



Journal of Applied Sciences

ISSN 1812-5654

science
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RESEARCH ARTICLE

OPEN ACCESS

DOI: 10.3923/jas.2015.929.933

How Go Green Campaign Effects on Malaysian Intention towards Green Behaviour

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ARTICLE INFO

Article History:

Received: November 22, 2014

Accepted: March 09, 2015

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ABSTRACT

Go green campaigns are widely used to expose the environmental issues to the public and at the same time to inculcate the awareness of green behaviour on the environment. Malaysia as a developing country is stepping into the way of going green and both the Government and Non-Government Organizations (NGOs) have been asked to conduct go green campaigns to inform and educate the public towards the green behaviour. This study aims to determine the extent to which the selected social-economic characteristics and attitudinal factors influence respondents to have the intention to change their behaviour for a green way. Based on the results there is a positive reaction towards go green campaigns among the respondents. For the binary logistic regression the higher income and the higher education level respondents have a stronger intention to change their behaviour as the result of go green campaign.

Key words: Campaign, intention, behaviour, attitude, green

INTRODUCTION

The world is facing with the environmental degradation, and human behaviour is the main responsible of this (UNEP., 2007). Malaysia as other parts of the world is in challenge with the environmental problems including water and air pollution, and infection diseases (DOE., 2010). Therefore, there is a need to change human behaviour towards the environment. Along with environmental problems including water and air pollution and infection diseases (DOE., 2010). Therefore, there is a need to change human behaviour towards the environment. Along with this way, some concepts such as go green campaign are employed. The go green campaigns are the types of campaign which aim at raising public awareness of the environmental degradation and to teach people about the green behaviour (Islam *et al.*, 2010). The concept of green behaviour in a society is defined as ways or behaviours with which individuals take action to protect their environment or contribute to having a healthy one (Krajhanzl, 2010). Green behaviour can be performed by such behaviours as household waste recycling, purchasing of sustainable products, conserving water or energy and changing travel behaviour (Jackson, 2005). Like many other countries

in the world the Malaysian government has purposely aimed to promote environmentally friendly behaviour among its people (EPU., 2010). The Government and Non-Government Organizations (NGOs) are trying to employ the go green campaigns to promote this behaviour. There are already well known go green national campaigns of “No Plastic Bag Day Campaign”, “3R campaign (Reduce, Reuse, Recycle)” and “Environmental Education” or the campaigns which are organized by NGOs like WWF-Malaysia or Malaysia Nature Society. As a matter of fact, the effects of such programmes on the public have been significant but the impact has not been the same for the society as a whole.

Consumers who are well aware and concerned about the environmental issues are known as green consumers (Soonthonsmai, 2007). These green consumers usually submit petitions, boycott manufactures and retailers and actively promote the preservation of the planet (Fergus, 1991). According to Squires *et al.* (2001), performing environmentally friendly behaviour can be affected by a particular attitude towards the environmental. McCarty and Shrum (1994) believed that consumers' attitude towards the environment can be categorized by perceived severity of the environmental problems, inconvenience of being

environmentally friendly and consumers' understanding that caring for the environment will reduce the pollution and maintain the natural resources. Furthermore, demographic characteristics can affect the performance of having a positive environmental behaviour (Squires *et al.*, 2001). As an example there is a difference between women and men in terms of performing green behaviour since they do not have the same attitude (Konrad *et al.*, 2000). In the study which is conducted by Han *et al.* (2009), it is observed that women are strongly different in terms of having environmentally friendly behaviour than men. Moreover, Laroche *et al.* (2001) concluded that not only women are more environmentally concerned but also their willingness to pay for green products is more. To support this finding, Banerjee and McKeage (1994) explained that women are more conscious about the environment and they make more decisions to purchase eco-friendly products than men. In contrast, Mostafa (2007) found that women are not more aware of the environmental issues and men have more concerns about the environment and Xu *et al.* (2012) found that men are more likely to have knowledge about green labelled sea foods.

In general campaigns act as educational programmes which focus on changing a behaviour (Coffman, 2002) and optimizing environmental campaigns is not an easy task (Mosler and Martens, 2008). For instance, the evaluation of national Japanese media campaign to increase public awareness of global warming and reducing GHG emission shows that it can be successful in terms of increasing the numbers of concerned people about global warming; however, the effectiveness of the campaign could be short-lived (Sampei and Aoyagi-Usui, 2009). Furthermore, respondents with different backgrounds show different reactions to campaigns. For instance, Mills and Schleich (2012) noted that a family with children is more likely to adopt energy-efficient technology and energy conservation practices.

Therefore, this structured study aims to determine the respondents' point of view regarding these campaigns as well as to determine the extent to which the selected socio-economic characteristics and attitudinal factors influence the respondents' intention to change their behaviour via go green campaigns.

MATERIALS AND METHODS

Theory of Planned Behaviour (TPB) was applied as the structure of the presenting study (Ajzen, 1991). TPB has three main domains of intention to perform or not perform the behaviour, attitudes, subjective norms and perceived behavioural controls. The salient beliefs which are in conjunction with the evaluation of outcome of behaviour performance are also effective. Go green campaigns as an external factor has an effect on the TPB domains. The respondents' awareness, beliefs and perception towards green behaviour by the impact of go green campaign is made their intention to perform green behaviour. Furthermore, social

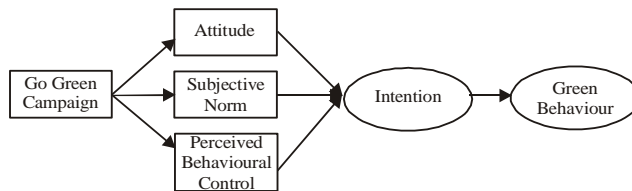


Fig. 1: Conceptual framework of Theory of Planned Behaviour with application to effect of go green campaign to intention to perform green behaviour

norms can pressure the person to go green while these subjective norms can be affected by go green campaign. All these factors will shape the intention of going green and can lead a person to perform green behaviour (Fig. 1).

One thousand two hundreds and six respondents were randomly selected among Klang Valley residents. The supermarkets such as Tesco, Aeon, Aeon Big, Giant and Cold storage were selected as locations of data collection. A Likert scale of 1-7 (presents strongly disagree to 7 strongly agree) was used to measure the attitude, subjective norm and perceived behavioural control to have the intention to perform green behaviour as the result of go green campaigns. In the last part of the questionnaire, respondents were asked to give some feedback on their socio-economic characteristics.

To accomplish the study objectives, a reliability test, descriptive statistics and the binary logistic regression model were used. Descriptive statistics were used to identify the respondents' socio-demographic characteristics as well as respondents' attitude towards go green campaign. The binary logistic regression model was used to investigate the extent to which the selected socio-economic characteristics and attitudinal factors are influential on the intention to perform green behaviour. The equation model is shown below:

$$\text{Logit}(y) = \text{Natural log}(\text{odds}) = \ln \frac{\pi}{1 - \pi} = \alpha + \beta x_i \quad (1)$$

Where:

y = Intention to perform green behaviour via go green campaign

x_i = Attributes and socio-economic characteristics

This regression model is presented below. In this model, vector x_i contains, selected socio-economic characteristics including, gender, residential area, marital status, income, educational level, age and involvement in go green campaigns. Specially, the binary logistics model can be estimated as below:

$$\ln \frac{\pi}{1 - \pi} = \beta_0 + \beta_1 \times \text{Gender} + \beta_2 \times \text{Marital status} + \beta_3 \times \text{Residential area} + \beta_4 \times \text{income} + \beta_5 \times \text{Education level} + \beta_6 \times \text{Age} + \beta_7 \times \text{Involvement in go green campaign} + e$$

Moreover, Table 1 shows the coding system of the independent variables to measure the intention of respondents to perform green behaviour via go green campaign.

Table 1: Use of independent variables in logistic regression on intention to perform green behaviour as the result of go green campaign

Exploratory variables	Coding system
Residential area	0 = Suburban, 1 = Urban
Gender	0 = Male, 1 = Female
Income	0 = Below RM 3000, 1 = Above RM3001
Educational level	0 = Primary and Secondary, 1 = Tertiary
Age	0 = Below 35 years, 1 = Above 36 years
Marital status	0 = Single, 1 = Married
Involving in go green campaign	0 = Not involved, 1 = Involved

RESULTS

To measure the reliability of the study, Cronbach alpha value was determined and the value obtained was 0.946. This showed that there was consistency among all the questions in the study. Therefore, the model is fit for the study.

Descriptive statistics analysis: The socio-economic characteristics of the study include gender, residential area, marital status, income, and age of respondents. Table 2 represents the result of socio-economic demographic profile of the respondents. The majority of the respondents are female 812 (67.3%) in comparison with the male, 394 (32.7%). The distribution of marital status for single persons is 28.4% and for married persons is 71.6%. Roughly three-fourth of the respondents are related to urban areas (70.2%, 29.8 persons) and suburban respondents are 29.8%. The study classified the respondents age into five main groups. The majority of the respondents are related to the second and third groups. This rate is 31 and 34.4%, respectively for the range of 26-35 years and 36-45 years. Respondents with ages below 25 are rated as 13.5%, and those with ages of 46-55 years are 14.3%. The respondents above 56 years are 82 persons (6.8%). Most of the respondents have tertiary level education (68.7%) and other educational levels of secondary and primary education are rated 22.1 and 9.1%, respectively. The finding of the study in terms of earning income is demonstrated in five categories. Respondents with a monthly income of below RM 2000 are 14.8%. Most of the respondents belong to the income levels of RM 2001-3000 and RM 3001-4000. The former is with 26.8%, whereas the latter is 36.6%. A smaller percentage is related to income levels of RM 4001-5000 and high income level of more than RM 5001 with 9.3%.

Furthermore, this statistic analysis was employed to describe the respondents' opinion towards go green campaign. In Table 3, the respondents' attitude towards go green campaigns is presented.

Respondents' attitude towards go green campaigns: Table 3 shows the mean scores and the percentage of the statements that are related to the respondents' attitude towards go green campaign and were scored by using seven point Likert scale 1 to 7. The results show that the majority of respondents have a positive attitude towards go green campaign. Most of the respondents agreed that the go green campaign is informative for them to know how green behaviour can be performed (76%). When respondents were asked that go green campaign can protect the environment,

Table 2: Social demographic profile of the respondents (n = 1206)

Characteristics	Percentage	Characteristics	Percentage
Gender		Residential area	
Female	67.3	Urban	70.2
Male	32.7	Suburban	29.8
Educational level		Marital status	
Primary	9.1	Single	28.4
Secondary	22.1	Married	71.6
Tertiary	68.7	Age	
Income		Below 25	13.5
Below 2000	14.8	26-35	31.0
2001-3000	26.8	36-45	34.4
3001-4000	36.6	46-55	14.3
4001-5000	12.6	Above 56	6.8
Above 5001	9.3		

around 75% of respondents were agreed. In addition, around three quarter of respondents believed that go green campaign informs people about climate change and possible ways of reducing it. Interestingly respondents carried positive attitude towards go green campaigns which are organized by NGOs. Since around 48% of respondents were not agree that involving in these campaigns is a waste of resources.

Binary logistic model: A binary logistic regression was to determine the extent to which the selected socio-economic characteristics including gender, residential area, marital status, educational level, income and attitudinal factors affect respondents to have intention to perform green behaviour via go green campaigns. The dependent variable was split into two categories which were "respondents have intention to change their behaviour via go green campaign" was coded as one and otherwise it was coded as zero. Based on the result of the binary logistic regression, all variables were statistically significant (Table 4). Therefore, some selected socio-economic characteristics or demographic factors and respondents' attitude were found to be related in explaining the intention of respondents to go green as a result of go green campaigns.

Base on the results of Table 4, the respondent who involved in go green campaigns are 1.57 times more likely to perform this behaviour than those who did not participate. The estimated coefficients for females and those married were higher than that of singles. Estimate coefficient for gender is positive and significant at 99% confidence level. This shows that female respondents had a higher intention to go green by 1.46 times more than male respondents. The likelihood of performing green behaviour for married persons was 1.38 times more than for single persons.

The results also show that the respondents who were living in urban areas have 1.27 times higher intention to perform green behaviour that those who were living in suburban areas. Estimated coefficient for income is positive and significant at 99% level of confidence. This tells that with persons who had higher incomes, the likelihood of their intention level to go green will increase 1.78 times than the persons with lower incomes. The educational level was positive and significant at 99% confidence level and respondents who had a higher educational level were 2.45times more likely to go green as the result of go green

Table 3: Respondents' attitude towards go green campaigns

Statement	Likert scale scores							Mean
	1	2	3	4	5	6	7	
Go green campaign is informative for me know how I can perform green	0.8	1	0.7	3	18	30	46	6.10
In my opinion, if I follow go green campaign I can protect the environment	0.6	1	2.3	6	16	31	44	6.02
I believe go green campaign inform people about climate change and possible ways of reducing it	0.6	1	3.2	6	14	30	45	5.87
To me involvement in NGO organised go green campaign is a waste of resources	15	13	20	13	27	4.7	7	4.06

Table 4: Estimated logistic model for respondents' intention to perform green behaviour as the result of go green campaign

Variables	B	S.E	Wald	Df	Sig	Exp (B)
Marital status (married = 1 and single = 0)	0.356	0.132	7.067	1	0.004***	1.38
Gender (female = 1 and male = 0)	0.498	0.129	12.941	1	0.000***	1.46
Residential area (urban area=1 and suburban = 0)	0.245	0.134	3.236	1	0.0630*	1.27
Income (above RM3001 = 1 and below RM 3000 = 0)	0.623	0.132	23.626	1	0.000***	1.78
Educational level (tertiary=1 and primary and secondary=0)	0.898	0.132	41.213	1	0.000***	2.45
Age (below 35 years = 0 and above 36 years =1)	-0.723	0.136	25.458	1	0.000***	0.451
Involving in go green campaign (participated = 1 and otherwise = 0)	0.456	0.128	12.435	1	0.000***	1.57
Constant	-1.116	0.121	29.520	1	0.000	0.287
-2 log likelihood	1574.870	Hosmer and Lemeshow test			0.387	
Cox and Snell R ²	0.456					

campaigns than others with a lower educational level. Furthermore, being young could strengthen the intention to perform green behaviour since the likelihood of having the intention in older generations decreased by 0.451 times.

DISCUSSION

Based on the result of present study, the Theory of Planned Behaviour was helpful to reach the study objectives. It was observed that the majority of respondents have the positive attitude towards go green campaign. Moreover, the results of the study showed that married people are more intend to go green. These findings corresponds with the finding of Mills and Schleich (2012) that showed the families with young children were more likely to adopt energy-efficient technology and energy conservation practices. Additionally, in terms of gender, the difference was observed and women were more influenced to perform green behaviour as the result of go green campaigns. This result corresponds to previous studies like Han *et al.* (2009) in U.S.A in hotel customers' eco-friendly decision-making processes. Furthermore, results suggested that higher income level people have a higher intention to perform green behaviour. This is because respondents who have higher income levels have the ability to perform green behaviour since it is a costly behaviour. These results were consistent with the results of the study by (Egea and de Frutos, 2013) in which education levels was proven to be effective on environmentally motivated consumption reduction.

Moreover, involving in go green campaign can make footprint on changing intention. The reason can be explained by the fact that being involved in go green campaigns informs people of the possible ways of going green by giving them relevant information. Thus campaign organizers need to organize such go green campaigns to facilitate and encourage people to get more involved and subsequently change their behaviour. Furthermore, the government should apply comprehensive rules to strengthen and popularize these

campaigns in both urban and suburban areas and for both higher and lower educated people. Needless to say the green behaviour is the one which should be performed by the all people living in a society to protect their environment.

CONCLUSION

The main finding of this study concluded that go green campaigns were successful in developing the intention to perform green behaviour. These types of campaigns had their own uniqueness where respondents got familiar with the concept of green behaviour. This showed that the go green campaigns were able to cater to the respondents to help them perform green behaviour.

REFERENCES

Ajzen, I., 1991. The theory of planned behavior. *Organiz. Behav. Hum. Decis. Process.*, 50: 179-211.

Banerjee, S. and K. McKeage, 1994. How Green is my Value: Exploring the Relationship between Environmentalism and Materialism. In: *Advances in Consumer Research*, Allen, C.T. and D.R. John (Eds.). Vol. 21, Association for Consumer Research, Provo, UT., pp: 147-152.

Coffman, J., 2002. Public communication campaign evaluation: An environmental scan of challenges, criticisms, practice and opportunities. Prepared for the Communications Consortium Media Centre, Harvard Family Research Project, Cambridge, MA., USA., May 2002, pp: 1-40.

DOE., 2010. Malaysia environmental quality report 2010. Department of Environment, Ministry of Natural Resources and Environment, Malaysia, pp: 1-80.

EPU., 2010. Tenth Malaysia plan: 2011-2015. Report by Economic Planning Unit, Prime Minister Department, Malaysia. http://www.pmo.gov.my/dokumenattached/RMK/RMK10_Eds.pdf

Egea, J.M.O. and N.G. de Frutos, 2013. Toward consumption reduction: An environmentally motivated perspective. *Psychol. Market.*, 30: 660-675.

- Fergus, J., 1991. Anticipating Consumer Trends. In: *The Greening of Businesses*, David, R.A. (Ed.). The University Press, Cambridge, UK., pp: 51-65.
- Han, H., L.T.J. Hsu and J.S. Lee, 2009. Empirical investigation of the roles of attitudes toward green behaviors, overall image, gender and age in hotel customers' eco-friendly decision-making process. *Int. J. Hosp. Manage.*, 28: 519-528.
- Islam, M.R., R. Saidur, N.A. Rahim and K.H. Solangi, 2010. Usage of solar energy and its status in Malaysia. *Eng. e-Trans.*, 5: 6-10.
- Jackson, T., 2005. *Motivating sustainable consumption: A review of evidence on consumer behaviour and behavioural change. A Report to the Sustainable Development Research Network, Centre for Environmental Strategies, University of Surrey, January 2005.*
- Konrad, A.M., J.E. Ritchie Jr., P. Lieb and E. Corrigan, 2000. Sex differences and similarities in job attribute preferences: A meta-analysis. *Psychol. Bull.*, 126: 593-641.
- Krajhanzl, J., 2010. Environmental and proenvironmental behavior. *School Health*, 21: 251-274.
- Laroche, M., J. Bergeron and G. Barbaro-Forleo, 2001. Targeting consumers who are willing to pay more for environmentally friendly products. *J. Consum. Market.*, 18: 503-520.
- McCarty, J.A. and L.J. Shrum, 1994. The recycling of solid wastes: Personal values, value orientations and attitudes about recycling as antecedents of recycling behavior. *J. Bus. Res.*, 30: 53-62.
- Mills, B. and J. Schleich, 2012. Residential energy-efficient technology adoption, energy conservation, knowledge and attitudes: An analysis of European countries. *Energy Policy*, 49: 616-628.
- Mosler, H.J. and T. Martens, 2008. Designing environmental campaigns by using agent-based simulations: Strategies for changing environmental attitudes. *J. Environ. Manage.*, 88: 805-816.
- Mostafa, M.M., 2007. Gender differences in Egyptian consumers' green purchase behaviour: The effects of environmental knowledge, concern and attitude. *Int. J. Consum. Stud.*, 31: 220-229.
- Sampei, Y. and M. Aoyagi-Usui, 2009. Mass-media coverage, its influence on public awareness of climate-change issues and implications for Japan's national campaign to reduce greenhouse gas emissions. *Global Environ. Change*, 19: 203-212.
- Soonthonsmai, V., 2007. Environmental or green marketing as global competitive edge: Concept, synthesis and implication. *Proceedings of the College Teaching and Learning (TLC) and European Applied Business Research (EABR) Conferences, June 4-7, 2007, Venice, Italy.*
- Squires, L., B. Juric and T.B. Cornwell, 2001. Level of market development and intensity of organic food consumption: Cross-cultural study of Danish and New Zealand consumers. *J. Consum. Market.*, 18: 392-409.
- UNEP., 2007. *Global Environment Outlook 4 (GEO-4): Environment for Development. United Nations Environment Programme (UNEP), USA., ISBN-13: 9789280728361, Pages: 540.*
- Xu, P., Y. Zeng, Q. Fong, T. Lone and Y. Liu, 2012. Chinese consumers' willingness to pay for green-and eco-labeled seafood. *Food Control*, 28: 74-82.