the results of studies by Rahbar and Wahid (2011), Delafrooz et al. (2014), and Ahmadi, Javadi, and Pakravan (2015). Although the concept of rural tourism is associated with natural and environmental resources, some of the products used by homestays or other industry players for tourism activities are not environmentally friendly. It is important to note that the current trend shows that tourists who visited rural tourism destinations were ready to accept eco-branded products, particularly in the case of Sarawak. In other words, eco-branded products are influencing the attitudes of tourists toward the consumption of green products. As revealed by the findings, most tourists who visit rural tourism destinations for holiday are environmentally conscious, therefore industry players are encouraged to begin shifting their tourism products and services toward eco-branding. Eco-branded products are highly correlated with green purchasing behavior that subsequently leads to brand loyalty (Ginsberg & Bloom, 2004) and sustainability.

The findings of the current study indicate the existence of positive and significant relationship between eco-label and green purchasing behavior of rural tourism. In addition to that, the findings of the present study also supported data from previous studies (Chekima et al., 2016; Dekhili & Achabou, 2014), which also provided positive evidence between eco-labels and green purchasing behavior of the consumers in a positive way. This is due to the fact that the label itself contains the product information (Chekima et al., 2015). Thus, eco-labels provide useful information for tourists to differentiate the nature of the products, whether they fall into the category of environmentally friendly or harmful to the environment. In the same breath, Grankvist et al. (2004) found that groups with a strong concern for the environment, such as women, graduates, and youngsters, tend to be affected by eco-labels in their purchasing behavior. Rural tourists were also of the opinion that eco-labels were one of the vital instruments that affected their attitudes toward green purchasing behavior in rural destinations, regardless of the higher price (Loureiro & Lotade, 2005). Therefore, it is justifiable that tourists are more confident in purchasing green products that bear eco-labels.

On the other hand, the findings also portrayed a high correlation between environmental advertisements and green purchasing behavior of rural tourism. Researchers, such as Grillo et al. (2008) and Delafrooz et al. (2014), have found that environmental advertisement plays an important role in creating eco-friendly consciousness among the consumers that leads to their green purchasing behavior. Tourists who visited the rural tourism destinations believed that environmental advertisement helped to establish positive customer values and attitudes, which then led to the purchasing behavior. Advertisements are one of the first promotional kits to reach tourists prior to or during their visit. This can be in any form of media or printed advertising techniques. For some of the rural tourism destinations, television advertisements might not be appropriate due to limitations in term of electricity supply. However, some rural tourism destinations in Kuching are quite developed and come with electricity supply due to numerous government initiatives. The findings revealed that tourists are of the opinion that environmental advertisement does play a significant role in influencing their attitudes toward green purchasing behavior, either before or during their visit to rural destinations.

### **Conclusion, implications, and recommendations**

This study concludes with a summary that the three-dimensional components of green marketing tools, that is, eco-brand, eco-label, and environmental advertisement are significantly and positively correlated with the green purchasing behavior of rural tourism destinations, which were examined from the tourists' perspectives. Thus, the present study has contributed to the body of knowledge in rural tourism marketing and management by enhancing the understanding of factors that influence the attitude of tourists in rural tourism destinations in making decisions for green purchasing behaviors. In addition, the current study has also confirmed and validated that relationships exist between eco-brand, eco-label, and environmental advertisement and green purchasing behavior of consumers based on TPB, particularly among tourists in rural tourism destinations in Kuching, Sarawak. The three-dimensional constructs of green marketing tools were found to influence rural tourists' attitudes and their green purchasing behaviors.

Although there is substantial literature documenting the study of green marketing tools on green purchasing behavior, most of them have taken place in urban tourism and the Western context. No known research works have investigated the relationship of green marketing tools on green purchasing behavior from the perspective of tourists who visited rural tourism destinations. Hence, this study adds value to the literature from the geographical perspective of an Asian country, particularly in a Malaysian context, coupled with the research framework being tested in the rural tourism context.

The practical implication of the study is to provide guidance for the marketers to strategize their promotion techniques of green products in order to foster green consumption among consumers, particularly in rural tourism destinations. The term "marketers" does not solely refer to marketers with professional certifications, but can also be any local community who is involved in tourism activities. These include homestay owners, tour guides, transportation providers, and others. The findings of the study established the three-dimensional constructs of green marketing tools (eco-labels, eco-brands, and environmental advertisement) as important in influencing the tourists' green purchasing behavior in rural tourism destinations. Thus, destination marketers can focus more on

the three-dimensional constructs of green marketing tools in developing their marketing plans. Besides marketers, the Malaysian government, corporate sectors, and the society should also strengthen the environmental governance.

Moreover, this study attempts to further understand tourists' attitudes and perspectives toward the influence of the three-dimensional constructs of green marketing tools on green purchasing behaviors in rural tourism destinations. These findings can be valuable to local planners, policy makers, and business operators with regards to effective implementation of rural tourism marketing strategies. The findings also provide useful insights for rural marketers such as homestay operators, tourism industry players, and the government to enhance their implementation of the green marketing strategies in rural tourism destinations. The three-dimensional constructs of green marketing tools were found to be significant factors that shape green purchasing behavior, thus respective marketers should focus more on developing the right eco-brand, eco-label, and effective environmental advertisement when executing a promotional method in rural tourism destinations.

The sustainability of rural tourism destinations is increasingly important in the competitive current market. As such, further investigation into factors that influence green purchasing behavior is strongly recommended. As this study only includes tourists and their perceptions on the green marketing tools and green purchasing behavior, a wider perspective of different respondents such as rural industry players and green policy makers should be integrated to get more generalized results. It is suggested that future studies could focus specifically on a single product category to examine the effects of green marketing tools toward green purchasing behavior, particularly on the product types that promote sustainable consumption. Besides, future researchers can extend the dimensions of green marketing tools to various types of industries in different market areas, apart from rural tourism sites in Kuching.

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## Appendix A

### Constructs and Measurement Items

Construct(s)/Item(s)	Question(s)
<b>Eco-brand</b>	I can easily differentiate between green and non-green products.
EcoBrand_01	I prefer to use eco-brand products in rural tourism destinations.
EcoBrand_02	I found that eco-brand products are good for environmental sustainability.
EcoBrand_03	Eco-brand of a product is a symbol of product reliability.
EcoBrand_04	I believe eco-brand is more truthful than ordinary brand.
EcoBrand_05	I believe that the product with eco-brand has less adverse impacts to the precious environment in the rural destinations.
EcoBrand_06	I believe that the product with eco-brand is very attractive to me.
EcoBrand_07	I am aware of the SIRIM QAS International's Eco-Labeling mark.
<b>Eco-label</b>	I often buy and bring eco-label friendly products to rural tourism destinations.
EcoLabel_01	The Malaysia eco-label logo is easily recognizable for me.
EcoLabel_02	I often buy products that are labeled as "environmentally safe."
EcoLabel_03	I always read labels on the products.
EcoLabel_04	I believe products with eco-label should be sold in rural tourism destinations.
EcoLabel_05	I prefer products with eco-label information on the product that I bought in rural destinations.
EcoLabel_06	
EcoLabel_07	
<b>Environmental Advertisement</b>	In general, I like environmental advertisement on television.
EnvAdver_01	I consider television advertising is misleading in rural tourism destinations.
EnvAdver_02	I consider television advertising to be very essential in environmental advertising in rural tourism destinations.
EnvAdver_03	I consider print (newspaper and magazine) advertising to be very essential to environmental advertisement in rural tourism destinations.
EnvAdver_04	In general, I like environmental advertisement on print advertising.
EnvAdver_05	I consider print advertising is misleading in rural tourism destinations.
EnvAdver_06	I would be influenced to buy the products that advertised in the environmental advertisements.
EnvAdver_07	I like those advertisements that contain information regarding the environmental friendly products.
EnvAdver_08	I buy the products specifically because of its "green" characteristics in rural tourism destinations.
<b>Green Purchasing Behavior</b>	I have a favorable attitude toward purchasing a green product in rural tourism destinations.
GreenPB_01	I am willing to pay more for a green product in rural tourism destinations.
GreenPB_02	I switch to the other brands for ecological reasons in rural tourism destinations.
GreenPB_03	I have avoided buying a product because it had potentially harmful environmental effects in the rural tourism destinations.
GreenPB_04	
GreenPB_05	
GreenPB_06	I am aware of the environmental impact of the products I buy.