European Proceedings of
Social and Behavioural Sciences
EpSBS

www.europeanproceedings.com

e-ISSN: 2357-1330

DOI: 10.15405/epsbs.2020.12.05.35

IEBMC 2019

9th International Economics and Business Management Conference

UNIVERSITY STUDENTS' REACTIONS TO ECOLOGICALLY RESPONSIBLE PACKAGING

Abdul Rahman Zahari (a)*, Elinda Esa (b), Zuraini Abdullah Zawawi (c)
*Corresponding author

(a) Universiti Tenaga Nasional, Sultan Haji Ahmad Shah Campus, Muadzam Shah, Pahang, Malaysia, Rahman@uniten.edu.my
(b) Universiti Tenaga Nasional, Sultan Haji Ahmad Shah Campus, Muadzam Shah, Pahang, Malaysia, Elinda@uniten.edu.my
(c) Universiti Tenaga Nasional, Sultan Haji Ahmad Shah Campus, Muadzam Shah, Pahang, Malaysia, ZZuraini@uniten.edu.my

Abstract

To date, many companies are producing ecologically responsible packaging. In many developing countries, the study of intention to choose ecologically responsible packaging is relatively new, particularly involving younger consumers. Research into this topic is essential because young consumers have substantial purchasing ability. Hence, the purpose of this study is to investigate university students' reactions to ecologically responsible packaging. 250 questionnaires were distributed to university students selected from a government-linked university located in Muadzam Shah, Pahang, using a cluster sampling approach. Of these, 200 were deemed fit for analysis using Partial Least Squares Structural Equation Modelling (PLS-SEM). The findings showed that two factors, namely cognitive benefits and positive emotions, positively influenced intention to choose ecologically responsible packaging. Environmental concern failed to influence this behaviour, but as hypothesized, negative emotions negatively influenced intention to choose ecologically responsible packaging. The findings will assist green marketers to identify the reactions of university students to ecologically responsible packaging. In addition, they highlight a number of implications for policy makers and universities.

Keywords: Environmental concern, cognitive benefits, positive and negative emotions, intention to choose ecologically responsible packaging.

https://doi.org/10.15405/epsbs.2020.12.05.35
Corresponding Author: Abdul Rahman Zahari
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

1. Introduction

Sustainable development is a fundamental concept which has been discussed over the past few decades. Currently, environmental concern has become, not only a significant public issue, but also an important topic among scholars because an increased level of environmental awareness since the 1970s has resulted in a positive change in consumer behaviour and attitudes towards environmentally related products (Mohammad & Amin, 2012; Magnier & Schoormans, 2015; Prakash & Pathak, 2017; Prakash et al., 2019; Xu, Prybutok & Blankson, 2019). This trend has led to green consumerism (Moisander, 2007) in which consumers consider and value environmental-friendly and ethical products when making their purchasing decisions (Rokka & Uusitalo, 2008). Since the concept of green consumerism has been widely accepted, this paper aims to study university students' reactions to ecologically responsible packaging. Ecologically responsible packaging or green packaging can be defined as packaging that consists entirely of natural plants, can be recycled or reused, promotes sustainable development and is biodegradable and harmless to the environment, the human body and animal health (Zhang & Zhao, 2012). Furthermore, Dharmadhikari (2012) explained that ecologically responsible packaging is associated with 'Reduce, Reuse, Reclaim, Recycle and Degradable' (4RID principle). This means the packaging is made from eco-friendly or biodegradable material which can be broken down and assimilated, by natural means, back into earth elements like carbon, oxygen and hydrogen.

In business, packaging always plays an important role in preserving, protecting and marketing products during their storage, transportation and usage. Many past studies indicate that packaging is one of the most crucial factors in influencing the consumers' purchasing decision at the point of sale (Hao et al., 2019; Magnier & Crie, 2015; Prakash et al., 2019). Nowadays, the majority of manufacturers and consumers agree that non-ecological packaging will eventually turn into plastic waste which has a significant impact on the environment. Many studies have revealed that non-ecological packaging often makes the process of recycling plastic material more difficult and costly and it needs more landfill space due to an increasing amount of packaging waste. In addition, widely used chemicals in plastic packaging and food containers may be toxic to the central nervous system (Charter & Polonsky, 2018; Kardos et al., 2019; Panainte et al., 2014). For these reasons, responsible marketers search for ecological packaging as part of their ethical marketing practices. This approach can enhance the reputation of companies and increase the customers' purchasing intentions towards these companies' products (Prakash et al., 2019). Importantly, efficient packaging solutions (eco-packaging) can benefit the consumer, the individual, the community, the companies and the government (Orzan et al., 2018).

In 2018, the Ministry of Energy, Science, Technology, Environment and Climate (2019) launched Malaysia's roadmap towards zero single-use plastics (2018-2030) as part of an ongoing effort by the Malaysian government to commit to a sustainable future. The roadmap clearly focused on zero single-use plastics for a cleaner and healthier environment in Malaysia by 2030. All stakeholders are now urged to jointly address single-use plastics pollution. With this latest initiative, more and more companies are subject to the compulsory development of ecologically responsible packaging of their products. This roadmap could be difficult to achieve if the end-users do not have favourable reactions to ecologically responsible packaging. Several previous works claimed that the study of ecologically responsible packaging is quite limited included young consumers or university students contexts (Joshi & Rahman, 2015; Prakash &

https://doi.org/10.15405/epsbs.2020.12.05.35
Corresponding Author: Abdul Rahman Zahari
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

Pathak, 2017; Scott & Vigar-Ellis, 2014). Hence, the study of university students' reactions to green packaging is deemed critical because the findings of this study could be used to support the latest roadmap formulated by the Malaysian Ministry of Energy, Science, Technology, Environment and Climate and assist the policy makers to understand the cause of these reactions.

The remainder of this paper is organized as follows: the introductory remarks are followed by a section describing the problem statement. Section 3 and Section 4 discuss the research questions and purpose of study. Section 5 explains the methods employed in this paper. Section 6 presents the findings and finally, Section 7 gives conclusions and suggestions for future research

2. Problem Statement

As mentioned in previous empirical studies, the concept of ecological packaging could be a new concept for consumers in countries like Malaysia, Romania, India and Sri Lanka (Mohammad & Amin, 2012; Lasuin & Ching, 2014; Scott & Vigar-Ellis, 2014; Joshi & Rahman, 2015; Mohd Suki, 2016; Prakash & Pathak, 2017; Karunarathna et al., 2017; Kardos et al., 2019; Xu et al., 2019; Ling Tan et al., 2019). For instance, in Malaysia, the Ministry of Domestic Trade, Cooperative and Consumerism introduced the 'No Plastic Bag Campaign Day' in January 2011 with the main objectives being to reduce the heavy consumption of plastic bags and save the environment at the end-user stage nationwide (Ministry of Domestic Trade, Cooperative and Consumerism, 2012). This initiative was considered new and innovative, but the impact of this programme has been insignificant because the majority of end-users in Malaysia are still paying RM0.20 to buy plastic bags from retailers or sellers (Mohd Suki, 2016). Also, researchers have concluded that research into university students' reactions to ecologically responsible packaging is quite limited in developing countries and, therefore, it is a study that needs to be conducted to close this knowledge gap.

3. Research Questions

This study aims to answer the research question: What are the reactions (environmental concerns, cognitive benefits, positive emotions and negative emotions) that will lead university students to choose ecologically responsible packaging?

4. Purpose of the Study

The objective of this study is to investigate university students' reactions to ecologically responsible packaging. The findings of this study could extent work specialising in the reactions to ecologically responsible packaging and could provide a useful contribution to literature, particularly in the context of developing country. Additionally, this paper elaborates on the theory used (Theory of Planned Behavior) by providing empirical evidence on the link between the reactions and ecologically responsible packaging. This paper could also assist green marketers, policy makers and management at universities to identify university students' reactions to ecologically responsible packaging. As a consequence, they will be able to develop the right strategy or campaign to stimulate university students' intention to choose ecologically responsible packaging and ultimately save the environment.

https://doi.org/10.15405/epsbs.2020.12.05.35
Corresponding Author: Abdul Rahman Zahari
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

5. Research Methods

The target population for this study was limited to university students studying in a government-linked university located in Muadzam Shah, Pahang. The survey was conducted through self-administered questionnaires using a cluster sampling approach. A total number of 250 questionnaires was distributed to the targeted respondents and 200 were returned (an 80 per cent response rate). The questionnaire used in this study consisted of two sections. Section One was designed to gain information about the exogenous (environmental concern, cognitive benefits, positive emotions and negative emotions) and endogenous (intention to choose ecologically responsible packaging) constructs. Section Two was prepared to capture respondents' profiles. There were twenty items in Section One and these items were adapted from a previous study developed by Koenig-Lewis et al. (2014). Subsequently, the questionnaire has been refined after receiving comments and suggestions based on expert opinion and pre-test procedures.

The questionnaire used a six-point Likert scale ranging from (1) strongly disagree to (6) strongly agree. Additionally, the current study used a reflective measurement model and data was analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM). Two major analyses of PLS-SEM, namely the measurement model and structural model have been applied to the data. Figure 01 demonstrates the conceptual framework used in this study.

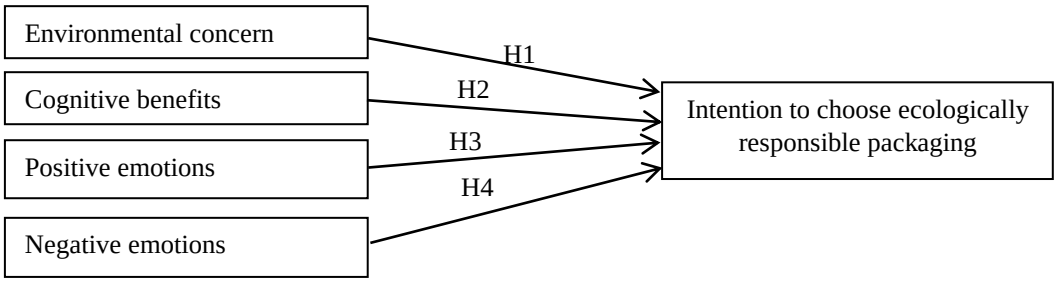

Figure 01. Conceptual framework

6. Findings

This study succeeded in obtaining 200 respondents. Of the valid responses, 79 percent were female and 21 per cent were male. Furthermore, 79 percent respondents were aged below 23 years of age. With respect to the ethnic groups, the majority of respondents were Malay (86.5 percent), followed by Indian (11 percent) and Chinese (5 percent). In regard to the students' programme, the majority of them were from Bachelor of Accounting (38.5 percent), followed by Bachelor of Human Resource Management and Bachelor of Finance (37.5 percent and 10.5 percent respectively). Finally, most of the respondents (61 percent) were third year students and only 2.5 percent of them were fourth year students.

The next analysis used PLS-SEM. To analyse the reflective measurement model, few tests such as internal consistency, indicator reliability, convergent validity and discriminant validity tests were executed. Table 01 shows the results of the measurement model where the loading values for all items ranged from .738 to .970. All items were accepted because the values were greater than .700 as recommended by Hair et al. (2017). With regards to internal consistency, this was measured using composite reliability. Table 01 demonstrates that the values of composite reliability are above .870, thus indicating that all constructs in

https://doi.org/10.15405/epsbs.2020.12.05.35
Corresponding Author: Abdul Rahman Zahari
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

this present study have high values of internal consistency (Nunnally & Bernstein, 1994). On top of that, convergent validity was tested through average variance extracted. The results showed that the average variance extracted range from .586 to .857 and considered above the accepted value (Fornell & Larcker, 1981; Chin, 2010). In addition, the values of the variance inflation factor shown in Table 01 are below two, thus no thread to multicollinearity problems can be associated with this study (Diamantopoulos & Siguaw, 2006).

Table 01. Results of measurement model

Constructs/Items	Loadings	CR	AVE	VIF
Environmental Concern (EC1)	.763	.876	.586	1.357
EC2	.816			
EC3	.758			
EC4	.749			
EC5	.738			
Cognitive Benefits (CB1)	.821	.926	.806	1.514
CB2	.922			
CB3	.901			
CB4	.870			
Positive Emotions (PE1)	.830	.903	.700	1.423
PE2	.821			
PE3	.821			
PE4	.874			
Negative Emotions (NE1)	.970	.960	.857	1.053
NE2	.912			
NE3	.922			
NE4	.898			
Intention to choose Ecologically Responsible Packaging (IEP1)	.882	.931	.773	
IEP2	.911			
IEP3	.901			

Notes: CR = Composite reliability; AVE = Average variance extracted; VIF = Variance inflation factor

To measure the discriminant validity, the current study applied the test of Heterotrait-Monotrait Ratio (HTMT) as recommended by Henseler et al. (2015). This technique has two approaches to examine the discriminant validity. The first technique is called the criterion or statistical test. To obtain discriminant validity of/by using the statistical test, the HTMT value should be below or equal to the HTMT.85 value of .85 (Kline, 2011), or the HTMT.90 value of .90 (Teo et al., 2008). In this study, all values shown in Table 02 have passed HTMT.90 measures (Henseler et al., 2015; Teo et al., 2008). The next method is known as $HTMT_{Inference}$. This method was used to test the null hypothesis (H0: HTMT $\geq$ 1) compared to the alternative hypothesis (H1: HTMT < 1). The issue of discriminant validity is identified if the confidence interval contains the value of 1. The results of $HTMT_{Inference}$ shown in Table 02 revealed that the confidence interval value for each construct is below 1. Hence, these results confirm that discriminant validity exists in this study.

https://doi.org/10.15405/epsbs.2020.12.05.35
Corresponding Author: Abdul Rahman Zahari
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

Table 02. Heterotrait-Monotrait Ratio (HTMT)

Constructs	CB	IEP	EC	NE	PE
Cognitive benefits (CB)					
Intention to choose ecological responsible packaging (IEP)	.692[a] .559;.795[b]				
Environmental concern (EC)	.547 .386;.692	.521 .351;.659			
Negative emotions (NE)	.087 .051;.268	.135 .071;0.305	.123 .078;.246		
Positive emotions (PE)	.522 .361;.662	.573 .418;.708	.453 .273;.612	.152 .101;.309	

Notes: [a] The criterion for HTMT ratio is below .85; [b] The criterion for HTMT upper confidence intervals (CI) is below 1

After analysing the measurement model (inner model), the next step in a PLS-SEM analysis is to establish a structural model. The test of the structural model included the estimating of the path coefficients, the coefficient of determination (R^2) and the effect size (f^2). Table 03 shows the summary of the PLS-SEM structural model test criteria adapted from Wicks and Chin (2008). In this study, there are two path coefficients that show positive relationships (CB -> IEPand PE -> IEP). Specifically, cognitive benefits (Hypothesis 2) and positive emotions (Hypothesis 3) have a strong positive influence on the intention to choose ecologically responsible packaging by university students. There is substantial evidence indicating that cognitive benefits have positively influenced intention to choose ecologically responsible packaging (Forgas, 1995; Nyer, 1997; Nerb & Spada, 2001; Vining & Ebreo, 2002). Other studies conducted by Koenig-Lewis et al. (2014), Chen et al. (2017) and Kardos et al. (2019) have also produced similar results to the present study.

Furthermore, many past researchers have claimed that people make decisions based on a cognitive evaluation of their emotional reactions. If they put aside their emotional reactions, they fail to understand human behavior (Forgas, 1995; Nyer, 1997; Nerb and Spada, 2001). In this study, positive emotions (Hypothesis 3) have significantly influenced university students to choose ecologically responsible packaging. The results are consistent with past studies by Koenig-Lewis et al. (2014), Magnier and Schoormans (2015), Nguyen, Lobo and Nguyen (2018) and Liang et al. (2019). These studies indicated that positive emotions were significantly associated with intention to choose ecologically responsible packaging among young French, Netherland, Norse and Chinese consumers.

Additionally, the results of t-stats for negative emotions (Hypothesis 4) was reported as below 1.96, therefore, Hypothesis 4 was supported. Past literature mentioned fear, guilt and regret among the negative emotions that have a significant effect on pro-environmental behaviour and contributed to negative influences on intention to choose ecologically responsible packaging (Kaiser, 2006; Ferguson & Branscombe, 2010; Harth et al., 2013). Similar studies by Koenig-Lewis et al. (2014) and Liang et al. (2019) have also proved this relationship. This study has incorporated this construct because a past study by Kals and Maes (2002) advocated limited support for linking emotions and green packaging. Moreover, several scholars have mentioned that an emotional affinity with nature is regarded as the most powerful emotion within the human/nature relationship (Kals et al., 1999; Hartmann & Apaolaza-Ibáñez, 2008) and, more importantly, it also explained pro-environmental behavior (Bassing-Olsen et al., 2016; Liang et al., 2019; Rees et al., 2015).

https://doi.org/10.15405/epsbs.2020.12.05.35
Corresponding Author: Abdul Rahman Zahari
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

Meanwhile, as shown in Table 03, Hypothesis 1 which hypothesized the significant influence of environmental concern on intention to choose ecological packaging was not supported by results (H1: b=.130, t = 1.868). These findings are consistent with past studies by Bartiaux (2008), Zahari and Esa (2016) who found that environmental concern has no effect on the selection of green packaging. However, the results are in contrast with the work of Lasuin and Ching (2014), Prakash and Pathak (2017), Karunarathna et al. (2017) and Kardos et al. (2019) who confirmed that environmental concern significantly influenced the use of ecologically responsible packaging by university students. For instance, a study carried out by Lasuin and Ching (2014) among university students in Sabah demonstrated that environmental concern had a positive effect on the intention to choose ecologically responsible packaging. Findings from this study show that the Theory of Planned Behavior is well supported and in line with past studies conducted by Lasuin and Ching (2014), Magnier and Schoormans (2015) and Karunarathna et al. (2017).

Furthermore, the value of R^2 recorded at .470, shows that 47.0 percent of intention to choose ecologically responsible packaging was determined by exogenous constructs such as cognitive benefits, positive emotions and negative emotions. In this current study, the R^2 value (.470) was considered moderate (Chin, 1998). With regards to the effect sizes, Cohen (1988) has stated that $f^2$of .02 is considered a small effect, .15 a medium effect and .35 a large effect. Table 03 shows the moderate and small effect sizes of cognitive benefits (.203), positive emotions (.116), negative emotions (.037) and environmental concern (.024) respectively.

Table 03. Structural model

Relationship	Hypothesis	Std. Beta	Std. Error	T Stats	Decision	f^2
EC -> IEP	H1	.130	.070	1.868	Not supported	.024
CB -> IEP	H2	.399	.081	4.958*	Supported	.203
PE -> IEP	H3	.293	.068	4.328*	Supported	.116
NE -> IEP	H4	.141	.077	1.834	Supported	.037

Notes: CB = Cognitive benefits; IEP = Intention to choose ecologically responsible packaging; EC = Environmental concern; NE = Negative emotions; PE = Positive emotions; * $p < .01$

7. Conclusion

This study aimed to investigate university students' reactions to ecologically responsible packaging. The results indicate that only three hypotheses were supported. Specifically, cognitive benefits and positive emotions had a positive relationship with the intention to choose ecologically responsible packaging while, as hypothesized, negative emotions demonstrated a negative link with this relationship. Meanwhile, environmental concern did not represent a positive relationship with intention to choose ecologically responsible packaging. In future, based on the findings, green marketers and policy makers could exploit in a positive way, the university students' reactions to ecologically responsible packaging. A comprehensive understanding of these factors is critical because university students could make a conscious decision to consistently buy goods that have ecological packaging in the future. Based on the findings, the government and university should develop more campaigns to encourage university students to use ecologically responsible packaging because, at the moment, they are exhibiting insufficient concern for the

environment. Through this initiative, the level of environmental concern on the part of university students could be increased. However, this study comes with some limitations. The sample size in this study was limited to 200 respondents from one government-linked university located in Muadzam Shah, Pahang, hence any future study should increase the sample size and involve a variety of universities. Also, the current study only applied internal reactions to ecologically responsible packaging and therefore, a new study could incorporate the external reactions such as green policies or acts, and government intervention in the conceptual model.

References

Bartiaux, F. (2008). Does environmental information overcome practice compartmentalization and change consumers' behaviours? *Journal of Cleaner Production, 16*, 1170-1180.

Bassing-Olsen, M. J., Fielding, K. S., & Iyer, A. (2016). Experiences of pride, not guilt, predict pro-environmental behavior when pro-environmental descriptive norms are more positive. *Journal of Environmental Psychology, 45*, 145-153.

Charter, M., & Polonsky, M. J. (2018). *Greener marketing: A global perspective on greening marketing practice* (2nd ed.). Routledge.

Chen, Y. S., Hung, S. T., Wang, T. Y., Huang, A. F., & Liao, Y. W. (2017). The influence of excessive product packaging on green brand attachment: The mediation roles of green brand attitude and green brand image. *Sustainability, 9*(4), 654. https://doi.org/10.3390/su9040654

Chin, W. W. (2010). How to write up and report PLS analyses. In V. Esposito Vinci, W. W. Chin, J. Henseler, & H. Wang (Eds), *Handbook of partial least squares: Concepts, methods and applications* (655-690). Springer.

Chin, W. W. (1998). The partial least squares approach to structural equation modelling. In G. A. Marcoulides (Eds.), *Modern methods for business research* (pp. 295-336). Lawrence Erlbaum Associates.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. New York: Routledge Academic.

Diamantopoulos, A., & Siguaw, J. A. (2006). Formative versus reflective indicators in organizational measure development: A comparison and empirical illustration. *British journal of management, 17*(4), 263-282.

Dharmadhikari, S. (2012). Eco-friendly packaging in supply chain. *The IUP Journal of Supply Chain Management, 9*(2), 7-18.

Ferguson, M. A., & Branscombe, N. R. (2010). Collective guilt mediates the effect of beliefs about climate change on willingness to engage in mitigation behavior. *Journal of Environmental Psychology, 30*, 135-142.

Forgas, J. P. (1995). Mood and judgment: The affect infusion model (AIM). *Psychological Bulletin, 117*, 39-66.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39-50.

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modelling (PLS-SEM) (*2nd ed.). Sage.

Harth, N. S., Leach, C. W., & Kessler, T. (2013). Guilt, anger, and pride about in-group environmental behaviour: Different emotions predict distinct intentions. *Journal of Environmental Psychology, 34*, 18-26.

Hartmann, P., & Apaolaza-Ibáñez, V. (2008). Virtual nature experiences as emotional benefits in green product consumption the moderating role of environmental attitudes. *Environment and Behavior, 40*, 818-842.

Hao, Y., Liu, H., Chen, H., Sha, Y., Ji, H., & Fan, J. (2019). What affect consumers' willingness to pay for green packaging? Evidence from China. *Resources, Conservation and Recycling, 141*, 21-29.

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modelling. *Journal of the Academy of Marketing Science*, *43*(1), 115-135.

Joshi, Y., & Rahman, Z. (2015). Factors affecting green purchase behaviour and future research directions. *International Strategic Management Review, 3*(1), 128-143.

Kaiser, F. G. (2006). A moral extension of the theory of planned behavior: Norms and anticipated feelings of regret in conservationism. *Personality and Individual Differences, 41*, 71-81.

Kals, E., & Maes, J. (2002). Sustainable development and emotions. In P. Schmuck, & P. W. Schultz (Eds.), *Psychology and sustainability* (97-122). Kluwer.

Kals, E., Schumacher, D., & Montada, L. (1999). Emotional affinity toward nature as a motivational basis to protect nature. *Environment and Behavior, 31*, 178-202.

Kardos, M., Gabor, M. R., & Cristache, N. (2019). Green marketing's roles insustainability and ecopreneurship. Case study: Green packaging's impact on Romanian young consumers' environmental responsibility. *Sustainability*, *11*(3), 873. https://doi.org/10.3390/su11030873

Karunarathna, W. R. A. D., Naotunna, S. S., & Sachitra, K. M. V. (2017). Factors affect to green products purchase behavior of young educated consumers in Sri Lanka. *Journal of Scientific Research & Reports*, *13*(2), 1-12.

Kline, R. B. (2011). *Principles and practice of structural equation modelling*. Guilford Press.

Koenig-Lewis, N., Palmer, A., Dermody, J., & Urbye, A. (2014). Consumers' evaluations of ecological packaging-rational or emotional? *Journal of Environmental Psychology, 37*, 94-105.

Lasuin, C. A., & Ching, N. Y. (2014). Factors influencing green purchase intention among university students. *Malaysian Journal of Business and Economics, 1*(2), 1-14.

Liang, D., Hou, C., Jo, M. S., & Sarigöllü, E. (2019). Pollution avoidance and green purchase: The role of moral emotions. *Journal of Cleaner Production, 210*, 1301-1310.

Ling Tan, C. N., Ojo, A. O., & Ramayah, T. (2019). Determinants of green product buying decision among young consumers in Malaysia. *Young Consumers*, *20*(2). https://doi.org/10.1108/YC-12-2018-0898

Magnier, L., & Crie, D. (2015). Communicating packaging eco-friendliness: An exploration of consumers' perceptions of eco-designed packaging. *International Journal of Retail & Distribution Management*, *43*(4/5), 350-366.

Magnier, L., & Schoormans, J. (2015). Consumer reactions to sustainable packaging: the interplay of visual appearance, verbal claim and environmental concern. *Journal of Environmental Psychology, 44*, 53-62.

Ministry of Domestic Trade, Cooperative and Consumerism (2012). http:// www.kpdnkk.gov.my/web/guest/media-majlis-pelancaran-kempen-kurangkan-penggunaan-beg-plastik-dan-hari-tanpa-beg-plastik

Ministry of Energy, Science, Technology, Environment and Climate (2019). https://www.mestecc.gov.my/web/wp-content/uploads/2019/03/Malaysia-Roadmap-Towards-Zero-Single-Use-Plastics-2018-20302.pdf

Mohd Suki, N. (2016). Green product purchase intention: Impact of green brands, attitude, and knowledge. *British Food Journal, 118*, 2893-2910.

Mohammad, Z., & Amin, Z. (2012*). Consumers' attitude and purchasing intention toward green packaged foods; A Malaysian perspective*. International Conference on Economics Marketing and Management, 28, 1-5.

Moisander, J. (2007). Motivational complexity of green consumerism. *International Journal of Consumer Studies, 31*, 404-409.

Nerb, J., & Spada, H. (2001). Evaluation of environmental problems: A coherence model of cognition and emotion. *Cognition and Emotion, 15*, 521-551.

Nguyen, T. N., Lobo, A., & Nguyen, B. K. (2018). Young consumers' green purchase behaviour in an emerging market. *Journal of Strategic Marketing, 26*(7), 583-600.

Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). McGraw-Hill.

Nyer, P. U. (1997). A study of relationships between cognitive appraisals and consumption emotions. *Journal of the Academy of Marketing Science, 25*, 296-304.

Orzan, G., Cruceru, A. F., Balaceanu, C. T., & Raluca-Giorgiana, C. (2018). Consumers' behaviour concerning sustainable packaging: An exploratory study on Romanian consumers. *Sustainability*, *10*, 1787. https://doi.org/10.3390/su10061787

Panainte, M., Inglezakis, V., Caraman, I., Nicolescu, M. C., Mosnegu, E., & Nedeff, F. (2014). The evolution of eco-labeled products in Romania. *Environmental Engineering and Management Journal*, *13*(7), 1665-1671.

Prakash, G., & Pathak, P. (2017). Intention to buy eco-friendly packaged products among young consumers of India: A study on developing nation. *Journal of Cleaner Production, 141*, 385-393.

Prakash, G., Choudhary, S., Kumar, A., Garza-Reyes, J. A., Khan, S. A. R., & Panda, T. K. (2019). Do altruistic and egoistic values influence consumers' attitudes and purchase intentions towards eco-friendly packaged products? An empirical investigation. *Journal of Retailing and Consumer Services*, *50*, 163-169.

Rees, J. H., Klug, S., & Bamberg, S. (2015). Guilty conscience: motivating pro-environmental behavior by inducing negative moral emotions. *Climate Change*, *130*(4), 439-452.

Rokka, J., & Uusitalo, L. (2008). Preference for green packaging in consumer product choices-do consumers care? *International Journal of Consumer Studies, 32*, 516-525.

Scott, L., & Vigar-Ellis, D. (2014). Consumer understanding, perceptions and behaviours with regard to environmentally friendly packaging in a developing nation. *International Journal of Consumer Study*, *38*(6), 642-649.

Teo, T. S. H., Srivastava, S. C., & Jiang, J. Y. (2008). Trust and electronic government success: An empirical study. *Journal of Management Information Systems*, *25*(3), 99-132.

Vining, J., & Ebreo, A. (2002). Emerging theoretical and methodological perspective on conservation behaviour. In R. Bechtel, & A. Churchman (Eds.), *Handbook of environmental psychology* (541-558). Wiley.

Wicks, A. M., & Chin, W. W. (2008). Measuring the three process segments of a customer's service experience for an out-patient surgery center. *International Journal of Health Care Quality Assurance*, *12*(1), 24-38.

Xu, L., Prybutok, V., & Blankson, C. (2019). An environmental awareness purchasing intention model. *Industrial Management & Data Systems*, *119*(2), 367-381.

Zahari, A. R., & Esa, E. (2016). Motivation to adopt renewable energy among generation Y. *Procedia Economics and Finance*, 444-453.

Zhang, G., & Zhao, Z. (2012). Green packaging management of logistics enterprises. *Physics Procedia*, *24*, 900-905.