



INCOMaR 2013

Determining Socio-Demographic, Psychographic and Religiosity of Green Hotel Consumer in Malaysia

Adaviah Mas'od*, Thoo Ai Chin

Universiti Teknologi Malaysia, Department of Business Administration, 81310 Skudai, Malaysia

Abstract

This study is proposed to explore whether green consumer profiles (socio-demographics, psychographic and religiosity) have a role to play in profiling green hotel consumers. As such, a total of ten hypotheses are developed to explore the effects of the green consumer profiles on ecologically Ecologically aware consumers are defined as individuals who seek to consume only products that cause the minimum or not give any - impact on the environment (Roberts, 1996). Behaviour (ECCB) in Malaysian lodging consumers. In addition, this study will explore the relationships between ECCB, green purchase intention (GPI) and effective green purchase behaviour (GPB) by using rigorous structural equation modeling methods. A total of three direct effects and one mediation effect are hypothesised and will be tested in the study. A research framework of the identified green consumer profiles, ECCB, GPI, and GPB is proposed with a view towards suggesting how such research might systematically be carried out. The research findings will be particularly important for hoteliers in understanding the green consumer behavior in order to achieve sustainability performance.

© 2014 The Authors. Published by Elsevier Ltd. Open access under [CC BY-NC-ND license](https://creativecommons.org/licenses/by-nc-nd/4.0/).

Selection and peer-review under responsibility of the Organizing Committee of INCOMaR 2013.

Keywords: green consumer profile; green purchase intention; green purchase behaviour; ecological consciousness; psychographic; religiosity.

1. Introduction

In today's global environmental demands, the concept of green business has received greater attention among businesses and consumers. The environmental awareness has changed the behaviours and demands of consumers (Ottman, 1992; Mendleson and Polonsky, 1995). Consumers who are aware on the concept of environmental

* Corresponding author. Tel.: +6-019-981-9984; fax: +6-07-561-0099.
E-mail address: adaviah@utm.my

sustainability will have a greater preference for green firms, green products or green services. A greater awareness towards green products or services has led the consumers to develop positive green purchase intentions and to participate in greening the earth (Papadopoulos et al., 2009). This is consistent with the results of the study by Do Paco and Raposo (2009), in which the consumers have increased environmental awareness, and they felt that they have responsible to buy greener products and services. To support, Sheltzer et al., (1991) suggested that consumer with high environmental awareness will be reflected to their green behaviour, which lead to developed green purchase intention. Contradict result from researchers shown that even though consumers claim that they aware and concerns on environmental problem, their buying behaviour is not reflected this preoccupation (Gardyn, 2003). Differences in green consumers' behaviour pattern are consistently becoming the main issues; thus a study to investigate the relation between consumers' green attitude and their green purchase behaviour, could help to better understand green consumer behaviour.

A similar trend also exists in Malaysia, where the studies on consumer behavior towards green marketing and sustainable tourism are increasing (Mohd Helmi et al., 2012; Hengky, 2011; Ng, 2011). Tourism industry is the second largest industry in Malaysia after the manufacturing industry. World Tourism Organization (WTO) has ranked Malaysia as the third country among 53 commonwealth countries who received the most number of tourists' arrivals (Ting, Boo, and Mohhidin, 2011). Furthermore, according to Malaysian Tourism Board statistics (2010 - 2011), Malaysia had recorded a total of 53.7 million hotels guests from January to December 2011 where the 27.7 million were local lodging customers (Tourism Malaysia, Hotel Guests by Locality Report, January to December 2011). The tourism sector in Malaysia is heavily dependent on hotel services; as shown in data of Ministry of Tourism Malaysia, there are 2,277 hotels registered in Malaysia (figures updated in June 2012). Despite the increased emphasis of environmental awareness, until now only 10 hotels have been awarded as Green Hotel. Undeniably, there are many hotels are actively participating in greening the lodging industry such as operating and purchasing in green manners (Ministry of Tourism, Malaysia, 2010). In Malaysia, greening the hotel is still at a beginning stage and it is considered as a very new business model to local hoteliers when compared to developed countries (Ng, 2011). This shows that businesses and individual customers in Malaysia are well aware of the green movement (Tan and Yeap, 2012). However, greening hotel businesses can be considered still at an early stage in Malaysia. Thus, understanding green consumers' profile and their green purchase intention and behaviour is crucial.

From the economic perspective, the tourism industry has increased the economic impact positively, but it is very critical to save the environment through the management of energy efficiency and green consumptions because it is pointless if the economy is growing tremendously, but the quality of the environment gets worse. Economic sectors that are facilitated by electricity and transportation are the largest sources of CO₂ emission (Norlaila and Khalid, 2012). Similarly, Kasim (2009) showed that the service sector including hotels consumes the huge liters of water. This means the more hotels are built the more of the local water resources are utilised. For examples, swimming pools, golf courses, spas and bathrooms can consume a lot of water. Daily routine of the business such as towels and linens laundry also contribute to inefficient energy usage, water usage and detergents usage, hence causing pollution of freshwater. Thus, in order to protect the environment, it is important for the government to encourage the business firms to increase their operational efficiencies through resource reductions. However, cultivating an organizational culture of environmental awareness requires a substantial amount of time and resources. Firms that are participating in greener products and services usually need a huge investment in terms of rearranging their business activities and buying green necessities. Therefore, it is crucial for managers or hoteliers to understand a general overview of the green consumer profiles and their behavioral order to develop new targeting and segmentation strategies (D'Souza et al., 2007) for enhanced sustainability performance.

2. Conceptual Model

The conceptual model depicted in Figure 1 is mainly developed to test green purchase decision-making process which comprises the green consumer profiles in terms of socio-demographic, psychographic and religiosity (Rushton et al., 1981; Straughan and Roberts, 1999; Chan, 2001; Worthington et al., 2012). This conceptual model is an extension of an existing model that re-examined green consumer profiles (Akehurst, et al., 2012). As highlighted by research by Neilsen (1992), customers with high awareness and conscious about environmental problems will translate their concerns into purchasing behaviour. Thus, ecologically conscious consumers tend to

have high intention in green purchasing and thus translating the intention into green purchasing behaviour. Theoretically, understanding consumer profiles is the key point in targeting the accurate and profitable consumers segments. Several studies have concluded that psychographic variables provide more relevant insights into green consumer behaviour if compared to socio-demographic profiles (Kassarjian, 1971; Anderson and Cunningham, 1972; Banerjee and McKeage, 1994; Chan, 1999; Awad, 2011). In view of scant research efforts exploring the combined effects of socio-demographic and psychographic, this study suggest that religiosity is an important determinant in explaining ethical behaviour like ECCB of Malaysian green hotels customers. Thus, this study aims to fill the research gap.

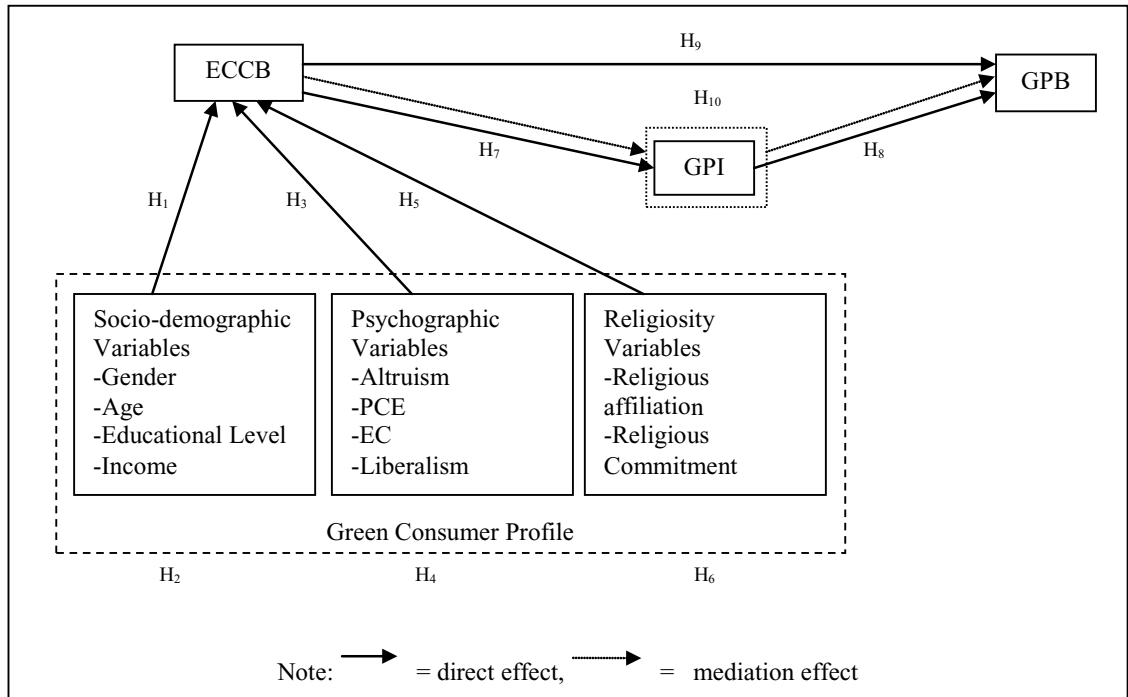


Fig. 1. Proposed conceptual model

3. Hypothesis Development

This study will gather and examine the socio-demographics differences from respondents' or general hotel customers'. As mentioned by Tsagarakis et al. (2011), socio-demographics such as gender, education, income, and age are typical and important descriptive variables in valuation or public acceptance studies. Tsagarakis et al. (2011) found that women are likely to select green hotel than men. This is broadly in line with previous studies, where female customers place high selection on green hotels (Gossling et al., 2005; Wisser, 2007; Li et al., 2009; and Solomon and Johnson, 2009). However, some empirical evidences are somewhat contradictory, indicating male customers appear to have high willingness to engage in green activities such as paying more and patronising green lodging businesses (Zanikau, 2003; Rose et al., 2002; Kang et al., 2012; Kostakis and Sardianou, 2012). Thus, comparison of gender differences in eco-friendly behaviour is important to be considered in this study. Besides, age is one of the customers' demographics that can play a role in identifying customers' differences in terms of intentions and behaviour. Previous studies (Tsagarakis et al., 2011; Kang et al., 2012) showed that differences in age could define the differences of customers through their engaging in green activities and willingness to pay extra for green services. This view has support from Tsagarakis et al. (2011) who found that younger customers are more likely to pay more in green invested lodging businesses than older people. In addition, previous researchers such as Bastic and Gojcic (2012) found that tourists with higher incomes will have higher expectation about eco-

dimensional of hotel service than those with lower income. While others see the level of income as being an important demographic variable in explaining customers' purchase behaviour (Evanschitzky and Wunderlich, 2006; Im et al., 2003; Homburg and Giering, 2001), only Han et al. (2011) found that the level of income is not strongly related to lodging customer's green intention. Similarly, there are a broad agreement on the effects of education level in customers' thinking, attitudes, and intentions (Han et al., 2011; Kang et al., 2012; Kostakis and Sardianou, 2012; Bastic and Gojic, 2012). However, Han et al. (2011) and Kostakis and Sardianou (2012) provided insignificant difference of education level in customers purchase behavior. Therefore, the different findings of these studies are identified for researchers to grapple with. Thus, the following hypotheses are developed:

H₁ – The socio-demographic variables (gender, age, educational level, and income) are relevant in explaining the ECCB

H₂ – The socio-demographic variables are more relevant than psychographic and religiosity in explaining the ECCB

Apart from the identification of the green consumer profile through the socio-demographic characteristics, several authors found that psychographic variables provide more relevant insights into green consumer behaviour (Kassarjian, 1971; Anderson and Cunningham, 1972; Banerjee and McKeage, 1994; Chan, 1999; Awad, 2011). Thus, customers' psychographic dimensions are also explored in this study: altruism, perceived consumer effectiveness (PCE), environmental concern (EC), and liberalism (Straughan and Roberts, 1999). Altruism is defined as the concern about the welfare of society and others (Stern et al., 1993). Altruism plays an important role in green consumer behavior (Straughan and Robert, 1999). In addition, Stern et al. (1993) found that social-altruism and egoism are significantly influencing green behaviour. PCE is defined as the consumer's perception of the extent to which their actions can make a difference in solving environmental problems (Ellen et al., 1991), for instance, in purchasing green products, recycling and engaging in less-paper programs such as e-billing. According to Moisander (2007), consumers will act proactively if they feel their actions can effectively preserve the environment. Many studies have included PCE as an important predictor in eco-friendly behaviour (Kinnear et al., 1973; Roberts, 1996; Roberts and Bacon, 1997; Straughan and Roberts, 1999; Awad, 2011). The third psychographic variable, environmental concern (EC) is commonly defined as the individual's awareness of the environmental problems and their willingness to be part of the problem solution (Dunlap and Jones, 2002; Chan and Lau, 2000). Many authors have linked EC with environmental friendly behaviour (Kinnear et al., 1973; Van Liere and Dunlap, 1981; Roberts and Bacon, 1997; Straughan and Roberts, 1999). According to Maloney et al. (1975), EC is closely related to the emotions and knowledge level as well as to a readiness to change behaviour. Bang et al. (2000) and Kim and Choi (2005) pointed out that consumers who are more concerned about the environment are more willing to purchase green products than those who are less concerned. Finally, liberalism is well known as left-leaning political ideologies. Some studies have provided some evidences in which individuals with liberal political orientations are more likely to commit with the green movement than those with more conservative political views. Roberts (1996) supported the relevance of liberalism in consumer behaviour. Researchers have also consistently found that young, well-educated, and politically liberal adults to be more pro environmental than their counterparts (Jones and Dunlap, 1992). However, Straughan and Roberts (1999) found that liberalism is not significant indicator to explain ECCB. Thus, the following hypotheses are developed:

H₃ – The psychographic variables (altruism, perceived consumer effectiveness, ecological concern and liberalism) are relevant in explaining the ECCB

H₄ – The psychographic variables are more relevant than socio-demographic and religiosity in explaining the ECCB

Religious affiliation and commitment are the two most used constructs in marketing to explain religion influences in the marketplace (Nazlida and Mizerski, 2010). Religious orientation represents people's motivation in following his or her religion. Donahue (1985) claimed that this construct may be the best measure in studying religions' influences on human behaviour. Religious orientation captures an individual's motivation in obeying their religion and then classifies them as either intrinsically motivated or extrinsically motivated (Allport and Ross, 1967). This concept uses a motivational approach to understanding the influence of religion (Himmelfarb, 1975), and argues for the antecedent to one's commitment to a religion (Himmelfarb, 1975). Some researchers have investigated the role

of religion towards recycling and solid waste management activities in Malaysia and have shown that religious affiliation and religious communities might be motivated people's ethical concerns on the environment (Zeeda et al. 2012). In support, Mohd et al. (2010) found that religious factor plays one of the most influential roles in shaping purchase intentions towards organic foods in the way that it is permitted by their religions. In other words, pro-environmental behaviour is always being reflected as ethical behavior and is closely related to the moral and value which comes from what individual believe (usually come from their religion). According to Syed, Rohani and Badrul (2011), religiosity affects consumer behaviour and purchase decision. This means religiosity determinants have gained popularity in profiling consumer in marketing. Diversity of ethnics and religious such as Islam (61.3%), Buddhism (19.8%), Christianity (9.2%), and Hinduism (6.3%) have gradually become the most important consumer segments in Malaysia that verify some particular lifestyle and consumption habits. Thus, the following hypotheses are developed:

- H₅ – The religiosity variables (religious affiliation and religious commitment) are relevant in explaining the ECCB
 H₆ – The religiosity variables are more relevant than socio-demographic and psychographic in explaining the ECCB

Ecologically aware consumers are defined as individuals who seek to consume only products that cause the minimum or not give any - impact on the environment (Roberts, 1996). A green consumer is individual consumer who links their purchasing behaviour towards acts that will preserve Mother Nature (Hailes, 2007). By refusing to purchase products that are jeopardy the environment, the green consumer knows she/he is contributing to environmental preservation. Therefore, green consumers avoid purchasing the product that they perceive as unhealthy, damage the environment during production, use or final disposal, use much energy, have disproportionate packaging, and contain elements coming from endangered habitats or species. To evaluate this ecologically conscious behavior, Roberts (1996) developed the ECCB scale to include a wide variety of items represented green movement behaviour. The scale was later used by Straughan and Roberts (1999). Though Young et al. (2010) defined that the consumer who have a higher level of environmental awareness does not automatically lead to the purchase habits, however, Imkamp (2000) took the view that the consumer who spent their money on green product not only concerned about the quality only, but they also concerned about the environmental effects associating with the products. Thus, the following hypothesis is developed:

- H₇ – Malaysian consumers with higher ECCB have a higher GPI

GPI refers to the willingness expressed by the consumer to act eco-friendlily (Chan, 1999). Generally, some studies confirmed that there is a significant relationship between GPI and GPB (Chan and Yam, 1995), while others found there is no relationship between GPI and GPB (Wong et al., 1996; Chan, 2001). According to Beckford et al., (2010) and Chan (2001) studies, green purchase intention is a significant predictor of green purchase behavior, which means that purchase intention is positively affecting the probability of a customer decision that he/she will buy green products. Thus, in attempting to investigate the determinants of green products purchased and the relationship between GPI and GPB, the following hypothesis is developed:

- H₈ – There is a significant relationship between GPI and GPB

The ECCB measures the consumer behavioural orientation towards buying the green products or services. Thus, this study expects that ECCB has a positive effect towards GPB (Roberts, 1996; Straughan and Roberts, 1999). GPB reflects the effective purchase of green products or services by consumers that act accordingly to their value and ethics such as refuse to use a plastic bag, buy eco-friendly products packaged with recycle materials, and avoid buying products that will give negative impact towards environment. However, Chan (2001) found that GPI does not necessarily direct consumers to green purchasing behaviour. Therefore, the following hypotheses are developed:

- H₉ – There is a direct and significant relationship between ECCB and GPB
 H₁₀ – GPI mediates the relationship between ECCB and GPB

The expected results of this study are to explore which green consumer profiles (socio-demographic,

psychographic and religiosity) that are most relevant in explaining ecologically conscious behaviour (ECCB) among green hotel consumers in Malaysia. This study also predicts that the higher the ECCB among consumers, the higher GPI will be, and as the higher GPI that consumers have, the higher GPB is expected to be. However, literatures shown that even though consumers are aware and concerns on environmental problems (have higher ECCB), it is not a must that they will portray it to their purchasing behaviour (GPB). Thus, this study predicts that GPI is mediating the ECCB impact towards GPB which either the GPI is not mediate (ECCB have stronger direct significant effect to GPB but insignificant effect towards GPI), partially mediate (ECCB have the same significant effect towards GPI and GPB), or fully mediate the relationship (ECCB have stronger significant effect towards GPI but insignificant direct effect towards GPB).

4. Research Methodology

The population of this study consists of all domestic tourists with a total of 11.6 million. The number of respondents acceptable for this study depends upon the statistical tool used – structural equation modeling (SEM). SEM is a large sample technique and the sample size required are more than 200 (Kline, 2005). To meet the objectives of this study, a questionnaire is developed to gather data of socio-demographic and religiosity affiliation, as well as to measure the constructs of psychographic, religious commitment, ECCB, GPI and GPB. The socio-demographic data in terms of gender, age, educational level and income will be collected from respondents by using close-ended questions. There are four sub-variables of psychographic: altruism, PCE, EC and liberalism. The 20 measurement items for altruism using the Self Report Altruism Scale Instruction are adapted from Rusthon, Chrisjohn and Fekken (1981) and will be measured on a 5-point Likert scale anchored with “Very often = 5” to “Never = 1”. The PCE, EC and liberalism consisting of five, five and six measurement items respectively will be measured on a 5-point Likert scale anchored with “Always True = 5” to “Never True = 1” (Straughan and Roberts, 1999). As for the religiosity variables, the religiosity affiliation will be collected from respondents via close-ended questions whereas the religious commitment consisting of 10 measurement items are tested using the Religious Commitment Inventory-10 (RCI-10) and will be scaled by 5-point Likert scale anchored with “Totally true of me = 5” to “Not at all true of me = 1” (Worthington et al., 2012). The ECCB contains 30 measurement items will be measured on a 5-point Likert scale anchored with “Always True = 5” to “Never True = 1” (Roberts and Bacon, 1997). The GPI consists of 3 measurement items will be measured on a 7-point scale ranging from “Very Likely = 7” to “Very Unlikely =1”, (Chan, 2001) and the 3 measurement items of GPB will be measured on a 7-point scale ranging from “Every Opportunity = 7” to “Never =1” (Chan, 2001). Finally, it is imperative to note that all the measurement of constructs will be modified in accordance with the green hotel contexts. Table 1 below listed the variables and measurement items in this study:

Table 1. Variables and measurement items

Variables	Measures
Ecologically Conscious Consumer Behaviour (ECCB) (Straughan and Roberts, 1999)	1. I buy toilet paper made from recycled paper. 2. I buy Kleenex made from recycled paper. 3. I buy paper towels made from recycled paper. 4. To save energy, I drive my car as little as possible. 5. To reduce our reliance on foreign oil, I drive my car as little as possible. 6. I use a recycling center or in some way recycle some of my household trash. 7. I make every effort to buy paper products made from recycled paper. 8. I use a low-phosphate detergent (or soap) for my laundry. 9. I have convinced members of my family or friends not to buy some products which are harmful to the environment. 10. Whenever possible, I buy products packaged in reusable containers. 11. I try only to buy products that can be recycled. 12. I normally make a conscious effort to limit my use of products that are made of or use scarce resources. 13. I will not buy products which have excessive packaging. 14. When there is a choice, I always choose that product which contributes to the least amount of pollution. 15. If I understand the potential damage to the environment that some products can cause, I do not purchase those products.

16. I have switched products for ecological reasons.
17. I have purchased products because they cause less pollution.
18. I do not buy products in aerosol containers.
19. When I purchase products, I always make a conscious effort to buy those products that are low in pollutants.
20. When I have a choice between two equal products, I always purchase the one which is less harmful to other people and the environment.
21. I will not buy a product if the company which sells it is socially irresponsible.
22. I usually purchase the lowest-priced product, regardless of its impact on society.
23. I do not buy household products that harm the environment.
24. I try to buy energy-efficient household appliances.
25. I always try to use electric appliances (e.g., dishwasher, washer, and dryer) before 10 PM and after 10 PM.
26. I have tried very hard to reduce the amount of electricity I use.
27. I buy high-efficiency light bulbs to save energy.
28. I have purchased a household appliance because it uses less electricity than other brands.
29. I have purchased light bulbs that were more expensive but saved energy.
30. I have replaced light bulbs in my home with those of smaller wattage so that I will conserve on the electricity that I use.

Using likert-scale Never True (1) until Always True (5)

Green Purchase Intention
(Chan, 2001)

1. I will consider stay at green hotel when travelling because they are less polluting.
2. I will consider switching to stay at green hotel when travelling for ecological reasons.
3. I plan to switch to a green version of hotel

Using likert-scale Very Unlikely (1) until Very Likely (7)

Green Purchase Behaviour
(Chan, 2001)

1. The frequency of staying at green hotel before.

Using likert-scale Never (1) until at Every Opportunity (7)

2. The amount spent on green hotel before.

Using likert-scale Never (1) until Lots of Money (7)

3. The total days of stayed at green hotel before

Using likert-scale Never (1) until at Every Opportunity (7)

Socio-demographic

Four key demographic variables to be investigated:

1. Gender
2. Age
3. Educational Level
4. Income

Psychographic

Altruism

(Rushton et al., 1981, Straughan and Roberts, 1999)

1. I have helped push a stranger's car out of mud
2. I have given directions to a stranger.
3. I have made change for a stranger.
4. I have given money to a charity.
5. I have given money to a stranger who needed it (or asked me for it).
6. I have donated goods or clothes to a charity.
7. I have done volunteer work for a charity.
8. I have donated blood.
9. I have helped carry a stranger's belongings (books, parcels, etc.).
10. I have delayed an elevator and held the door open for a stranger.
11. I have allowed someone to go ahead of me in a lineup (at bank, in the supermarket).
12. I have given a stranger a lift in my car.
13. I have pointed out a clerk's error (in a bank, at the supermarket) in under charging me for an item.
14. I have let a neighbour whom I didn't know too well borrow an item of some value to me (e.g., a dish, tools, etc.).

15. I did charity deliberately because I knew it was a good cause.
16. I have helped a classmate who I did not know that well with a homework assignment when my knowledge was greater than his or hers.
17. I have before being asked, voluntarily looked after a neighbour's pets or children without being paid for it.
18. I have offered to help a handicapped or elderly stranger across a street.
19. I have offered my seat on a bus or train to a stranger who was standing.
20. I have helped an acquaintance to move households.

Using likert-scale Never (1) until Very Often (5)

Psychographic

Perceived Consumer Effectiveness (PCE)

(Straughan and Roberts, 1999)

1. Each person's behavior can have a positive effect on society by signing a petition in support of promoting the environment.
2. I feel I can help solve natural resource problem by conserving water and energy.
3. I can protect the environment by buying products that are friendly to the environment.
4. There is not much that I can do about the environment
5. I feel capable of helping solve the environment problems.

Using likert-scale Never True(1) until Always True (5)

Psychographic

Environmental Concern (EC)

(Straughan and Roberts, 1999)

1. I am extremely worried about the state of the world's environment and a what it will mean for my future.
2. Mankind is severely abusing the environment
3. When humans interfere with nature it often produces disastrous consequences.
4. The balance of nature is very delicate and easily upset.
5. Humans must live in harmony with nature in order to survive.

Using likert-scale Never True(1) until Always True (5)

Psychographic

Liberalism

(Straughan and Roberts, 1999)

1. The profits of the big industries should be controlled by the federal government.
2. I am for a federal health insurance program covering men and women of all ages.
3. If unemployment is high, the government should spend to create jobs.
4. A government administered health insurance program is necessary to insure that everyone receives adequate medical care.
5. I am for less government regulation of business.
6. I am for revising the tax structure so that the burden falls more heavily on corporations and persons with large incomes.

Using likert-scale Never True(1) until Always True (5)

Religiosity

Four religious affiliation to be investigated:

Religious Affiliation

1. Islam
2. Buddhism
3. Christianity
4. Hinduism

Religiosity

Religious Commitment

(Worthington, et al. 2012)

1. I often read books and magazines about my faith.
2. I make financial contributions to my religious organization.
3. I spend time trying to grow in understanding of my faith.
4. Religion is especially important to me because it answers many questions about the meaning of life.
5. My religious beliefs lie behind my whole approach to life.
6. I enjoy spending time with others of my religious affiliation.
7. Religious beliefs influence all my dealings in life.
8. It is important to me to spend periods of time in private religious thought and reflection.
9. I enjoy working in the activities of my religious affiliation.
10. I keep well informed about my local religious group and have some influence in its decisions.

Using likert-scale - Not at all True of Me (1) until Totally True of Me (5)

Data collected from this study will be analysed using t-test and one way analysis of variance (ANOVA) and step-wise linear regression to test H1, H2, H3, H4, H5 and H6. The methods were performed based on multiple socio-demographic, psychographic and religiosity variables with ECCB as the dependent variable. To test the model fits and to answer more complex interrelations between variables with direct, indirect and mediated variables, (H7, H8, H9 and H10), this study proposed non-response bias analysis, normality test, exploratory factor analysis, reliability analysis and confirmatory factor analysis. Path Analysis of SEM will be used to analyse the complex interrelations between variables. Path analysis is an extension of multiple regressions, and it explores various multiple regression models or equations simultaneously. This provides a more effective and directs the way of modeling mediation, indirect effects, and other complex relationship among variables (Lee and Wu, 2007).

5. Discussion and Conclusion

Effective marketing strategies begin with understanding the characteristics of the target audience. The findings of this study are particularly important for those managers and hoteliers when sizing a green market, through green customer analysis and green customer segmentation for effective green consumer targeting. As advocated by Kotler and Armstrong (2008), in order to have an effective segmentation, the market segments need to be identified easily. In addition, Straughan and Roberts (1999) showed that the easiest way to differentiate consumers who ecologically concern and who do not be through demographic variables. Similarly, accessibility of the segmentation is one of the important criteria in which the customers should be able to be effectively reached and served. As such, the investigation of the green consumer profiles provides managers and hoteliers with a useful tool to evaluate current green purchase behaviour in green hotels when aiming to serve the customer needs and at the same time fulfilling the societal and environmental responsibilities. However, the size of the green market must be large enough for any firms to operate profitably (Roberts, 1996). Therefore, hoteliers in Malaysia need to know that the size of the market is big enough in order to make positive profits.

In addition to the practical implications for managers and hoteliers, the findings of this study may also have implications for academics and others involved in theory building. Firstly, this study extends previous green consumer profile frameworks in Western countries by considering an additional demographic variable which is religiosity in Malaysian green hotel. This study strongly argues that in order to develop a successful green customer segmentation, scholars must not focus on one particular demographic variable, but rather consider socio-demographic, psychographic and religiosity in combination. The additional religiosity difference in this study is expected to offer a validated and overarching instrument to measure green consumer profile in green hotels. Secondly, this study is one of the first papers to examine the relationships between ECCB, GPI and GPB using the highly rigorous method of SEM while simultaneously exploring the effects of green consumer profile (socio-demographic, psychographic and religiosity) in ECCB. Thus, the study portrays green consumer demographics from a variety of different perspectives with a common goal to understand the ECCB and ultimately improving GPI and GPB.

References

- Allport, G.W., and Ross, L. M., (1967), Personal Religious Orientation and Prejudice. *Journal of Personality and Social Psychology*, 5, 447-457.
- Anderson, W.T. and Cunningham, W. (1972), The socially conscious consumer. *Journal of Marketing*, 36, 23-31.
- Awad, T.A. (2011), "Environmental segmentation alternatives: buyers' profiles and implications", *Journal of Islamic Marketing*, 2, (1), 55-73.
- Banerjee, B. and McKeage, K., (1994), "How green is my value: exploring the relationship between environmentalism and materialism". *Advances in Consumer Research*, 22, 257-61.
- Bang, H., Ellinger, A.E., Hadjimarcou, J. and Traichal, P.A. (2000), Consumer concern, knowledge, belief, and attitude toward renewable energy: an application of the reasoned action theory, *Psychology and Marketing*, 17, 6-26.
- Baron, R. M., and Kenny, D. A. (1986), The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations. *Journal of Personality and Social Psychology*. 51, (6), 1173-1182.
- Bastic M., and Gojic S., (2012), Measurement scale for eco-component of hotel service quality. *International Journal of Hospitality Management*. 31,(3), 1012-1020.
- Beckford, C. L., Jacobs, C., Williams, N., and Nahdee, R. (2010), "Aboriginal Environmental Wisdom, Stewardship, and Sustainability: Lessons From the Walpole Island First Nations, Ontario, Canada", *The journal of environmental education*, 41 (4), 239–248.
- Brundtland, G. H. (1987), *Our common future, world commission on environment development*. New York, NY: Oxford University Press.
- Chan, K. (1999), Market segmentation of green consumers in Hong Kong. *Journal of International Consumer Marketing*, 12, (2), 7-24.

- Chan, R. and Lau, L. (2000), Antecedents of green purchases: a survey in China. *Journal of Consumer Marketing*, 17, (4), 338-57.
- Chan, R.Y.K. and Yam, E. (1995), Green movement in a newly industrializing area: a survey on the attitudes and behavior of the Hong Kong citizens. *Journal of Community and Applied Social Psychology*, 5, (1), 273-84.
- Do Paco, A., and Raposo, M. (2009), Green segmentation: an application to the Portuguese consumer market. *Marketing Intelligence & Planning*, 27, (3), 264-379.
- Donahue, M.J., (1985), Intrinsic and Extrinsic Religiousness: The Empirical Research. *Journal for the Scientific Study of Religion*. 24,(4), 418-423.
- D'Souza, C., Taghian, M., Lamb, P. and Peretiatkos, R., (2005), Green products and corporate strategy: an empirical investigation. *Society and Business Review*, 1, (2), 144-157.
- Dunlap, R.E. and Jones, R.E. (2002), *Environmental concern: conceptual and measurement issues*, in Dunlap, R.E. and Michelson, W. (Eds), Handbook of Environmental Sociology, Greenwood Press, Westport, CT, 482-524.
- Ellen, P.S., Wiener, J.L. and Cobb-Walgren, C. (1991), The role of perceived consumer effectiveness in motivating environmentally conscious behaviors, *Journal of Public Policy & Marketing*, 10, 102-170.
- Evanschitzky, H., and Wunderlich, M., (2006), An examination of moderator effects: the four stage loyalty model. *Journal of Service Research*. 8, (4), 330-345.
- Gardyn, R. (2003), Eco-friend or foe?, *American Demographics*, 25, (8), 12.
- Gossling S., Kunkel, T., Schumacher, K., Heck N., Birkemeyer J., Froese J., et al. (2005) A target group-specific approach to "green" power retailing: students as consumers of renewable energy. *Renewable and Sustainable Energy Reviews* 9, 69-83.
- Hailes, J. (2007), *The New Green Consumer Guide*, Simon and Schuster, London.
- Han, H., Hsu, J., Lee, J., and Sheu, S. (2011). Are Lodging Customers Ready to Go Green? An Examination of Attitudes, Demographics, and Eco-friendly Intentions. *International Journal of Hospitality Management*, 30, 345-355.
- Hengky, S. H., (2011). Technocentrism: Using Sustainable Tourism Concept To Sustain Environment, Improving Communities' Life Qualities, And Increasing Economic Growth On Perak's Destination. Malaysia. *International Journal of Business and Social Science*.2, (16), 238-245.
- Himmelfarb, H. S. (1975), Measuring Religious Involvement. *Social Forces*, 53,(4), 606-618.
- Homburg, C., and Giering, A. (2001), Personal characteristics as moderators of the relationship between customer satisfaction and loyalty: an empirical analysis. *Psychology and Marketing*, 18, (1), 43-66.
- Im, S., Bayus, B.L., and Mason, C.H.,(2003), An empirical study of innate consumer innovativeness, personal characteristics, and new-product adoption behavior. *Journal of the Academy of Marketing Science*, 31, (1), 61-73.
- Imkamp, H. (2000), The interest of consumers in ecological product information is growing – evidence from two German surveys, *Journal of Consumer Policy*, 23,(2), 193-202.
- Jones, R. E., and Dunlap, R. E. (1992). The social bases of environmental concern: Have they changed over time? *Rural Sociology*, 57, 28-47.
- Kang, K.H., Stein, L., Heo, C.Y., and Lee, S., (2012), Customers' willingness to pay for green initiatives of the hotel industry. *International Journal of Hospitality Management*, 31, 564-572.
- Kasim, A. (2006), The need for business environmental and social responsibility in the tourism industry. *International Journal of Hospitality & Tourism Administration*, 7, (1), 1-22.
- Kassarjian, H. H., (1971), Incorporating ecology into marketing strategy: the case of air pollution, *Journal of Marketing*, 35, (7), 61-65.
- Kim, Y. and Choi, S.M. (2005), Antecedents of green purchase behavior: an examination of collectivism, environmental concern, and perceived consumer effectiveness, *Advances in Consumer Research*, 32, 592-599.
- Kinncar, T. and Taylor, J. (1973), The effect of ecological concern on brand perception, *Journal of Business Research*, 36, (3), 217-32.
- Kline, R. B. (2005). *Principles and Practice of Structural Equation Modeling*. (2nded.) New York: Guilford Press.
- Kostakis I., and Sardianou E., (2012), Which factors affect the willingness of tourists to pay for renewable energy? *Renewable Energy*, 38, 169-172.
- Kotler, P. and Armstrong, G. (2008) *Principles of Marketing*. 12th ed. New York.
- Lee, P.W., and Wu, Q. (2007), *An NCME Instructional Module on Introduction to Structural Equation Modeling: Issues and Practical Considerations*. The Pennsylvania State University, 33-43.
- Li H., Jenkins-Smith H.C., Silva C.L., Berrens R.P., Herron K.G., (2009), Public support for reducing US reliance on fossil fuels: investigating household willingness-to-pay for energy research and development. *Ecological Economics* 68, 731-42.
- Malaysia Hotel Guests by State January - December 2010*. Retrieved from Tourism Malaysia website: http://corporate.tourism.gov.my/research.asp?page=facts_figures
- Maloney, M., Ward, M. and Braucht, N. (1975), Psychology in action: a revised scale for the measurement of ecological attitudes and knowledge, *American Psychologist*, 30, 787-90.
- Mendelson, N., and Polonsky, M.J. (1995), Using strategic alliances to develop credible green marketing, *Journal of Consumer Marketing*, 2, (12), 4-18.
- Mohd Helmi, A. R., RosZayanah, J., Fauziah, A., and Novel, L., (2012), Green Advertising and Environmentally Responsible Consumer Behavior: The Level of Awareness and Perception of Malaysian Youth. *Asian Social Science*. 8, (5), 46-54.
- Mohd, R. S., et al., (2010). Purchase Intention of Organic Food in Kedah, Malaysia: A Religious Overview. *International Journal of Marketing Studies*, 2, (1), 96-103.
- Moisander, J. (2007), Motivational complexity of green consumerism, *International Journal of Consumer Studies*, 31, (4), 404-16.
- Nazlida, Muhamad and Mizerski. Dick (2010), The constructs mediating religions' influence on buyers and consumers, *Journal of Islamic Marketing*, 1, (2), 124-135.

- Ng K. M., (2011). The Potential of Hotels' Green Products in Penang: An Empirical Study. *Paper presented at Second International Conference on Business and Economic Research*, 741-757.
- Norlaila, A.C and Khalid, A.R., (2012). The Impact of Malaysian Industrial Energy use on Carbon Dioxide Emissions. Paper presented at 3rd International Conference on Business and Economic Research Proceeding, *Bandung Indonesia*. 1565-1582.
- Ottman, J. A. (1992). Industry's Responds to Green Consumerism. *Journal of Business Strategy*, 13 (4), 3-7.
- Ottman, J.A. (1993), Green Marketing: Challenges and Opportunities for the New Marketing Age, *Journal of Marketing Research*, 10, 191-197
- Papadopoulos, L., Karagouni, G., Trigkas, M., and, Platogianni, E., (2009). Green marketing. The case of timber certification coming from sustainable forests management, promotion. Presented at Annual International EuroMed Conference Proceedings 2, The Research Business Institute, Salerno, Italy.
- Polonsky, M.J. and Mintu-Wimsatt, A.T. (Eds) (1994), *Environmental Marketing: Strategies, Practice, Theory and Research.*, The Haworth Press, New York, NY.
- Research Advisor (2006): Sample Size Table, Retrieved from <http://researchadvisors.com/tools/SampleSize.htm>
- Roberts, J.A. (1996), *Green consumers in the 1990s: profile and implications for advertising*, NTC Business Books, New York, NY.
- Roberts, J.A. and Bacon, D.R. (1997), Exploring the subtle relationships between environmental concern and ecologically conscious consumer behaviour, *Journal of Business Research*, 40, (1), 79-89.
- Rose S., Clark J., Poe, G., Rondeau, D., and Schulze, W. (2002), The private provision of public goods: tests of a provision point mechanism for funding green power programs. *Resource and Energy Economics*.24, 131-55.
- Rushton, J. P., Chrisjohn, R. D., and Fekken, G. C. (1981). The altruistic personality and the self-report altruism scale. *Personality and Individual Differences*, 2, 293-302.
- Schreiber, J. B., Nora, A., Stage, F. K., Barlow, E. A. and King, J. (2006). Reporting Structural Equation Modeling and Confirmatory Factor Analysis Results: A Review, *The Journal of Educational Research*, 99, (6), 323-337.
- Sheltzer, L., Stackman, R.W. and Moore, L.F. (1991), Business – environment attitudes and the new environmental paradigm, *Journal of Environmental Education*, 22, (4), 14-21.
- Solomon, B.D., and Johnson, N.H., (2009), Valuing climate protection through willingness to pay for biomass ethanol. *Ecological Economics* 68,(7), 2137-44.
- Statistics of Licensing Hotels in Malaysia*. Retrieved December 28, (2011) from The Ministry of Tourism Malaysia web site: <http://www.motour.gov.my/en/statistic/licensing.html>
- Stern, P., Dicitz, T. and Guagnano, G.A. (1993), Value orientations, gender and environmental concern. *Journal of Social Issues*, 50, (3), 65-67.
- Straughan, R.D. and Roberts, J.A. (1999), Environmental segmentation alternatives: a look at green consumer behaviour in the new millennium, *Journal of Consumer Marketing*, 16, (6), 558-575.
- Syed, S.A, Rohani, M., and Badrul, H. (2011). Is Religiosity an important determinant on Muslim consumer behaviour in Malaysia? *Journal of Islamic Marketing*. 2, (1), 83-96.
- Tan B.C., and Yeap P.F., (2012). What Drives Green Restaurant Patronage Intention? *International Journal of Business Management*. 7, (2), 215-223.
- Ting, L.H., Boo, H.C., and Mohhidin, O., (2011). Development of Service Quality Dimensions in Malaysia – The Case Of A Multicultural Society. *Asian Forum on Business Education, AFBE 2008 Conference Paper*. 4, (1), 93-108.
- Tsagarakis, K. P., Bounialetoub, F., Gillas, K., Profylienoub, M., Pollaki, A., and Zografakisc, N. (2011), Tourists' attitudes for selecting accommodation with investments in renewable energy and energy saving systems. *Renewable and Sustainable Energy Reviews* 15, 1335-1342.
- Van Liere, K. and Dunlap, R. (1981), The social bases of environmental concern: a review of hypotheses, explanations, and empirical evidence, *Public Opinion Quarterly*, 44, (2), 181-197.
- Widrick, S. M., Mergen, E., and Grant, D. (2002), Measuring the dimensions of quality in higher education. *Total Quality Management & Business Excellence*, 13,(1), 123-131.
- Wiser, R.H., (2007). Using contingent valuation to explore willingness to pay for renewable energy: a comparison of collective and voluntary payment vehicles. *Ecological Economics* 62, 419-32.
- Wong, V., Turner, V. and Stoneman, P. (1996), "Marketing strategies and market prospects for environmentally friendly consumer products", *British Journal of Management*, 7 (3), 263-281.
- Worthington, E. L., Jr., Wade, N. G., Hight, T. L., Ripley, J. S., McCullough, M. E., Berry, J. W., Schmitt, M. M., Berry, J. T., Bursley, K. H., and Oâ Conner, L. . (2012), The Religious Commitment Inventory-10 (RCI-10) .*Measurement Instrument Database for the Social Science*.
- Young, W., Hwang, K., McDonald, S. and Oates, C. (2010), Sustainable consumption: green consumer behaviour when purchasing products, *Sustainable Development*, 18, 20-31.
- Zanikau, J. (2003). Consumer demand for 'green power' and energy efficiency. *Energy Policy*, 31, 1661-72.
- Zeeda, et al., (2012). The role of religious community in recycling: Empirical insight from Malaysia. *Journal of Resource, Conservative and Recycling*, 58, 143-151.