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Government Concerns of Consumers' Intention to Purchase Green Products (Preliminary Study-Malaysia Evidence)

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Abstract: Facing with the environmental degradation, the Malaysian government as well as other parts of the world takes the path of protecting the environment. Along with this way, the government encourages the public to perform green behaviour. For instance, in the market, different types of green or environmentally friendly products are prepared for the desirable consumers. The main objective of this study as a preliminary one is to find out the latent factors that can affect the intention of respondents to purchase green products. Second, it aims to determine to which the selected socio-economic characteristics and attitudinal factors influence the respondents' intention to purchase green products.

Key words: Green products, green behaviour, environmental degradation, green consumers, intention

INTRODUCTION

Over the last decades, the environment and many human lives are threatened by the numbers of environmental degradations including global warming, pollution of air and water and ozone layer depletion. Human activities like the new industrial and over consumption of the natural resources are mainly responsible for these disasters (Oskamp, 2000; UNEP, 2012). Therefore, to protect the environment and to gain control over these problems, the concept of green is introduced. This concept is in conjunction with focusing on people's actions to address the environmental degradation (McEachern and Mcclean, 2002; Lorenzen, 2012). The green concept has been moved in getting more the developed countries and is attention in the developing and less developed countries (Rezai et al., 2013). To improve this movement, McGougall (1993) believes in the role of consumers.

Green consumers are the group of people that is aware and concerned about the environmental issues (Soonthonsmai, 2007) and aim to perform green behaviour (Akehurst *et al.*, 2012) like purchasing green products. Green products are the products which reduce the negative effects on the environment and are recyclable and reusable (Shamdasani *et al.*, 1993) for example green foods (Lijuan, 2003).

Evidences have been proven that nowadays the consumers are more concerned about the environment and are more responsible about it by taking account of the

environment in their life styles decision (Stone et al., 1995). Based on the organic monitor, IFOAM (2009) report, the rate of organic sales around the world was \$46 billion in 2007 with more consumption concentration in North America and Europe. Moreover, consumers are willing to pay more for at least one type of green products (Peter, 2011). In addition, the mail survey in the UK shows that the majority of the sample agree to pav even 40% more for the green products (Myburgh-Louw and O'Shaughnessy, 1994).

The Malaysian government strongly supports the concept of green in the nation. Along with protecting the environment, the government introduces the agencies and ministries to protect the environment. In 2009, the government launched the agency entitled the Ministry of Energy, Green Technology and Water. The ministry aims to raise the awareness about the concept of green technology in addition to promoting the usage of this technology among public. Moreover, other agencies like the Department of Environment introduced so called clean products which try to reduce the hazardous effects of these products on the environment (DOE, 2007).

To promote green behaviour, the government supplies different green products in the market. For instance, in regards to green foods, there are some schemes and labels in the market. The Ministry of Agriculture (MOA, 2009) has initiated different green agricultural production schemes and labels for crops, livestock and fisheries. As an example, the Good Agriculture Practice (GAP) scheme was introduced by this

ministry. This scheme tries to encourage the farmers, animal and fish breeders to improve the milestones of sustainable agriculture. Besides, the Malaysia Organic Scheme (SOM) is another certification programme which is launched by this ministry with main concentration on the farmers. In addition, the label of the Malaysian Farm Accreditation (SALM) is also introduced by this ministry to assure the environmentally friendly production as well as production the products that are safer for consumption (MOA, 2009). Furthermore in the Malaysian market, other green products like energy saving compact fluorescent lamp are distributed (MGBC, 2013) and the shops such as the Body Shop or justlife shop prepare the green products including the cosmetic products or eco-friendly household cleaner and organic cotton wear for the desirable consumers.

Given all the efforts that the Malaysian government has been done in the way of green, this concept is still new in the country. There is not enough available knowledge about the consumer behaviour in terms of green products purchasing. Thus, it is attempted to perform a comprehensive study by underlying the latent factors on intention of consumers to purchase green foods. Furthermore, it aims to determine the extent to which the selected socio-economic characteristics and attitudinal factors influence the respondents' intention to purchase the green products.

LITERATURE REVIEW

Environmental knowledge: Considering the environment by the society to protect it and to promote a healthy known environment is as green behaviour (Krajhanzl, 2010). The approach of this behaviour is by performing the acts such as recycling, purchasing environmentally friendly products or composing the waste (Jackson, 2005). From the market perspective, it is crucial to understand the knowledge of consumers about the green products and green concept to segment the consumers (Nasir and Karakaya, 2013). According to Maloney and Ward (1973) measuring people's knowledge about the environmentally friendly behaviour can help to understand the environmentally friendly performance. Environmental knowledge is "a general knowledge of facts, concepts and relationships concerning the natural environment and its major ecosystem" (Fryxell and Lo, 2003). Following this paradigm, other researches including (Tan, 2011) assert that performing green behaviour (i.e., green purchase behaviour) is strongly dependent upon the environmental knowledge of a person. Stern (1992) states that knowledge about environmental issues and possible actions to deal with them is the main and clear factor to differentiate between individuals who are engaged in environmentally issues and those who are not. However, Rahim *et al.* (2012) believes that the concept of green in Malaysia is new and people do not have enough knowledge about environmental problems yet.

Profiling the green consumers: Demographic factors such as gender, income level, educational level and marital status are the main possible indicators of performing green behaviour (Stern, 2000; Robinson and Smith, 2002; Roitner-Schobesberger *et al.*, 2008; Han *et al.*, 2009).

The majority of studies show that females and males are different in this term (Mostafa, 2007; Urena *et al.*, 2008) and that women are more likely to perform green behaviour than men, for example carry the intention of purchasing organic foods (Olivova, 2011). However, it has been observed that men are more knowledgeable about eco-labelled foods (Xu *et al.*, 2012). In contrast, the research has also shown that the consumers' intention to purchase eco-labelled sea foods (Chen and Chai, 2010) is independent from gender and no difference is observed (Yu *et al.*, 2014).

Furthermore, other studies conclude that performing green behaviour is depending on the income levels (Cheah, 2009; Du et al., 2010) and the consumers with higher income levels are more likely to perform green behaviour (Lockie et al., 2002; Sidique et al., 2010). Nevertheless, in the this scenario, Yiridoe et al. (2005) believes that income level does not play a significant role on purchasing organic products. Besides, in terms of marital status Laroche et al. (2001) concludes that the respondents who are married are more willing to pay for green products.

Factor influencing the green product purchasing: As claim by Roach (1991) the factors of food safety, quality, protecting the environment and animal welfare are the crucial variables affecting the green purchasing decision. Besides, Davies *et al.* (1995) assert that concern about the health is a difference between the organic food buyers and non-organic food buyers. According to Dreezens *et al.* (2005) there is an association between organic foods and animal welfare and consumers are concerned about this food attributes (Rezai *et al.*, 2011).

In the review of the psychology researches on behavioural performance, attitude is a crucial indicator of behaviour (Kotchen and Reiling, 2000). For example, in the study by Cheah and Phau (2011) it is estimated that there is a strong correlation between the favourable attitude towards environmentally friendly products and the purchase of these products. However, there researchers

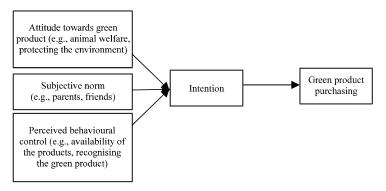


Fig. 1: Conceptual framework of theory of planned behaviour with application to purchase green products

including (Chen, 2007; Prestin and Pearce, 2010) believe in the roles of the subjective norms and behavioural control on a person to perform the green behaviour such as recycling and purchasing the organic food.

METHODOLOGY

The selected model of this study is the Theory of Planned Behaviour (TPB) (Ajzen, 2002). Based on this theory, attitude, subjective norms and perceived behavioural control are the main predictors of performing the behavioural intention. Attitudes are the favourable or unfavourable evaluation an individual forms of a specified behaviour (Ajzen, 1991). The attitude of consumers towards the environment or healthy life style could affect their intention to purchase green products. Subjective norms are related to the perceived social pressure an individual feels to perform the behaviour. In the present study these norms could be in conjunction with the parents, friends or even being in an environmentally friendly society which put pressure on a person to purchase green products. Furthermore, perceived behavioural controls are concerned with the perception of the ease or difficulty of performing the behaviour of interest (Ajzen, 1991). The perceived behavioural controls could be availability of these products, being healthy by purchasing the green product and also the knowledge or recognising of green product from non-green products which facilitate or prohibit the person of performing this behaviour.

The conceptual framework of the present study is illustrated in Fig. 1. Consumers' attitude towards the issues such as protecting the environment or animal welfare could influence their attitude towards the green products purchasing. Furthermore, the subjective norms can influence the respondents to have the intention to purchase these products. The control factors exist to potentially could affect and motivate the consumers.

Sampling and data collection: The selected sampling method of the study is the simple random sampling

method. The survey is held in the supermarkets such as Tesco, Aeon, Carrefour and Giant which are located in Malaysia. Since consumers from all the life styles shop in these places, supermarkets are selected as a place for collecting the data.

Descriptive analysis, factor analysis and the binary logistic regression are the selected analysis tools. Descriptive analysis is applied to describe the socio-demographic characteristics of the respondents. This analysis tool also is used to measure the awareness and knowledge of consumers about the green concept and green products in Malaysia. Factor analysis is employed to underline the latent factors that can affect the respondents' intention to purchase green products. Moreover, the Cronbach's alpha is applied to measure the reliability of the factor analysis result. In the logistic regression, the intention of the respondents to purchase green products is measured. The dependent variable is "to have the intention to purchase green products". This variable is a dichotomous variable with the outcome of "Yes" and "No". It is coded as 1 if the respondents say "Yes"; otherwise, it is coded as 0. The independent variables are divided into three groups. The first group is related to the selected social demographic characteristic of the respondents including the gender, educational level and marital status. The second group concerns the knowledge of consumers about the consumption of green products. The third group is related to the factors which are extracted from the factor analysis.

DISCUSSION

The Theory of Planned Behaviour is used in this study to investigate the consumers' intention to purchase green products. The concept of green in Malaysia is still new and apparently, the government tries to promote this concept in the nation. Thus this study aims to find out the respondents' awareness of green products in Malaysia at

the first stage and tries to uncover the latent factors that can influence the intention of consumers to purchase these environmentally friendly products in the second stage .Eventually, this study as a structured one tries to measure the likelihood of the consumers' intention to purchase green products and to propose the model by which the intention of Malaysian consumers can be reflected. The result of this study can show the factors that are influential on the consumers' Furthermore, by applying the outcome of the binary logistic regression, it could be clear who the optional green product consumers are. For example, whether the likelihood of having intention to purchase green products is higher among women or men. Furthermore, the demographic characteristic like the educational level or the marital status can affect the intention of the respondent or not. Consequently, the result could be helpful for the government and both the local and the international marketers to improve the green movement and marketing of these products.

REFERENCES

- Ajzen, I., 1991. The theory of planned behavior. Org. Behav. Human Decis. Process., 50: 179-211.
- Ajzen, I., 2002. Perceived behavioral control, self-efficacy, locus of control and the theory of planned behavior. J. Applied Soc. Psychol., 32: 665-683.
- Akehurst, G., C. Afonso and H.M. Goncalves, 2012. Re-examining green purchase behaviour and the green consumer profile: New evidences. Manage. Decis., 50: 972-988.
- Cheah, C.M., 2009. A study on consumers green purchasing intention. Master's Thesis, College of Business, University Utara Malaysia, Malaysia.
- Cheah, I. and I. Phau, 2011. Attitudes towards environmentally friendly products: The influence of ecoliteracy, interpersonal influence and value orientation. Market. Intell. Plann., 29: 452-472.
- Chen, M.F., 2007. Consumer attitudes and purchase intentions in relation to organic foods in Taiwan: Moderating effects of food-related personality traits. Food Qual. Preference, 18: 1008-1021.
- Chen, T.B. and L.T. Chai, 2010. Attitude towards the environment and green products: Consumers' perspective. Manage. Sci. Eng., 4: 27-39.
- DOE, 2007. Cleaner production blueprint for Malaysia. Department of Environment, Ministry of Natural Resources and Environment, pp. 1-26.
- Davies, A., A.J. Titterington and C. Cochrane, 1995. Who buys organic food?: A profile of the purchasers of organic food in Northern Ireland. Br. Food J., 97: 17-23.

- Dreezens, E., C. Martijn, P. Tenbult, G. Kok and N.K. De Vries, 2005. Food and values: An examination of values underlying attitudes toward genetically modified- and organically grown food products. Appetite, 44: 115-122.
- Du, Q., L.Q. Nguyen and Y. von Friedrichs, 2010. Effectiveness of eco-label? A study of Swedish university students' choice on ecological food. Master Thesis, Umea University, Umea, Sweden.
- Fryxell, G.E. and C.W.H. Lo, 2003. The influence of environmental knowledge and values on managerial behaviours on behalf of the environment: An empirical examination of managers in China. J. Bus. Ethics, 46: 45-69.
- 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. Hospitality Manage., 2: 519-528.
- IFOAM, 2009. Global organic agriculture: Continued growth. BioFach World Organic Trade Fair 2009, International Federation of Organic Agriculture Movements, Nuremberg, Germany. https://archive.is/vORd.
- 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. http://hiveideas.com/attachments/044_motivatings cfinal_000.pdf.
- Kotchen, M.J. and S.D. Reiling, 2000. Environmental attitudes, motivations and contingent valuation of nonuse values: A case study involving endangered species. Ecol. Econ., 32: 93-107.
- 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. Marketing, 18: 503-520.
- Lijuan, L., 2003. Enhancing sustainable development through developing green food: China's option. First Secretary Mission of China to the United Nations in Geneva. http://ro.unctad.org/trade_env/test1/meetings/bangkok4/chinaPPT.pdf.
- Lockie, S., K. Lyons, G. Lawrence and K. Mummery, 2002. Eating green: Motivations behind organic food consumption in Australia. Sociologia Ruralis, 42: 23-40.

- Lorenzen, J.A., 2012. Going green: The process of lifestyle change. Sociol. Forum, 27: 94-116.
- MGBC, 2013. TEEAM energy saving Compact Fluorescent Lamp (CFL) recycling project. Malaysia Green Building Confederation. http://www.mgbc.org.my/news/teeam-energy-saving-compact-fluorescent-lamp-cfl-recycling-project.
- MOA, 2009. Malaysian farm accreditation scheme (SALM). Ministry of Agriculture, Kula Lumpur, Malaysia.
- Maloney, M.P. and M.P. Ward, 1973. Ecology: Let's hear from the people: An objective scale for the measurement of ecological attitudes and knowledge. Am. Psychol., 28: 583-586.
- McEachern, M.G. and P. McClean, 2002. Organic purchasing motivations and attitudes: Are they ethical? Int. J. Consum. Stud., 26: 85-92.
- McGougall, G.H.G., 1993. The green movement in Canada: Implications for marketing strategy. J. Int. Consum. Market., 5: 69-87.
- 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.
- Myburgh-Louw, J.H. and N.J. O'Shaughnessy, 1994. Consumer Perception of Misleading and Deceptive Claims on the Packaging of Green Fast Moving Consumer Goods. American Marketing Association, Chicago, IL., pp: 344-353.
- Nasir, V.A. and F. Karakaya, 2013. Underlying motivations of organic food purchase intentions. Agribusiness. 10.1002/agr.21363
- Olivova, K., 2011. Intention to buy organic food among consumers in the Czech Republic. Master Thesis, University of Agder, Kristiansand, Norway.
- Oskamp, S., 2000. A sustainable future for humanity? How can psychology help? Am. Psychol., 55: 496-508.
- Peter, P.L., 2011. The willingness to pay for green and fair trade product types. Master Thesis, Erasmus University, Rotterdam.
- Prestin, A. and K.E. Pearce, 2010. We care a lot: Formative research for a social marketing campaign to promote school-based recycling. Resour. Conserv. Recycl., 54: 1017-1026.
- Rahim, M.H.A., R.Z.J.A. Zukni, F. Ahmad and N. Lyndon, 2012. Green advertising and environmentally responsible consumer behavior: The level of awareness and perception of Malaysian Youth. Asian Social Sci., 8: 46-54.

- Rezai, G., Z. Mohamed, M.N. Shamsudin and K. Teng, 2011. Demographic and attitudinal variables associated with consumers' intention to purchase green produced foods in Malaysia. Int. J. Innovation Manage. Technol., 2: 401-406.
- Rezai, G., P.K. Teng, Z. Mohamed and M.N. Shamsudin, 2013. Consumer willingness to pay for green food in Malaysia. J. Int. Food Agribusiness Marketing, 25: 1-18.
- Roach, V., 1991. Green is beautiful. Drug and Cosmetic Industry, Volume 148, No. 2, February 21-22, 1991.
- Robinson, R. and C. Smith, 2002. Psychosocial and demographic variables associated with consumer intention to purchase sustainably produced foods as defined by the Midwest food alliance. J. Nutr. Educ. Behav., 34: 316-325.
- Roitner-Schobesberger, B., I. Darnhofer, S. Somsook and C.R. Vogl, 2008. Consumer perceptions of organic foods in Bangkok, Thailand. Food Policy, 33: 112-121.
- Shamdasani, P., G.O. Chon-Lin and D. Richmond, 1993. Exploring green consumers in an oriental culture: Role of personal and marketing mix factors. Adv. Consum. Res., 20: 488-493.
- Sidique, S.F., F. Lupi and S.V. Joshi, 2010. The effects of behavior and attitudes on drop-off recycling activities. Resour. Conserv. Recycl., 54: 163-170.
- 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.
- Stern, P.C., 1992. What psychology knows about energy conservation. Am. Psychol., 47: 1224-1232.
- Stern, P.C., 2000. New environmental theories: Toward a coherent theory of environmentally significant behavior. J. Soc. Issues, 56: 407-424.
- Stone, G., J.H. Barnes and C. Montgomery, 1995. Ecoscale: A scale for the measurement of environmentally responsible consumers. Psychol. Market., 12: 595-612.
- Tan, B.C., 2011. The roles of knowledge, threat and PCE on green purchase behaviour. Int. J. Bus. Manage., 6: 14-27.
- UNEP, 2012. Global environment outlook 4. United Nation Environment Programme. http://www.unep.org/geo/geo4.asp.
- Urena, F., R. Bernabeu and M. Olmeda, 2008. Women, men and organic food: Differences in their attitudes and willingness to pay. A Spanish case study. Int. J. Consum. Stud., 32: 18-26.

- 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.
- Yiridoe, E.K., S. Bonti-Ankomah and R.C. Martin, 2005. Comparison of consumer perceptions and preference toward organic versus conventionally produced foods: A review and update of the literature. Renewable Agric. Food Syst., 20: 193-205.
- Yu, X., Z. Gao and Y. Zeng, 2014. Willingness to pay for the green food in China. J. Food Policy, 45: 80-87.