

Drivers of consumers green purchasing behavior in Batticaloa

ABSTRACT

Nowadays the environmental issues become a global concern for whole countries. Thus, it could be observed a worldwide rapid ecological awareness; entire community has realized the necessity of environmental protection. At the same time, people are educated to become aware on the environmental protection. Adopting green consumption behavior is a mechanism encourage to maintain sustainable environment. Meanwhile, both consumers and businesses are concerned about the development of sustainable environment in Sri Lanka. Though they have the willingness to adopt still their green consumption behavior is in the early stage.

This study attempts to identify the major drivers of consumers' green purchasing behavior in Batticaloa district. A sample of 200 consumers' response attained through convenience sampling method to examine the key factors influencing to green purchasing behavior. The data obtained from the survey were analyzed with reliability test, mean and regression analysis. The findings revealed that perception of eco labeling, willingness to pay and green knowledge & eco literacy have a significant impact on green purchasing behavior. At the same time environmental laws & guidelines has no significant impact on green purchasing behavior. Hence, study concluded that perception of eco labeling, willingness to pay and green knowledge & eco literacy are key reasons to promote green purchasing behavior. It will help to policy makers and managers in formulating and implementing strategies to encourage green purchasing among the targeted consumers

Keywords: green purchasing, eco labeling, willingness to pay and green knowledge & eco literacy

1. INTRODUCTION

Most of the countries across the world are commenced to realize the threats of sustainable environment and they have started working together with the intention of minimizing the harmful impact on the environment. Green purchasing behavior is one type of environmentally conscious behavior. Moreover, consumers' interest in environmental awareness in recent years has increased their willingness to green purchasing. 'Green consumption' means generally environmentally responsible consumption where consumers consider the environmental impact of purchasing, using, and

disposing of various products, or using various green services.^[1]

Though number of researches have been done regards green purchasing behaviour in developed countries, still there are very few studies that address green issues in the Sri Lankan context. Particularly, only few studies have dealt with green consumer purchasing behavior in Sri Lanka.^[2,3] Therefore, studying the factors that influence on consumers green purchasing behaviour is important to enhance green purchasing behavior of Sri Lankan consumers, specially Batticaloa district consumers. The aim of this present study is to identify the drivers of green purchasing behavior. This kind of research

can provide valuable insights to green marketers regarding how they can boost their green business.

2. PROBLEM STATEMENT

Consumers are becoming increasingly environmentally conscious.^[4] Businesses and consumers are more thoughtful of green marketing now. Meanwhile, at presently, consumers are more concerned about their shopping behavior and purchase decision, specifically concern about environment friendly consumption. This trend towards environment friendly attitude has developed the concept of green marketing.

Asian studies on green marketing are far less than western countries.^[5] And also, Essoussi and Linton state that the process of buying green is still difficult to understand.^[6] Once these factors are determined through proper research, necessary actions can be taken to encourage consumers to actually purchase green product. Furthermore, Samarasinghe in his studies mentioned that, studies in green purchase intention and behavior are necessarily needed to give the cues among environmentalists, government authorities and marketing planners in the Sri Lankan context to frame the effective green marketing strategies.^[7]

Therefore, this study attempts to fill the literature gap and empirical gap by identify the drivers of consumer green purchasing behavior. The findings provide further understanding on the factors affect green purchasing behaviour in Batticaloa district by providing answers to the research questions raised in the study.

2.2 Research Questions

1. Identify the factors effect on green purchasing behaviour in Batticaloa.
2. To identify the level of selected factors and green purchasing behavior in Batticaloa.

3. Identify which factors has the greater impact on green purchasing behavior in Batticaloa.

3. LITERATURE REVIEW

Green Products- Consumption of green products have grown as a result of the increasing concerns about global warming, global and local pollution levels, increasing wastage and environmental hazards. Azevedo in his studies proven that the green products have been proven to have reduced harmful side effects, reduced hazards, reduced toxic substances, reduced health issues, improved recyclability, and improved environmental friendliness.^[8]

Green Purchasing behavior - Green purchasing refers to the purchase of environmentally friendly products and avoiding products that harm the environment.^[9] Wong stated that green purchasing refers to purchasing products that focus on the production, distribution, consumption and disposal of products that have a less detrimental impact on the environment.^[10] And also "Green consumers are conceptualized as goal-oriented individuals and influential market actors who use their purchasing power to bring about social change by taking into account the public environmental consequences of their private consumption"^[11] Another study indicates that the positive purchase behaviour of consumers towards the environment is evident in their shopping habits, such as their concern regarding CFC-free products and product recycling.^[12]

Perception of Eco labeling- Eco-labelling informs consumers about the green characteristics of the product and motivates them to purchase green products.^[13] Another study has shown that awareness of eco-label has positive effect between knowledge of green product and consumer's intention to purchase.^[14]

Few studies have suggested that reliable information should be provided in a simple and user-friendly way in product labels. This might build consumer trust and encourage more sustainable purchases.^[15] However, Studies of Nittala found that consumers do not trust the information provided and remain skeptical

towards the manufacturing, labelling and certification procedures of various products.^[16] And also, another study indicate that although the functions of labels are recognized by some consumers but this does not automatically lead them to green purchasing decisions.^[17] It is essential to examine why eco label has opposing influence on consumer green purchase behaviour; in order to examine it, the following hypothesis formulated.

H1 - A significant and positive relationship exists between eco-label and green purchasing behavior

Environmental laws and guidelines - During the past few decades, various environmental regulatory laws and guidelines have been introduced but still there has been deficiency of environmental literacy among people.^[18]

About eco-laws and guidelines contradictory findings exist in literature. As Lai in his studies concluded that it is not necessary that all consumers who were aware and conscious about eco-laws and guidelines would have green purchase behavior.^[19] At the same time, it was concluded in some studies that awareness of environment laws and guidelines have positive impact on green purchasing behavior.^[20] With this contradictory conclusion of different studies, the following hypothesis formulated;

H2 - A significant and positive relationship exists between environmental laws and guidelines and green purchasing behavior

Green Knowledge and eco literacy - Green knowledge and eco literacy developed with two intentions: one is that consumers must understand the general impact of the product on the environment and second, the consumer's knowledge of the product itself and how is it being produced in an environmentally friendly way.^[21] Knowledge of environmental issues positively influenced consumer intention and actual purchase of green products.^[22]

In the study of Ramayah did not find any relation between environmental knowledge of the consumer and green purchase intention.^[23] At the same time, it was concluded in some studies that eco-literate people tend to pay premium prices for environment friendly products.^[24] Thus the following hypothesis formulated;

H3 - A significant and positive relationship exists between green knowledge and eco literacy and green purchasing behavior

Willingness to pay- Price is one of the main factor for the purchase decision.^[25] Generally, consumers consider high prices as a barrier to green consumption. Although green products such as organic products are generally perceived as being more expensive than conventional goods.^[26]

A study revealed that price does not play a significant role in purchasing eco-labeled goods or green foods, as consumers with environmental concerns are less sensitive to price.^[27] If consumers agree to pay a premium price because of green products attributes, then price is no longer a barrier to the green purchasing behavior. Hence, willingness to pay for green product is considered as a critical predictor of green purchasing, *H4* is proposed as follows:

H4 - A significant and positive relationship exists between willingness to pay and green purchasing behavior

4. METHODOLOGY

Descriptive research design was adopted for this study. A structured questionnaire was used which employed with multiple-choice questions and likert scale questions. Under the convenience sample", 200 properly filled online questionnaires were considered for the analysis and the respondents were selected from the Batticaloa district. This sample size was considered adequate based on Cooper and Schindler,^[28] proposition that statistically, in order for generalization to take place, a sample of at least 30 must exist and also in their study they took 200 as sample size.

Survey considered the respondents who are above 18 years and familiar with the concept green purchase behavior. The reason is individuals above this age and are familiar with purchasing of green products emphasize right decision making. A total of 30 questionnaires were issued among university students and analysed the results of pilot study and it confirmed the suitability of the used instruments. The data analysis for this research done by using

the statistical package SPSS. The results were presented below.

5. RESULTS AND DISCUSSION

The data presentation and analysis are presented with frequency distribution, mean, and standard deviation and regression analysis with research variable in order to achieve formulated research objective. Further the first research objective was attained by proper literature analysis.

5.1 Sample Profile

Descriptive statistical analysis was run on respondents' demographic variables. The results are shown in Table1.

Demographic Profile		Frequencies	Percentages (%)
Gender	Male	131	65.5
	Female	69	34.5
Age groups	18-30	80	40
	31-40	62	31
	41-50	49	24.5
	51-60	5	2.5
	Above 60	4	2
Education	Primary school	22	11
	Secondary School	46	23
	High School	67	33.5
	Graduation	48	24
	Post-graduation	17	8.5
Monthly Income	Less than 30,000	35	17.5
	30001-50000	77	38.5
	50001-70000	50	25
	70001-90000	22	11
	Above 90000	16	8
Aware of green consumption	Yes	153	76.5
	A little	47	23.5

Table 1: Summary of demographic information

Table 1 reflects the demographic characteristics of respondents. Among the selected sample of 200, majority of the respondents are male (65.5%) and the female respondents percentage is 34.5%. while, regarding their age, it can be concluded that there is almost more than 70% of respondents age distribution fall between 18-40. The sample is an educated one, since 33.5% of the respondents graduated high school and 32.5% have a graduate and post graduate degree.

A small percentage of 17.5% of the respondents have a less income, below 30,000Rs. Regarding aware of green consumption most of the respondents are well familiar with the green marketing around 76.5% and the remaining little known about the concept of green consumption.

5.2 Descriptive Statistics of Study Variables

The descriptive data including, reliability, mean, and standard deviation of the study variables was obtained and shown in following Table2 .

Table 2: Reliability

Variable	No. of Statements	Cronbach's coefficient
Perception of Eco labeling	4	.817
Environmental laws and guidelines	3	.745
Green Knowledge and eco literacy	4	.712
Willingness to pay	4	.766
Green Purchase Behaviour	6	.804

All selected factors were tested for reliability analysis. The Cronbach's Alpha coefficient value for all attributes above .7, which indicated strong internal consistency among the attributes. Therefore, the variables used in this study were concluded as reliable. Sekaran posits that the result of reliability tests below 0.60 is considered to be poor, whereas if it is greater than 0.60 it can be acceptable and if the results of reliability show range between 0.80, it is considered a good result. [29]

Table 3: Level of variables

Dimension	Mean	S.D	Decision Attribute
Perception of Eco labeling	3.632	.858	High Level
Environmental laws & guidelines	3.396	.731	Moderate Level
Green Knowledge & eco literacy	3.261	.839	Moderate Level
Willingness to pay	3.521	.850	High Level
Green Purchasing Behaviour	3.587	.988	High Level

According to the results perception of eco labeling, willingness to pay and green purchasing behaviour found to be high level. It shows that consumers in Batticaloa district have high level of attention toward these factors.

At the same time, environmental laws and guidelines, green knowledge and eco literacy found to be moderate Level. To conclude, customers in Batticaloa have only moderate level of attention regarding these factors.

Regression Analysis

In order to achieve the third research objective, The hypotheses stated in the literature review were created to determine whether green purchasing behaviour can be influenced by the selected factors. Thus, a Multiple Linear Regression Analysis was performed between independent variables as; perception of eco labeling, environmental laws & guidelines, willingness to pay and green knowledge & eco literacy on dependent variable, green purchasing behaviour. And the following results were obtained.

Table 4: Regression predicting green purchasing behaviour with selected factors

Coefficients ^a					
Model		Unstandardized Coefficients		t	Sig.
		B	Std. Error		
1	(Constant)	-.620	.144	-1.306	.000
	Perception of Eco labeling	.431	.062	6.905	.000
	Environmental laws & guidelines	.362	.058	6.252	.205
	Green Knowledge & eco literacy	.219	.054	4.072	.000
	Willingness to pay	.228	.053	4.278	.000

a. Dependent Variable: Green purchasing Behaviour

The coefficient of determination $R^2 = 0.627$, means that 62.7% of the variability of green purchasing behaviour is explained by the selected factors. Furthermore, among the selected factors; perception of eco labeling, willingness to pay and green knowledge & eco literacy have significant influence ($p < 0.05$) on green purchasing behaviour. This indicates that the alternative hypotheses (H_1 , H_3 and H_4) are appropriate and can be accepted.

Analyzing the coefficients, the variables that present the highest relative contributions to explain green purchasing behaviour are firstly perception of eco labeling, followed by willingness to pay and green knowledge & eco literacy respectively. This finding align with the findings of Hines *et al.* who confirmed knowledge was the most significant type when predicting environmental action. [30]

In contrast, according to the analysis, environmental laws & guidelines has no significant influence on the green purchasing behavior among Batticaloa respondents and the formulated hypothesis H2 rejected as $p > 0.05$. It is further validated by a previous research study, it was confirmed eco-literacy has no impact on the consumers' green purchase intentions.^[31] It is not necessary that consumers who are ecologically well aware with laws & guidelines, will more likely to engage in pro-environmental behavior.

6. CONCLUSIONS AND RECOMMENDATION

The main objective of this study is to explore influence of green marketing tools (perception of eco labeling, environmental laws & guidelines, willingness to pay and green knowledge & eco literacy) on green purchasing behavior. An investigation on the coefficients of each factors shows perception of eco labeling, willingness to pay and green knowledge & eco literacy as the positively significant variable related to green purchasing behaviour

It is clear that awareness of eco labeling among Batticaloa consumers and their attention to buy environmentally branded products were influenced by their perception in the benefits of green products purchasing behavior. Therefore in order to enhance the green consumption, government can arrange campaigns to promote public awareness of eco-labels, as this study proven that eco labels can employ a significant influence in green purchase behavior of consumers.

On the other hand study revealed that consumers willing to pay has positive effect on Batticaloa consumers and their attention to buy environmentally branded products were influenced by their perception in the benefits of green products purchasing behavior. Therefore, to induce greener purchasing behavior among consumers, manufacturers and retailers should reconsider their pricing strategies for green products. Delivering green products at a competitive price will encourage the consumers to choose green products instead of a conventional products. The study further supported by the findings of Bezawada and Pauwels found that lowering regular prices is an

effective tool for prompting consumers to buy green.^[32]

Besides the pricing programs the enhance the knowledge of the green consumer is another important factor as the study confirmed green knowledge & eco literacy has significant influence on the green purchase behavior. Thus, marketers are advised to develop strategies specifically targeted the segment to enhance green knowledge & eco literacy. Apart from this consumers are obtain the knowledge through the mass media and advertisements. It is an opportunity for new and existing green businesses to market themselves through mass media. And also, businesses can emphasize on ecological packaging in their promotional messages to target their green consumers.

Thus, considering all, perception of eco labeling, willingness to pay and green knowledge & eco literacy seem to be important variables as they influence the green purchase behaviour of consumers towards green products. It is recommended that marketers, and policymakers need to understand and promote the drivers of green purchase behavior.

Limitation- Certain limitations were identified in this study with some suggestions for future studies; study was limited to consumers of Batticaloa (one of the District of Sri Lanka) and did not cover all the districts in Sri Lanka. In future studies, it would be ideal to cover all the districts in Sri Lanka to generalize the study

REFERENCES

1. Moisander, J. (2007). Motivational complexity of green consumerism. *International Journal of Consumer Studies*, 31(4), 404-409
2. Wanninayake WMCB, Randiwela P. Consumer attractiveness towards green products of FMCG Sector: An empirical study. In Proceedings of the Oxford Business and Economics Conference, Oxford: UK; 2008.
3. Samarasinghe DSR, Samarasinghe GD. Green consumer profiles: Opportunities for green marketing practices in Sri Lanka. Proceedings of FMSC Research

- Symposium, First Semester- 2010-2011, University of Sri Jayewardenepura, Colombo, Sri Lanka; 2010.
4. Laroche, M., Bergeron, J., & Forleo, B., G. (2001) Targeting consumers who are willing to pay more for environmentally friendly products, *Journal of Consumer Marketing*, 18 (6), pp. 503-520.
 5. Lee, K. (2009) Gender differences in hongkong adolescent consumer' green purchase behaviour, *Journal of Consumer Marketing*, 26 (2), pp. 87-96.
 6. Essoussi, L.H. & Linton, J.D. (2010) New or recycled products: how much are consumers willing to pay? *Journal of Consumer Marketing*, 27, 458-468.
 7. Samarasinghe, R. (2012 a). Green consumerism: Individual's ethics and politics as predictors of pro-environmental Behaviour. *Delhi Business Review*, 13(1), 41-48
 8. Azevedo, S.G., Carvalho, H., Machado, V.C., 2011. The influence of green practices on supply chain performance: a case study approach. *Transp. Res. Part E* 47, 850e871.
 9. Chan, R. Y. (2001). Determinants of Chinese consumers' green purchase behavior. *Psychology & Marketing*, 18(4), 389-413
 10. Wong, F. V., Lee, M. Y., Lin, X. R., & Low, S. Y. (2012). A study on the youth attitude toward purchase green products in Malaysia & Singapore. 1-163.
 11. Moisander J. (2001). *Representation of Green Consumerism: A Constructionist Critique*. Helsinki School of Economics and Business Administration: Helsinki.
 12. Ansar, N. (2013). Impact of Green Marketing on Consumer Purchase Intention, *Mediterranean Journal of Social Sciences* (online), 4(11), pp. 650-655.
 13. Young, W., Hwang, K., McDonald, S., & Oates, C. J. (2010). Sustainable consumption: green consumer behaviour when purchasing products. *Sustainable Development*, 18(1), 20-31.
 14. Nik Abdul Rashid, N.R. (2009), "Awareness of eco-label in Malaysia's green marketing initiative", *International Journal of Business and Management*, Vol. 4 No. 8, pp. 132-41
 15. Rahbar, E., & Wahid, N. A. (2011). Investigation of green marketing tools' effect on consumers' purchase behavior. *Business Strategy Series*, 12(2), 73-83.
 16. Nittala, R. (2014). Green Consumer Behavior of the Educated Segment in India. *Journal of International Consumer Marketing*, 26(2), 138-152.
 17. Leire, C. and Thidell, A. (2005), "Product-related environmental information to guide consumer purchases e a review and analysis of research on perceptions, understanding and use among Nordic consumers", *Journal of Cleaner Production*, Vol. 13 No. 10, pp. 61-70.
 18. Sivasubramaniam, P. A. (2008). *Make IT Green: The TCS Way*. Tata Consultancy Services
 19. Lai, O. K., 2000. Greening of Hong Kong? Forms of manifestation of environmental movements. The dynamics of social movement in Hong Kong, Hong Kong University Press: 259-296.
 20. Amyx, D.A., DeJong, P.F., Lin, Chakraborty, G. and Wiener, J.L., 1994, Influencers of purchase intentions for ecologically safe products: an exploratory study, in Park, C.W. et al. (Eds), *AMA Winter Educators' Conference Proceedings*, American Marketing Association, 5: 341-7.
 21. D'Souza, C., Taghian. M. and Lamb. P., 2006. An Empirical Study on the influence of Environmental Labels on Consumers. *Corporate Communications: An International Journal*, 11(2): 162-173.
 22. Eze, U. C., & Ndubisi, N. O. (2013). Green Buyer Behavior: Evidence from Asia Consumers. *Journal of Asian and African Studies*, 48(4), 413-426.
 23. Ramayah, T., Lee, J. W. C., & Mohamad, O. (2010). Green product purchase intention: Some insights from a developing country. *Resources, Conservation and Recycling*, 54(12), 1419-1427.
 24. Amyx, D.A., DeJong, P.F., Lin, Chakraborty, G. and Wiener, J.L., 1994, Influencers of purchase intentions for ecologically safe products: an exploratory study, in Park, C.W. et al. (Eds), *AMA Winter Educators' Conference Proceedings*, American Marketing Association, 5: 341-7.
 25. Mai, R. and Hoffmann, S. (2012), "Taste lovers versus nutrition fact seekers: how health consciousness and self-efficacy determine the way consumers choose food products", *Journal of Consumer Behaviour*, Vol. 11 No. 4, pp. 316-328
 26. Aslihan Nasir, V. and Karakaya, F. (2014), "Consumer segments in organic foods

- market", *Journal of Consumer Marketing*, Vol. 31 No. 4, pp. 263-277.
27. Olson, E. (2013), "It's not easy being green: the effects of attribute tradeoffs on green product preference and choice", *Journal of the Academy of Marketing Science*, Vol. 41 No. 2, pp. 171-184.
28. Cooper DR, Schindler PS. *Business research methods*. (8th ed.). Boston: 15 McGraw-Hill Irwin; 2003.
29. Sekaran, U. (2003). *Research methods for business. A skill building approach*. New York: Wiley.
30. Hines, J., Hungerford, H. & Tomera, A. (1987) *Analysis and synthesis of research on environmental behavior: a meta-analysis*. *Journal of Environmental Education*, **18**, 1-8.
31. Laroche, M., Bergeron, J. and Barbaro-Forleo, G., 2001. Targeting consumers who are willing to pay more for environmentally friendly products. *Journal of consumer marketing*, **18(6)**: 503-520
32. Bezawada, R. and Pauwels, K. (2013), "What is special about marketing organic products? How organic assortment, price, and promotions drive retailer performance", *Journal of Marketing*, Vol. 77 No. 1, pp. 31-51.