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## Community's Intention Towards Environmentally-Friendly Activities: The Effect Of Green Advertisements

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### ABSTRACT

*The green context appears to be accentuated in the developed and developing countries in recent years. Malaysia is one of the developing countries that aggressively initiating the environmental conservation plans for sustainable future. The present study attempts to investigate the factors influencing the community's intention to perform environmentally-friendly activities and the effect of community's attitude towards the green advertisements. Building on the Theory of Planned Behaviour (TPB), with an inclusion of additional variables, namely, green advertisements, environmental knowledge and environmental concern, an extended TPB model was proposed and examined. Convenience sampling was used with 303 responses collected via survey method. The findings reported that the community in Malaysia exhibited positive attitude towards the green advertisements. The community's attitudes, perceived behavioural control and environmental concern had showed significantly positive effect on the community's intention to perform environmentally-friendly activities and the green advertisements appear to have the most significant influence towards the community's intention to perform environmentally-friendly activities. Nonetheless, there is no significant effect of subjective norms and environmental knowledge on the community's intention to perform environmentally-friendly activities. Lastly, there are several implications have been discussed to address useful insights for the Malaysian government and pro-environmental firms to develop strategic green marketing plans to engage with the community to be socially responsible in protecting the environment.*

**Keywords:** Green advertisement, environmentally-friendly activities, intention, theory of planned behaviour, developing countries.

## **INTRODUCTION**

Environmental issues have been a concern since a few decades ago and green activities have been initiated significantly in both developed and developing countries in a way to maintain the environmental sustainability. Among the critical issues include deforestation, pollution and waste management. Deforestation has contributed to the global warming which would affect the balance of the ecosystem. Furthermore, air pollution had caused China's economy to slow down when the smog problem hit Beijing at the end of year 2015 (Gustke, 2016). Other than that, mismanagement of plastic waste has led to a severe consequence to the marine living, which causing them to become intoxicated. Once entering the food chain, this would eventually threatening human and animal's health upon food consumption.

Non-Governmental Organisations (NGOs) have been actively voicing for the environmental issues across the nations. For example, World Wildlife Fund (WWF) supports financially for the environmental conservation movement on a worldwide scale such as collaboration with Apple to raise fund during Earth Day and tropical forest conservation in Brazilian Amazon. United Nations Environment Programme (UNEP) participates in Global Partnership on Marine Litter (GPML) to work on plastic cleaning in the ocean to reduce the marine life pollution. Overall, the NGOs' standalone or collaborative activities are intended to promote the environmental sustainability.

In Malaysia, preserving the environment has become the concern for the government, along with the economic growth. The cases of illegal logging, such as in Sarawak and Kelantan, have led to several environmental and social problems, among others include landslides, water pollution and disruption of indigenous people's village (Tan, 2015). They may also threaten the overall ecosystem's biodiversity. The habitat of endangered species such as Orang Utans, Malayan Tiger and Pygmy Elephants is at stake. The government is expected to stricken the enforcement of the stated laws and regulation and to expedite the prosecution of the illegal logging cases reported. Subsequently, the re-forestation and action to protect the endangered species have to be taken as part of saving the planet and the wildlife.

Besides that, urbanisation process and irresponsible business activities have placed water pollution at the top list of environmental issues in Malaysia. The urban developments have altered the river dynamics and natural conditions, which consequently brought damages and degradation to the river system. For example, water pollution in Sungai Buah, Nilai, which had flown to Sungai Semenyih Water Treatment Plant, had caused the plant to be shut down and water disruption occurred in Selangor. According to Kaur (2016), an average of 2,200 tonnes of rubbish have been collected every month from the rivers across the country, which partly contributed to the worsen of water pollution.

Upon recognising the environmental issues that occurred in the country, the Ministry of Natural Resources and Environment (NRE) has been consistently initiating the sustainable development program to increase awareness on the importance of environmental conservation. Department of Environment (DOE) of Malaysia has also started up many activities such as organising running events, National Environment Day, and establish green

ICT initiatives in the public services. The green ICT is a new mode of having environmental friendly practices and policies to use the information system. The practices include reducing energy consumption such as hardware, electricity and papers; and minimising carbon footprint. The advantages of these initiatives include natural resources conservation and cost savings (Suryawanshi & Narkhede, 2015). Ministry of Energy, Green Technology and Water (KeTTHA) is also active in protecting the environment with several programmes initiated such as “No Plastic Bag Day” to reduce the use of plastic and organising the International Green Technology & Eco Products Exhibition and Conference Malaysia (IGEM) to explore and obtain lucrative opportunity in the green market.

Green advertising is one of the green marketing tools to address the environmental issues and subsequently to promote sustainable development among the public in the country (Rahbar & Abdul Wahid, 2011). Many private organisations such as Nestlé Malaysia have been involved actively in promoting green activities, for examples, Project Rileaf (a riverside reforestation to minimise water pollution) and CAREton Project (collaboration with Tetra Pak to instil the recycling habit among the consumers and school children). Overall, these initiatives from both public and private sectors are beneficial to raise the public consciousness towards the environmentally-friendly behaviours for a more sustainable future.

Nonetheless, these green activities required an appropriate medium to reach out to the community to enhance their consciousness on environmental issues since the community is likely to be more sensitive to the advertised environmental issues (Chang, Zhang & Xie, 2015). Hence, green advertisements could be a pertinent platform to communicate the environmental issues with the community in the nation. Furthermore, the community's responses or number of participants attending the activities/ events could be used as a benchmark to measure the effectiveness and success of the campaigns organised. For example, although the campaign of “Love Our River” was launched 10 years ago, the condition of the rivers in the country is still unsatisfactory. This has been partly due to the low public awareness and sensitivity to the campaign and lack of advertisement made to promote the campaign (Rahim et al., 2012). Normally, the green activities are not well-promoted, thus led to limited participation from the public, which consequently affect the effectiveness of the activities and failure to achieve the objectives of the activities. Therefore, this study examines the factors that influence community's intention to perform environmentally-friendly activities including the effect of green advertisement.

This study adds to the extant literature by examining the effect of attitude towards green advertisements on green advertisements; and the impact of green advertisements on the community's intention to perform the environmentally-friendly activities. Prior studies mostly focused on green products purchase intention (Yadav & Pathak, 2016) with lack of research examining the factors that influence the community's intention to perform environmentally-friendly activities in a comprehensive manner, including the beliefs, concern and knowledge as well as the role of green advertisements. Perhaps, findings of the study could respond to the argument of the scepticism and credibility of messages transmitted through advertisements by examining the community's attitudes towards the green advertisements (Boush, Friestad & Rose, 1994). This is due to consumers' likeliness to

perceive the green advertisement as one of the marketing ploys to influence the purchase of a product or engage in a service offered by the firm. Moreover, the consumers perceived that the content of the green advertisements was exaggerated and impact their trustworthiness on the green advertisement (Hassan & Valenzuela, 2016).

This study also attempted to extend the Theory of Planned Behaviour research model by inclusion of additional variables such as environmental knowledge, concern and green advertisements. This study may reveal the impact of beliefs, knowledge, concern and green advertisements of the community in Malaysia towards their intention to perform environmentally-friendly activities. This study provides a holistic view on the factors that influence Malaysia community's intention to perform environmentally-friendly activities due to the lack of prior researches in Malaysia that studied the intention to perform environmentally-friendly activities with the proposed extended TPB model. For example, Aman, Harun & Hussein (2012) studied the attitudes, environmental knowledge and concern on green purchase intention, while Tan (2013) studied the three beliefs of TPB model and self-identity on green house purchase intention. Rezai et al. (2012) studied the TPB model towards the green food purchase intention. Thus, this study intends to furnish a pragmatic approach to the education centre and ambitious firms to shape the green community in Malaysia implicitly and explicitly.

The remaining of the paper is arranged as follows. Next section reviews related literature on intention to perform environmentally-friendly activities, factors that influence community's intention towards environmentally-friendly activities including green advertisement, and highlights the relevant hypotheses developed for the purpose of this study. Then, it explains the research methodology used, followed by discussion of findings gathered; and finally, a conclusion.

## **LITERATURE REVIEW**

### **Intention to Perform Environmentally-friendly Activities**

Numerous campaigns and programmes are initiated by the government and private sectors in Malaysia such as "No Plastic Bag Day", "Car Free Day", energy and water saving activities, and recycling. These environmental responsibilities are vital in increasing the awareness of environmentally-friendly activities among the community in Malaysia and subsequently generating more sustainable future development such as preserving natural resources, protection of the ecosystem, organisms' habitats and food chains. Environmentally-friendly activities often described as actions performed that are harmless to the environment (Manaktola & Jauhari, 2007; Zheng & Chi, 2015).

The term "environmentally-friendly" is sometimes being defined as "green" (Shrum, McCarty & Lowrey, 1995). For example, green practice is referring to carry out environmentally-friendly activities; while green purchase is referring to purchasing the environmentally-friendly products and green consumers are those individuals' purchase behaviour being influenced by environmental concerns. The researchers have suggested that performing environmentally-friendly activities comprise of recycling (Kaseva & Gupta,

1996), environmental purchase (eg. green purchase or buying eco-friendly products), and avoidance of using the disposable products (Han, Hsu and Sheu, 2010). The heightened awareness and concern of the community towards environmental sustainability have encouraged them to be actively involved in the environmentally-friendly activities. Following that, this study examines the factors that influence the community's intention to perform the environmentally-friendly activities using a more comprehensive research framework that is explained by the extended theory of planned behaviour.

### **Community's Attitudes Towards Green Advertisements**

Green advertisement refers to a media used to transmit environmentally-friendly messages to stakeholders (Leonidou et al., 2011). It is a tool to promote and communicate the environmental activities to the community (Tariq, 2014). The themes for green advertisement comprise of 3R (reduce, reuse and recycle), carbon-free, energy renewable and eco-friendly. The advertisement could be appeared in form of printed materials such as newspaper and magazine; campaigns such as forum, exhibition and corporate social responsibility (CSR). The community's responses towards the environmentally-friendly activities may vary with the way of conducting the green advertisements. Therefore, organisation should select the appropriate form of green advertisement to ensure it reaches the community well. Consumers who are highly involved in the environmental issues tend to exhibit more favourable attitudes towards green advertisements (D'Souza & Taghian, 2005; Fernando, Sivakumaran and Suganthini, 2016).

Prior literature dictated a positive association between the attitudes towards green advertisement and green advertisements (Purohit, 2012). A positive attitude towards green advertisement in printed and television format, led to greater intention to purchase environmentally-friendly product (Purohit, 2012). It is vital to examine the Malaysia community's attitude towards the green advertisements, as they could increase the awareness of the community on the environmental issues (Rahim et al., 2012). Therefore:

H1: There is a positive relationship between community's attitude towards the green advertisements and green advertisements.

### **Green Advertisements and Intention to Perform Environmentally-friendly Activities**

Consumers are more likely to purchase green products or engage in environmentally-friendly activities (e.g., recycling, minimising energy and water consumption) when they are exposed to the green advertisements with environmental claims (Carlson, Grove & Kangun, 1993). The environmental claim consists of environmentally-friendly attributes of a product and environmental facts, for examples, this product is organic and biodegradable; rain forests were destroyed at the rate of two acres per second globally. Therefore, the design of the green advertisements is important as it could influence the effectiveness to convey the green messages and subsequently impacts the intention to perform environmentally-friendly activities (Tih et al., 2016). If the community feel doubtful on the credibility of the green advertisement, it may create a negative impact on the community's intention to perform environmentally-friendly activities (Goh & Balaji, 2016). Prior studies highlighted the

positive relationship between the green advertisements and intention to perform environmentally-friendly activities such as purchasing environmentally-friendly products (Hassan & Valenzuela, 2016; Chekima et al., 2016). Therefore:

H2: Green advertisements are positively related to the community's intention to perform environmentally-friendly activities.

### **Community's Attitudes, Subjective Norms, Perceived Behavioural Control (TPB model) and Intention to Perform Environmentally-friendly Activities**

Theory of planned behaviour (TPB) acknowledged the importance of three components, namely attitudes, subjective norms and perceived behavioural control, in influencing a person's intention toward the performance of a behaviour. Attitude refers to the favourableness evaluation of an intention to perform an action, while subjective norms account for a person's tendency to act in accordance with the external or social pressure to form the intention. Perceived behavioural control defined a person's belief in the presence of own perceived ability to facilitate or obstruct the behavioural intention (Ghani et al., 2013). According to Tobler, Visschers & Siegrist (2012), TPB is a powerful model to inspect the community's intention to perform environmentally-friendly activities. Evidences gathered from the extant literature unveiled the roles of attitudes, subjective norms and perceived behavioural control in determining the intention to perform the environmentally-friendly activities (Wan, Cheung & Shen, 2012; Hsu, Chang & Yansritakul, 2017).

In the context of Hong Kong, Wan et al. (2012) documented the significant roles of the three components of TPB in influencing the university student's intention to perform recycling activities. Hsu, Chang and Yansritakul (2017), who examined the green skincare products purchase intention among the university students in Taiwan also found a significant association between all the components of TPB and purchase intention. Collectively, the positive association between the three components of TPB and intention to perform environmentally-friendly activities including the green purchase intention implied that the community would tend to perform the environmentally-friendly activities when they favour the activities (attitude), being influenced by the important group of the referent (subjective norms) and have control over on the activities (perceived behavioural control). Therefore:

H3: Community's attitudes towards environmentally-friendly activities are positively related to their intentions to perform environmentally-friendly activities.

H4: Community's subjective norms are positively related to their intentions to perform environmentally-friendly activities.

H5: Community's perceived behavioural controls are positively related to their intentions to perform environmentally-friendly activities.

### **Environmental Knowledge and Concern, and Intention to Perform Environmentally-friendly Activities**

Several prior studies highlighted the inclusion of additional variables to explain the intention towards the behaviour of the community (e.g. Kim & Chung, 2011; Ghani et al., 2013). Based on the evidences gathered from the extant literature, this study extends the TPB research framework by including environmental knowledge and environmental concern as part of the factors that influence community's intention to perform environmentally-friendly activities. Environmental knowledge refers to the community's degree of understanding and awareness on the environmental issues (Kumar, 2012). Fryxell and Lo (2003) explained that the environmental knowledge is the basic data, facts and any concept regarding the environment and its ecosystem including land, air and water. It also involves how the community perceives the concept and realise the responsibility to achieve sustainable development. Environmental knowledge could be divided into objective and subjective, whereby objective knowledge refers to actual knowledge or how much an individual knows; while subjective knowledge refers to perceived knowledge or how much an individual thinks he or she know about the matter (Vicente-Molina, Fernández-Sáinz & Izagirre-Olaizola, 2013).

Chan (1999) described that environmental knowledge (e.g. recycling activities information) is a crucial factor to predict the intention to perform environmentally-friendly activities. Kanchanapibul et al. (2014) and Emine & Afyon (2015) reported that consumers whom equipped with environmental knowledge tend to show significant positive influence on the behavioural intention in the purchase of environmentally-friendly products. Similarly, Yadav & Pathak (2016) depicted a significant positive effect of environmental knowledge on the community's intention to perform environmentally-friendly activities, specifically in purchasing green products. In other words, the more the environmental knowledge the community gained, the more likely they intent to perform environmentally-friendly activities. Therefore:

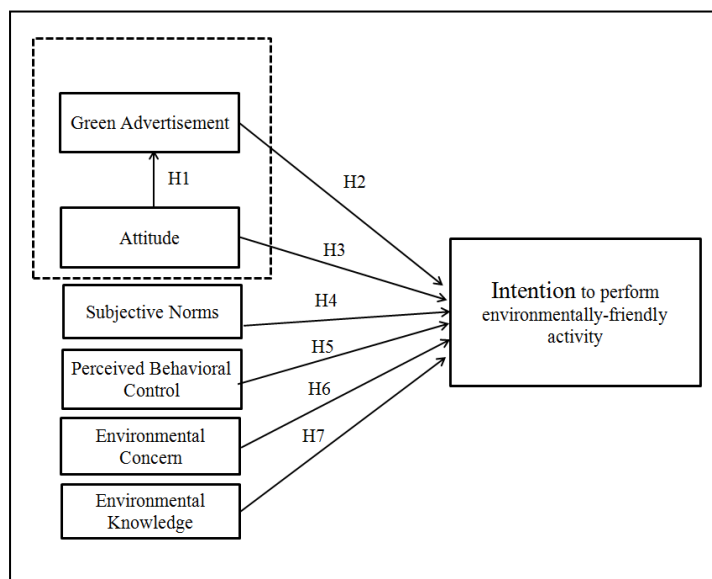
H6: Community's environmental knowledge is positively related to their intention to perform environmentally-friendly activities.

Environmental concern is depicted as the degree of the community's responses on the environmental issues and their readiness to furnish the efforts to protect the environment (Kim & Choi, 2005). As presented by prior studies, the environmental concern could be the antecedent that influences the community's intention to perform environmentally-friendly activities. In other words, when the community's environmental concerns increase, they have higher possibility to perform the environmentally-friendly activities such as purchasing products which are less harmful to environment or recycling (Bertrandias & Elgaaid-Gambier, 2014; Jekria and Daud, 2016). Paul, Modi & Patel (2016) found a significant association between environmental concern and the community's intention to purchase green products. Yadav and Pathak (2016) shared the similar findings in which the environmental concern among the student community is positively related to the intention to purchase environmentally-friendly products. Therefore:

H7: Environmental concern is positively related to the community's intention to perform environmentally-friendly activities.

## METHODOLOGY

This study used Theory of Planned Behaviour (TPB) and the research framework is adopted from prior studies by D'souza & Taghian (2005), Yadav & Pathak (2016) and Lee et al. (2016). The research framework is illustrated in Figure 1.



**Figure 1: Research Framework**

### Theory of Planned Behaviour

Theory of Planned Behaviour (TPB) is developed to understand how things can change the attitude and behaviour of a person. TPB is developed based on three components, namely attitude, subjective norms and perceived behavioural control; to be used as predictors of a person's intention and subsequently shaping the behaviour. TPB has been widely used in predicting an individual's behaviour in many social psychological studies (e.g., Han and Kim, 2010; Han, Hsu & Sheu, 2010; Kim and Chung, 2011; Kumar, 2012). From extant literature, plenty studies had adopted the Theory of Planned Behaviour (TPB) conceptual model to conduct the studies on the formation of individual's intention to perform environmentally-friendly activities such as recycling, visiting environmentally-friendly hotels and purchasing environmentally-friendly products (e.g., Han, Hsu & Hseu, 2010; Han & Kim, 2010; Ghani et al., 2013; Wang and Wang, 2016).

Several recent studies have employed an extended TPB with the inclusion of relevant variables to enhance the predictive power of the existing TPB model;



and that extended TPB's framework can be broadened by the inclusion of additional variables (Ajzen, 1991; Park, Hsieh & Lee, 2017). For example, in the waste separation context, Ghani et al. (2013) included "situational factors" as additional variables to examine the intention to participate in source separation of food waste. Besides, Kim & Chung (2011) who studied on the purchase intention of organic products included additional variable such as "past experience with organic products" in the study. Apart from that, several prior studies in hotel industry also included "past behaviour" (Wu & Teng, 2011); "perceived moral obligation" and "environmental concern" (Chen & Tung, 2014) to examine the hotel guests' intentions to visit the green hotel. Further, prior researchers have included two additional variables (i.e. environmental knowledge and environmental concern) into the TPB model to examine the purchase intention of environmentally-friendly products among the community in Thailand (Maichum, Parichatnon & Peng, 2016) and India (Yadav & Pathak, 2016). Therefore, based on the evidences gathered from the extant literature, the environmental concern and environmental knowledge were integrated in this paper to examine its influence on the community's intention to perform environmentally-friendly activities specifically in Malaysia.

### **Sampling Procedure**

The target respondents for this study are made of consumer who is 18 years old and above and stayed in Malaysia. These criteria is broader than the one applied in many prior literature, which focuses on university students only (Kim, Njite & Hancer, 2013; Zheng & Chi, 2015; Grimmer & Woolley, 2014; Hsu, Chang & Yansritakul, 2017). The convenience sampling technique was employed during the sample collection due to the large population in the targeted area. According to Sekaran (2000), it is an easier and efficient way to gather information.

### **Research Instrument**

The survey questionnaire was developed by referring to several reputable prior studies (e.g. Swaim et al., 2014; Paul, Modi & Patel, 2016). The preliminary questionnaire was pilot-tested and refined accordingly before being distributed to the larger sample. The survey questionnaire was self-administered and disseminated to the larger respondents through printed copies at many locations such as retail outlets, secondary schools, universities, neighbourhood and corporate offices. Online survey forms have also been developed as supporting method to establish wider reaching points to the respondents through Google form. As a result, 87 of online questionnaires were received and 230 questionnaires in hardcopy were collected. From a total of 400 survey questionnaires distributed, 317 responses were returned. Finally a total of 303 responses were considered after eliminating the incomplete responses, giving the response rate equal to 75.8%. The ratio of the printed copies versus online survey is 71% and 29% respectively.

A structured and close-ended questionnaire was designed and distributed to the respondents. All items are measured using the Likert 5-point scale, ranging from "1=

Strongly Disagree” to “5= Strongly Agree”, as suggested by Rahbar & Abdul Wahid (2011), Mohd Suki (2016) and Shafie, Yatim & Othman (2012). The scale is used as to enhance the quality of the responses and reduce the annoyance of the respondents when answering the questionnaires (Lam, 1997) as compared with wider range of the likert scale (e.g. 6 points and 7 points). Moreover, Dawes (2012) suggested that Likert 5-point scale is simpler for the interviewer to convey the questionnaires to the respondents whilst more point likert scale would be too lengthy. Further, lower point of likert scale (4 points and below) is likely to show lower validity coefficient for the data analysis (Chang, 1994). As a result, Likert 5-point scales will be selected to measure the responses. The questionnaire composes of 8 sections and the detail of respective constructs and items are presented in Table 1.

Section	Construct	No	Items	Source
A	Attitudes Towards Green Advertisement	1	I think green advertisements are believable.	Mackenzie and Lutz, 1989; D'souza & Taghian, 2005; Purohit, 2012; Rahim, Zukni & Lyndon (2012); Tariq 2014; fernando et al., 2015; Lee et al., 2016
		2	I think green advertisements are convincing.	
		3	I think green advertisements are good.	
		4	I think green advertisements are pleasant.	
		5	I think green advertisements are favourable.	
		6	The contents of environmental advertisements are of little relevance to daily life.	
		7	Environmental advertisements are well-produced and thus are attractive.	
		8	I think the green advertisements are persuasive	
		9	I think the green advertisements are likeable.	
		10	Which medium of green advertisements that you MOST preferred to receive green messages?	
B	Green Advertisements	1	I plan to perform environmental friendly activity based on the green claim on product/service.	Rahim et al., 2012; Tariq, 2014
		2	I plan to perform environmental friendly activity based on the green label on product/service.	
		3	The attractiveness of design of the green advertisements urge me to perform environmental friendly activities.	
C	Environmental Concern	1	I am very concerned about the environment.	Paul, Modi & Patel, 2016
		2	I would be willing to reduce my consumption to help protecting the environment.	
		3	Major social changes are necessary to protect the natural environment.	
		4	Major political change is necessary to protect the natural environment.	
		5	Anti-pollution laws should be enforced much stronger.	
D	Environmental Knowledge	1	I know the products and packages that I buy and use are environmental safe.	Yadav & Pathak, 2016
		2	I know more about recycling than the average person.	
		3	I am very knowledgeable about environmental issues (eg: pollution, illegal logging).	
		4	I understand the various phrases and symbols related to environment on product package.	
		5	I know how to select products and packages that reduce the waste amount.	
E	Attitudes Towards Intention	1	I like to behave in environmental friendly manner.	Yadav & Pathak, 2016
		2	I think to behave in environmental friendly manner is good idea.	
		3	I think to behave in environmental friendly manner give me pleasure.	
		4	I think to behave in environmental friendly manner is enjoyable.	
		5	I think to behave in environmental friendly manner is favourable.	
F	Subjective Norms	1	Most people who are important to me would want me to perform environmental friendly activity.	Paul, Modi & Patel, 2016
		2	Most people who are important to me think I should perform environmental friendly activity.	
		3	People whose opinions I valued would prefer that I perform environmentally friendly activity	
		4	My friend's positive opinion influence me to perform environmentally friendly activity	
G	Perceived Behavioural Control	1	It is easy for me to perform environmental friendly activities.	Swaim et al., 2014
		2	It is my decision to perform environmental friendly activities.	
		3	I have the ability to carry out the environmental friendly activities.	
		4	I have control over my actions to perform environmental friendly activities.	
H	Intention to Perform Environmentally-friendly Activities	1	I am willing to perform environmental friendly activities.	Swaim et al., 2014; Yadav & Pathak, 2016
		2	I plan to increase environmental friendly activities.	
		3	I intend to seek out more opportunities to be more environmental active in the future.	
		4	I plan to look into to play a greater role in protecting the environment in the future.	

**Table 1: Measurement of Research Variables**

In section A, attitudes towards green advertisement refers to a person's perceived feeling towards the green advertisement. Referring to section B, green advertisements are measured with three items, which are adapted from Rahim et al. (2012) and Tariq

(2014). Firstly, green claims refer to the claims of the advertised products having the characteristics that could conserve the environment (Chan, 2004); whilst green labels refer to the environmentally-friendly symbol or message incorporated in the content of the products in order for the consumers to aware on the brands (e.g. recycling symbol) (Tariq, 2014); and attractiveness of the design of the green advertisements refer to the creativity of the green advertisement's design to promote the environmental issues to the community.

Environmental knowledge (Section C) measures the community's awareness and understanding on the environmental issue (Kumar, 2012), while environmental concern (Section D) measures the community's perception on the importance of environmental issues occurred and willingness to perform the environmental protection. Community's attitudes towards the intention to perform environmentally-friendly activities (Section E) measures the community's favourable or non-favourable evaluations and feelings over the environmentally-friendly activities. Whereas, subjective norms (Section F) measure the impact of the social pressure from the referent group towards intention to perform environmentally-friendly activities. Perceived behavioural control (Section G) examines the person's perception and degree of self-control over the environmentally-friendly activities (Han, Hsu & Sheu, 2010). Finally, intention to perform environmentally-friendly activities (Section H) measures the likeliness or tendency of the community to perform environmentally-friendly activities.

## **FINDINGS AND DISCUSSION**

The demographic profile of the respondents were analysed and the findings were presented in Table 2. The respondents are predominantly female (60.1%). As for the age group, 37.3% of the respondents were under 25 years old and 47.2% were between 25 and 35 years old.

**Table 2: Respondent's Demographic Profile**

Characteristics	Categories	Frequency (N)	Percentage (%)
Gender	Male	121	39.9
	Female	182	60.1
Age group	Under 25	113	37.3
	25 to 35	143	47.2
	36 to 45	34	11.2
	46 to 55	8	2.6
	Over 55	5	1.7
Marital status	Single	217	71.6
	Married without children	24	7.9
	Married with children	58	19.1
	Separated/widowed/divorced	4	1.3
Origin country	Local (Malaysian)	275	90.8
	Foreign	28	9.2
Education	High School or lower	36	11.9
	Diploma	52	17.2
	Bachelor degree	154	50.8
	Master degree	50	16.5
	Others	11	3.6
Employment status	Employed	155	51.2
	Unemployed	112	37
	Self-employed	36	11.9
Monthly income	Less than RM3,000	53	17.5
	RM 3,001 to RM 5,000	55	18.2
	RM 5,001 to RM 8,000	45	14.9
	RM 8,001 to RM 10,000	14	4.6
	More than RM10,000	20	6.6
	Not applicable	116	38.3

The survey questionnaires were distributed to the individuals staying in Malaysia. The respondents consisted of 90.8 % Malaysian and 9.2% foreigners, who reside in Malaysia for working or studying. 71.6% of the respondents were single, while 27% of them were married. Half of the respondents graduated with Bachelor degree (50.8%), 17.2% with Diploma and 16.5% with Master degree. More than half of the respondents were employed (51.2%). 37% of them were unemployed, whereby this group of individuals was mostly students, and 11.9% of the respondents were self-employed.

This study also attempts to reveal the community's most preferred medium to receive the green messages. The findings showed that 44% of the respondents had opted for social network as the most preferred medium to receive green messages; whilst 26.1% of respondents prefer to obtain the green messages and information via television. Furthermore, 8.6% of respondents wish to receive green messages through printed materials such as magazines as well as via road shows or exhibitions respectively.

Then, there are 7.9% of respondents prefer to obtain green messages through websites such as blog; 3.6% of the respondents had chosen radio and only 1% of respondents prefer another medium such as attending a class in order to receive the green messages. The findings are presented in Table 3.

**Table 3: Preferred Medium to Receive Green Messages**

Preferred medium	Frequency (N)	Percentage (%)
Television	79	26.1
Printed material (e.g., brochures, magazines, newspapers)	26	8.6
Roadshows/exhibitions	26	8.6
Websites (e.g., blogs)	24	7.9
Social network	134	44.2
Radio	11	3.6
Others (class)	3	1.0

Subsequently, the descriptive statistics of the continuous variables were presented in Table 4. Overall, all research variables gathered a mean point of more than the average mean of 2.5. This implies that the respondents in general have a good attitude, knowledge, concern and intention towards the environmentally-friendly activities, which may partly indicate that to a certain extent, the Malaysian community care about the environment. The respondents seemed to have agreed that they possessed an acceptable level of knowledge with regard to the environmental issues (mean: 4.251), even though have a slightly lower mean for environmental concern (mean: 3.358). Perhaps, their good attitude towards the intention to perform environmentally-friendly activities (mean: 4.069) motivates them to have a certain extent of the intention to perform environmentally-friendly activities (mean: 3.975). The attitude towards green advertisement (mean: 3.323) is considered low when compared to the other variables, reflecting the lack of awareness or trust of the community to the green advertisement.

Kaiser-Meyer-Olkin (KMO) test was conducted to assess the sampling adequacy for the analysis, and the result shown was 0.907, exceeding the suggested value of 0.6 (Tabachnick & Fidell, 2013). Bartlett's Test of Sphericity showed a significant value ( $p=0.000$ ), which concludes that the data set was appropriate for factor analysis as suggested by Pallant (2013). Principal components analysis (PCA) was conducted upon the 40 items of the questionnaire survey with components explained a cumulative of 64.51% of the variance. Further, results from reliability test showed that all the items measured have good internal consistency, with Cronbach's alpha coefficient of more than 0.7 (Hair et al., 2006), thus, there is no deletion of items made in this study. The results were presented in Table 5.

**Table 4: Descriptive Statistics for Continuous Variables**

Variable	N	Minimum	Maximum	Mean	Tolerance	VIF

Attitudes towards green advertisement	303	1	5	3.323	0.684	1.461
Green advertisement	303	1	5	3.717	0.597	1.676
Environmental knowledge	303	2	5	4.251	0.717	1.394
Environmental concern	303	2	5	3.358	0.524	1.909
Attitudes towards the intention to perform environmentally-friendly activities	303	2	5	4.069	0.451	2.218
Subjective norms	303	1	5	3.445	0.717	1.394
Perceived behavioural control	303	1	5	3.793	0.619	1.615
Intention to perform environmentally-friendly activities	303	1	5	3.975	0.608	1.594

**Table 5: Results of Reliability Test**

No	Variables	No of items	Cronbach 's alpha coefficient
1	Attitude (towards green advertisements)	10	0.783
2	Green advertisement	3	0.739
3	Attitudes (towards intention to perform environmental activities) )	5	0.902
4	Subjective norms	4	0.866
5	Perceived behavioural control	4	0.802
6	Environmental knowledge	5	0.830
7	Environmental concern	5	0.792
8	Intention to perform environmentally-friendly activities	4	0.879

Results from correlation analysis were reported in Table 6. Overall, the relationship among the variables shown positive values and this indicated the variables were having correlation with each other in a positive direction. Prior to the multiple regression analysis, all assumptions for the regression analysis have been tested. In term of multicollinearity, the study showed that all the independent variables have satisfied the suggested tolerance value (more than 0.1) and VIF value (less than 10) as indicated in Table 4 (Pallant, 2013). Hence, there is no multicollinearity exist in this study. Normality, linearity and homoscedasticity assumptions were examined via the Normal Probability Plot (P-P) of the Regression Standardised Residual and Scatter

Plot. The data points were plotted in a straight diagonal line from bottom left to the top right. Apart from that, the scatter plot of the standardised residuals was reported with a rectangular distributed in which most of the scores were concentrated on the centre. Therefore, the assumptions of normality, linearity and homoscedasticity are not violated.

**Table 6: Results of Correlation Test**

Variables	Attitude towards GA	Green Advertisements	Environmental concern	Environmental knowledge	Attitude towards intention to perform EFA	Subjective Norm	Perceived Behavioural Control	Intention to perform EFA
Attitude towards GA	1	.480**	.371**	.237**	.470**	.237**	.411**	.367**
Green Advertisements	.480**	1	.491**	.315**	.497**	.340**	.480**	.530**
Environmental concern	.371**	.491**	1	.322**	.653**	.314**	.474**	.610**
Environmental knowledge	.237**	.315**	.322**	1	.387**	.447**	.384**	.395**
Attitude towards intention to perform EFA	.470**	.497**	.653**	.387**	1	.420**	.510**	.635**
Subjective Norm	.237**	.340**	.314**	.447**	.420**	1	.312**	.373**
Perceived Behavioural Control	.411**	.480**	.474**	.384**	.510**	.312**	1	.618**
Intention to perform EFA	.367**	.530**	.610**	.395**	.635**	.373**	.618**	1

\*\* . Correlation is significant at the 0.01 level (2-tailed).

There are two models of multiple regressions tested in this study. Model 1 tested on the relationship between attitude and green advertisements (H1) and the relationship between green advertisements and intention to perform environmentally-friendly activities (H2). Table 7 summarises the results of regression for Model 1. The findings showed that the association between community's attitudes towards the green advertisements and green advertisements was significant and positively related (Adjusted  $R^2 = 0.228$ ,  $\beta = 0.48$ ,  $p = 0.000$ ) and it explained 22.8 percent of the variance in green advertisements. Thus, the result is statistically supported H1, in which there is a positive relationship between community's attitude towards the green advertisements and green advertisements. The findings appeared to be consistent with Purohit (2012), Sabir et al (2014), and Fernando, Sivakumaran & Suganthi (2016)'s studies that reported the community favours the green advertisements when they exposed to the green advertisements. As proposed by Alniacik & Yilmaz (2012), the positive attitudes of the community towards the green advertisements are vital to determine the effectiveness of the green advertisements in conveying the messages to the community and lead them to perform environmentally-friendly activities.

The community prefers to receive the green messages through social network, in contrast to Rahim et al. (2012), who suggested television as the most preferred platform to receive green advertisements. In other word, social network serves as an effective medium to advertise and communicate the essential messages to the community and could achieve the highest response rates compared with another medium (Parveen, Jaafar & Ainin, 2015). This proposes useful insight for the organisations to continue to develop creative and effective green advertisements with appropriate medium to engage with the community in conveying environmental messages.

**Table 7: Results of Multiple Regression Analysis (Model 1)**

Variables	Adjusted R <sup>2</sup>	$\beta$ - Coefficient t	Sig. (P <0.05)	Hypothesis
1a Attitudes towards green advertisements	0.228	0.480	0.000	<b>Supported</b>
1b. Green advertisements	0.279	0.530	0.000	<b>Supported</b>

Notes: Dependent variable: 1a. green advertisements

1b. community's intention to perform environmentally-friendly activities

Independent variable: 1a. Attitudes towards green advertisements

1b. green advertisements

Subsequently, green advertisements were found to influence significantly and positively towards the intention to perform environmentally-friendly activities (Adjusted R<sup>2</sup> = 0.279,  $\beta$  = 0.53, p = 0.000) and it explained 27.9 percent of the variance in the intention to perform environmentally-friendly activities. Hence, the results are statistically supported H2, whereby green advertisements are positively related to the community's intention to perform environmentally-friendly activities. The community is found to be influenced by the green content and the design of the advertisements. When the community trust the environmental claims on the green advertisements, they are more likely to perform the environmentally-friendly activities such as recycling, purchase environmentally-friendly activities and save the energy (Chekima et al., 2016; Hassan & Valenzuela, 2016). Perhaps, the advertisers of green advertisements could emphasise on the environmental claims in the content to attract the community's attention and influence them to perform environmentally-friendly activities (Carlson, Grove & Kangun, 1993; Chen & Lee, 2015).

Model 2 tested on the relationship of green advertisements, attitude, subjective norms, perceived behavioural control, environmental knowledge and environmental concern and the intention to perform environmentally-friendly activities. As shown in Table 8, Model 2 explained 55.6% of the variance in community's intentions to perform environmentally-friendly activities with adjusted R<sup>2</sup>=0.556. The results revealed a positive and significant relationship between community's attitude towards environmentally-friendly activities ( $\beta$ =0.258, p=0.000); perceived behavioural control ( $\beta$ =0.327, p=0.000); environmental concern and intention to perform environmentally-friendly activities. Therefore, H3, H5 and H7 supported. Since there is no significant relationship reported for subjective norms ( $\beta$ =0.055, p= 0.220) and environmental knowledge ( $\beta$ =0.065, p=0.155), and intention to perform environmentally-friendly activities, this paper concludes that H4 and H6 are not supported.



**Table 8: Results of Multiple Regression Analysis (Model 2)**

Variables	$\beta$ -Coefficient	Sig. (P <0.05)	Hypothesis
Attitudes towards environmentally-friendly activities	0.258	0.000	<b>Supported</b>
Subjective norms	0.055	0.220	<b>Not Supported</b>
Perceived behavioural control	0.327	0.000	<b>Supported</b>
Environmental knowledge	0.065	0.155	<b>Not Supported</b>
Environmental concern	0.249	0.000	<b>Supported</b>
Adjusted R <sup>2</sup>	0.556		
F-value	76.782*		

\* Sig.level at  $p < 0.0005$

Notes: Dependent variable: community's intention to perform environmentally-friendly activities  
Independent variable: attitudes towards EFA, subjective norms, perceived behavioural control, environmental knowledge and environmental concern

The findings appear to support prior studies (Han, Hsu & Sheu, 2010; Lee et al., 2016; Mohd Suki, 2016). Nonetheless, they seemed in contrary with Moser (2016)'s study, whereby the German community exhibited negative perceptions over the environmentally-friendly activities. The different culture and country may have influences on the perceptions on the environmentally-friendly activities (Tih et al., 2016). Therefore, the findings implied that the Malaysia community exhibited positive perceptions and evaluation of the environmental issues and prone to perform the environmentally-friendly activities. As such, the education since young is important to instil the environmental attitudes to shape the intention to perform environmentally-friendly activities in daily lives.

Meanwhile, findings of the study showed that there is no significant relationship between subjective norms and intention to perform environmentally-friendly activities among the community in Malaysia, consistent with Kumar (2012) and Paul, Modi & Patel (2016). It implied that the community's intention to perform environmentally-friendly activities is not being influenced by any referent group, who are important to the community such as friends and families. The community will unlikely to participate in any environmentally-friendly activities even their friends and families are advocating on the green behavioural intention.

Moreover, perceived behavioural control had a significant influence on the intention to perform environmentally-friendly activities, in concur with Swaim et al. (2014), Mohd Suki and Mohd Suki (2015) and Hsu, Chang and Yansritakul (2017). This could be explained with Malaysia community has intuitive capabilities to perform the environmentally-friendly activities based on own judgement and decision. As a result, the community in Malaysia could experience the environmentally-friendly activities and establish favourable attitudes to protect the environment without much influence of peers or preferred persons in their lives.

The environmental knowledge had shown a negative influence on the community's intention to perform environmentally-friendly activities, in line with Kasim and Ismail (2012), who found that Malaysia community is unlikely to participate in any environmentally-friendly activities even they are aware and understand the environmental issues. The environmental knowledge among the community could be improved through educations (Kanchanapibul et al., 2014; Emine & Afyon, 2015) since young. Apart from that, the government and reputable service providers such as restaurants and lodging industry have to initiate the environmentally-friendly activities to increase the awareness of environmental issues. Therefore, the community's environmental knowledge could be augmented and prone to participate in environmentally-friendly activities in future.

Conversely, the environmental concern had a significant impact towards the intention to perform environmentally-friendly activities among the Malaysia community, in support of several prior literature (Bertrandias & Elgaaied-Gambier, 2014; Jekria & Daud, 2016; Kirmani and Khan, 2016). Malaysian community tends to participate in the environmentally-friendly activities such as reducing consumption of adverse impact towards the environments relative with the higher degree in concerning the environments. Therefore, the pro-environmental organisations and individuals are encouraged to share environmental messages to the community to enhance their consciousness substantially on the environmental issues that occurred in Malaysia and subsequently establish the intention to engage themselves in the environmentally-friendly activities.

## **Conclusion**

The findings in this study had shown that the community's attitudes towards green advertisements had a significant influence towards the green advertisements. It revealed that the Malaysia community favour the environmental claims and messages conveyed with the green advertisements. Therefore, it depicts the Malaysia community appear to enjoy and trust the content of the green advertisements. Further, the findings revealed that green advertisements had the strongest significant influence towards the community's intention to perform environmentally-friendly activities. This implied that the green advertiser should continue to develop more effective and creative green advertisements to transmit the environmental issues and activities to the community via influential platforms such as social media and television.

As for the TPB model, the community's attitudes towards environmentally-friendly activities and perceived behavioural control had a significant influence towards the community's intention to perform environmentally-friendly activities; whilst there is no significant impact of subjective norms towards the community's intention to perform environmentally-friendly activities. In addition, for the extended TPB model, there is no significant influence of environmental knowledge towards the community's intention to perform environmentally-friendly activities while environmental concern had a significant influence towards the community's intention to perform environmentally-friendly activities. In addition, community's attitudes towards environmentally-friendly activities and perceived behavioural control could be the strong predictors to explain the intention to perform environmentally-friendly activities. In view of this, the green advertiser could develop green strategies to evoke the community's positive attitudes towards the environmentally-friendly activities and establish stronger beliefs to be more responsible for protecting the environment.

Apart from that, Malaysia government and education centre could introduce the environmental management courses to the community to enhance the environmental knowledge since a young age. Additionally, enforcement of regulations in Malaysia could be one of the steps to encourage the community to be more vigilant on the environmental issues. Nevertheless, the current study demonstrated that there is more research could be done by including more factors such as demographic profile as well as additional steps to investigate the impact to the community's intention to perform environmentally-friendly activities and adopting the behaviour in the daily lives. Collectively, this study has gathered more comprehensive and meaningful findings in examining the effect of Malaysia community's attitudes towards green advertisements and factors influencing the community's intention to perform environmentally-friendly activities.

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