Integrating Environmental Involvement and Media Exposure on the Theory of Planned Behavior in Explaining Green Purchase Behavior

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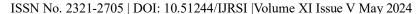
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ABSTRACT

Green purchase behavior has become a main agenda in most countries, especially after the introduction of the Sustainable Development Goals. Green purchase behavior is considered an act of protecting the environment for a better living. Green purchase behavior goes beyond self-benefits, it's a commitment to the benefits of others and the environment. Hence, understanding what influences consumer green purchase behavior is considered of utmost importance and relevant in today's sustainable development. This study aims to integrate environmental involvement and media exposure of environmental messages into the theory of planned behavior. The quantitative study among 346 young respondents from one of the top business schools in Malaysia revealed that attitude toward green products, subjective norms, perceived behavioral control, environmental involvement, and media exposure has a significant positive relationship with green purchase behavior. The findings contribute to extending the literature on green purchase behavior specifically in the context of young consumers in Malaysia. Besides, the findings suggest a few practical implications which are discussed at the end of the article.

Keywords: Green purchase behavior, environment involvement, media exposure, theory of planned behavior, young generation

INTRODUCTION

Green purchase behavior (GPB) has become a major concern of many academics and practitioners in today's challenging world. Since the introduction of the Sustainable Development Goals (SDGs) in 2015 by the United Nations, many countries have adopted this SDGs framework as a local agenda, including Malaysia. Malaysia under various ministries had mapped the 17 SDGs goals into the 11th Malaysia Plan (2018-2020) and will be continued until the 13th Malaysia Plan (2026-2030) (Ministry of Economy, 2021). This action shows the commitment of authorized parties to materialize the SDGs framework by 2030 based on Malaysia's own model especially related to environmental protection. In Malaysia, the government has intentions to invest in environmental protection because of its significant importance. The government is keenly focused on addressing such environmental problems and many rules and regulations have been implemented to ensure environmental protection (Chen & Chai, 2010). For such purpose, the Ministry of Energy and Green Technology and Water was formed to meet the increasing demand for green technology towards sustainable advancement (Nizam et al., 2014). As a result, public awareness of a sustainable environment has increased

and resulted in increasing demand for more environmentally friendly products and services (Kanchanapibul et al., 2014). Despite all of the strategies and actions taken by the authorized parties, the success of this SDG agenda depends heavily on people's attitudes and behaviors. Hence, this study aims to examine how Malaysian young consumers behave toward green purchases and its determinants using the theory of planned behavior.
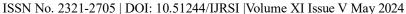
The recent report from Statista (2024) on sustainable practices among Malaysians indicate that green purchase behavior is not widely practiced. The findings show that about 79% of the respondents practice reducing the usage of single-use plastic while shopping, and 50% practice recycling. More impactful green purchase behavior such as choosing items in sustainable packaging, considering brands with known environmentally sustainable practices, and choosing organic/sustainably-produced food items are relatively low with 46%, 25%, and 22% respectively. Hence, it is important to understand what factors that can drive GPB, especially in promoting sustainable consumption.

Despite the intriguing insights into GPB gathered from previous studies, there remain significant gaps in understanding, particularly concerning the behavior of a specific generation that has wielded considerable influence on both social and economic development—the young generation (Lantos, 2014; Mabkhot, 2024). Most of the past studies focus on general consumers (Mabkhot, 2024) and studies in the context of the young generation are considered underexplored (Naz, et al., 2020) specifically in developing economies like Malaysia. Understanding GPB from the young generations is important because they prefer to be permanent customers of the green market, and they are very much concerned about the future (Kanchanapibul et al., 2014). Besides, a systematic review by Sharma et al. (2023) indicated that out of 151 research studies, only 13 were based on the Malaysian context, whereas most were based on China and other Western countries.

Previous studies conducted in various contexts have yielded disparate results. For instance, Jaiswal and Kant (2018) employed the attitude-intention-behavior model among Indian consumers revealing that environmental concern, perceived consumer effectiveness, and attitude toward green products influence green purchase intention (GPI) and GPB. The study by Wang et al. (2024) among Chinese consumers using the theory of planned behavior and self-determination theory discovered that GPI, environmental attitude, and intrinsic motivation influence GPB. Meanwhile, subjective norms is suggested to moderate the effect of environmental attitude on GPI. Further, the study by Trong Nguyen et al. (2023) among Vietnamese consumers stated that attitude, social norms, and environmental concerns influence GPB. A recent study by Mabkhot (2024) using a TPB among Saudi Arabian millennials found that green product value, environmental awareness, and behavioral control affect GPB. In addition, the findings of Soomro et al. (2020) among the young generation in Pakistan also opined that interpersonal influence and environmental knowledge have a significant impact on GPB. However, media exposure and price were not significant.

Kaufmann et al. (2012) define environmental knowledge (EK) as it is up to what level people know the environment about how the product is produced, how a product affects the environment, and how shared responsibility is essential for sustainable development. Given the emerging market of green products, it is postulated that consumers are already aware of the existence, production, and impact on the environment, this study suggests that a more advanced form of green consumerism, termed environmental involvement (EI), transcends mere environmental knowledge and awareness. This is in line with the hierarchy of effects model that consists of three stages; the cognitive (awareness, knowledge), the affective (liking, preference, conviction), and the behavioral stage (purchase) (Barry, 1987). Accordingly, Uddin and Khan (2016) suggest that environmental involvement was found to be very relevant and significant in explaining GPB. Environmental involvement refers to the affect or the emotion associated with beliefs about environmental protection (Lee, 2010), which is consistent with the 'liking' in the affective stage by Barry (1987).

A review of the literature also indicates that media exposure plays a crucial role in shaping individuals'

attitudes, beliefs, and behaviors related to environmental issues and green purchase decisions. By leveraging the power of media to disseminate compelling and persuasive environmental messages, it is possible to positively influence consumer behavior toward greater sustainability and eco-conscious consumption. As the study by Soomro et al. (2020) revealed media exposure failed to influence GPB, hence, it is worth retesting it in the context of Malaysia. Based on the preceding discussion, this study aims to incorporate environmental involvement and media exposure to environmental messages into the TPB predictors, specifically addressing attitudes toward green products, subjective norms, and perceived behavior control. The objective is to explore how these predictors influence the purchase of green products among the young generation. Additionally, this research aims to identify the most influential factors affecting GPB.

LITERATURE REVIEW

Green purchase behavior can be referred to as acquiring products that are environmentally friendly while avoiding those that are harmful to the environment (Soomro et al., 2020). In the same vein, Mostafa (2007) defines green purchase behavior as environmentally friendly buying behavior or the consumption of products that benefit the environment, recyclable, conservable, responsive, and sensitive to the concern of ecological matters. Based on the definitions, green consumers require a strong mindset and involvement. While conventional consumers focus on maximizing cost-benefits, green consumers take the extra mile, focusing on the long-term benefits of their purchase to others and the environment at large (Kamalanon et al., 2022) and most of the time pay more than conventional consumers (Akan et al., 2022, Witek & Kuźniar, 2020). Hence, consumer GPB is important for green marketers and other stakeholders, and understanding what influences their behavior would be beneficial in ensuring the success of SDG goals. In general, Sharma et al. (2023) summarized that attitude, cultural, individual, ethical, political, and product-related factors as key determinants for green purchase intention and green purchase behavior. However, this study only focuses on TPB factors and integrates environmental involvement and media exposure in understanding GPB among young generation in Malaysia.

The literature also suggested that TPB is among the most adapted theory in understanding GPB. However, according to Sharma et al. (2023), the results are still inconsistent and varied across the context of the study. Yadav and Pathak's (2017) study among Indian consumers found that attitude, subjective norm, and perceived behavioral control influence purchase intention and subsequently affect green purchase behavior. The findings were further supported by the findings of Liu et al. (2020) among Chinese consumers. The study among Indonesian consumers further found that only attitude and subjective norms have a significant relationship on GPB and perceived behavioral control was not significant. In addition, the study by Zahan et al. (2020) among 319 consumers in Bangladesh indicated that attitude and perceived behavioral control influence GPB and subjective norms statistically insignificant.

Based on the inconsistent findings, this current study proposed the following hypotheses:

H1: Attitude toward green products has a significant relationship with green purchase behavior.

H2: Subjective norms has a significant relationship with green purchase behavior.

H3: Perceived behavioral control has a significant relationship with green purchase behavior.

Past studies conceptualize environmental knowledge (as awareness) in explaining GPB. As stated earlier, environmental knowledge relates to how consumers know the production, process, and impact of green products on sustainable development. Based on the introduction of green products in the Malaysian market for many years, it is postulated that consumers are well aware of green products which would increase the propensity of GPB. This is evidence from past studies that indicate EK has a significant impact on GPB (such

as Hariyanto et al., 2019, Khaleeli et al., 2021, Li et al., 2023, Rusyani et al., 2021, Soomro et al., 2020, Wang et al., 2020). Based on today's emerging green market, it is proposed that the focus on environmental concern should be shifted to a higher rank of the hierarchy of effect model that is related to the affective state. Hence, this study utilizes environmental involvement instead of environmental knowledge. Research suggests that there is a positive relationship between environmental involvement and green purchase behavior (Cheng et al., 2020, Lee, 2010, Uddin & Khan, 2016). Individuals who are more environmentally involved tend to exhibit a greater willingness to engage in green purchase behavior. This premise is grounded in the idea that individuals who are more engaged with environmental issues are more likely to prioritize sustainability in their purchasing decisions. Environmental involvement reflects a combination of personal values, awareness, perceived efficacy, and social influences, all of which contribute to a greater propensity for green purchase behavior. Based on the preceding discussion, it is hypothesized that:

H4: Environmental involvement has a significant relationship with green purchase behavior.

It is also important to note that media exposure to environmental messages would also affect consumer intention and purchase of green products (Qader & Zainuddin, 2011, Karunarathna et al., 2017, Chen et al., 2018). Yang et al. (2022) opined media exposure and peers (that is subjective norms in this study) play significant roles in stimulating GPB. Soomro et al. (2020) highlight the media's crucial role as a multifaceted marketing tool. Beyond mere education and awareness creation, it serves as a powerful platform for raising crucial environmental concerns. These concerns, in turn, can profoundly influence consumers' perceptions, attitudes, and behaviors. However, the findings from Soomro et al. (2020) among the young generation in Pakistan found that media exposure was statistically insignificant in influencing GPB. Hence, this study attempts to reexamine the relationship between media exposure of environmental messages on GBP. It is hypothesized that:

H5: Media exposure to environmental messages has a significant relationship with green purchase behavior.

METHODOLOGY

This study is based on a quantitative approach using a questionnaire survey among the young generation in Malaysia. The population of the study comprises 13,920 students from one of the top management universities in Malaysia. The students aged between 18 to 26 are considered young and hence could serve as the best sample to explain the model. To adequately represent the study population, 375 questionnaires were distributed following Krejcie and Morgan's (1970) rules of thumb. About 15 student residential halls are located on campus. Therefore, 25 samples were selected randomly from each residential hall.

Most measures were adapted from the previous studies. Measurement items for green purchase behavior were adapted from Lee (2009) with 7 items, attitude toward green products from Shaik Ismail (2014) with 6 items, subjective norms from Abdullah et al. (2014) with 4 items, perceived behavioral control from Maichum et al. (2016) with 4 items, environmental involvement from Uddin and Khan (2016) with 4 items and lastly media exposure from Lee (2010) with 4 items. Most measure on 7 point Likert scale ranging from 1- strongly disagree and 7-strongly agree. Besides, demographic and general questions on green behavior were also asked of the respondents. For the purpose of analysis, descriptive analysis and multiple regression were performed using SPSS 24.0.

FINDINGS AND DISCUSSION

After one month, a total of 375 questionnaires were collected. Preliminary check revealed that only 357 questionnaires were usable for analysis. The remaining were removed due to missing or incomplete answers. Data screening further found that 11 responses as outliers and thus deleted from further analysis resulted only

346 valid responses.

Based on the descriptive analysis, the majority of the respondents were female (73.7%) and only 26.3% were male. For ethnicity, majority of the respondents were Malays (59.2%), followed by Chinese (26.3%) and Indian (7.8%).

A normality check was conducted following Sekaran (2003). The scholar stated that skewness and kurtosis values which range from 2 to -2 are considered acceptable while Coakes and Steed (2003) further explained the kurtosis value between 3 to -3 is considered satisfactory for social science study. Byrne (2010) also suggests that a kurtosis value of 3 is considered normal, while values exceeding 5 indicate the data are not normally distributed. Based on the analysis, the kurtosis values ranged from -.704 to .163 which suggested that the data was normally distributed. Meanwhile mean score for green purchase behavior was 5.1548, attitude towards green products was 5.8882, subjective norms was 5.0925, perceived behavioral control was 5.3486, environmental involvement was 5.4595, and media exposure was 5.2218 which indicates that respondents were at the agreement of all of the statements.

A reliability check was performed as suggested by Sekaran and Bougie (2013). Based on the findings, all variables indicate internal consistency reliability whereby the Cronbach alpha values range from 0.792 to 0.896. Table I summarizes the summary of the reliability test result.

Table I: Summary of Reliability Test Result

Variables	No of items	No. of Items Deleted	Cronbach's Alpha	Strength of Association
Green Purchase Behaviour	7	-	0.835	Very Good
Attitude towards Green Products	6	-	0.896	Very Good
Subjective Norm	4	-	0.840	Very Good
Perceived Behavioural Control	4	-	0.858	Very Good
Environmental Involvement	4	-	0.792	Good
Media Exposure to Environmental Message	4	-	0.846	Very Good

The following Table II shows Pearson's correlation describing the relationship between independent variables and dependent variable and its strength.

Table II: Pearson's Correlation

Variables	GPB	ATT	SN	PBC	EI	ME
GPB	1.000					

ATT	.430**	1.000				
SN	.551**	.351**	1.000			
PCB	.562**	.437**	.614**	1.000		
EI	.452**	.452**	.372**	.469**	1.000	
ME	.465**	.421**	.406**	.428**	.544**	1.000

** correlation is significant at the 0.01 level (2-tailed)

Based on Table II, the higher r value is observed from the relationship between PBC and GPB (r=.562) while the lowest is from the relationship between ATT and GPB (r=430). According to Sekaran's (2003) guideline, the strength of the relationship between all independent variables (ATT, SN, PBC, EI, and ME) and dependent variable (GPB) ranges from moderate to strong correlation.

The final analysis was conducted to test the hypotheses using multiple regression. Regression analysis was used to predict the influence of independent variables on the dependent variable. The following Table III summarizes the result of multiple regression analysis.
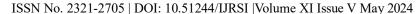
Table III: Summary of Regression Analysis

Independent variables	B value	T-value	Sig.	Result
H1 : ATT → GPB	.121	2.519	.012	Supported
H2 : SN → GPB	.263	5.036	.000	Supported
H3 : PBC → GPB	.228	4.106	.000	Supported
H4 : EI → GPB	.118	2.328	.020	Supported
H5 : ME → GPB	.152	3.062	.002	Supported
F value = 55.233				
R2 = .449				
Adj. R2 = .440				

Dependent variable: GPB

Based on Table III, all the hypothesized relationships (H1 to H5) were statistically significant and thus consistent with the findings of Al-Swidi and Saleh (2021), Emekci (2019), Kumar and Nayak (2022), Sharma et al. (2023), Yadav and Pathak (2017), Yuan et al. (2023). Overall, the variance explained by the predictors is 44.9% which is considered as high. This indicates that another 55.1% variance in GPB could be explained by other predictors. The finding also shows that subjective norms among the highest influential factor and environmental involvement is the lowest influential factor.

This study confirmed the applicability of TPB in explaining GPB among the young generation. Consistent with the conclusion made by Sharma et al. (2023) that TPB construct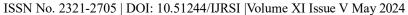s namely attitude, subjective norms, and perceived behavioral control indeed the best predictors of GPB. Hence, the present findings could bridge the gaps in the literature on inconsistent findings on TPB construct on GPB. Interestingly, the findings also found that EI and ME have a significant positive relationship with GPB. The higher the environmental involvement, the higher the propensity of consumers to purchase green products, and this study supported the previous findings of Uddin and Khan (2016). Similarly, the more media exposure of environmental messages, the higher the tendency of consumers to engage in GPB. The findings add new knowledge to the literature as the past study of Soomro et al. (2020) was unable to prove the significant influence of media exposure on the young generation's GPB.

CONCLUSION

This study contributes both to the theoretical and practical implications. For theoretical implication, firstly, this study extends the applicability of TPB by integrating additional variables such as environmental involvement and media exposure to environmental messages. This is in line with the suggestion of Witek and Kuźniar (2020) on the inclusion of additional variables other than TPB predictors in understanding GPB. Secondly, this study extends the conception of environmental knowledge to environmental involvement which is a higher-order stage in the hierarchy of effect model. Considering today's emerging marketing of green products in Malaysia, it is time to shift the focus to understanding how consumer are involved in environmental-related products rather than just exploring their state of knowledge toward environmental products. In this study, respondents were asked about their concern, involvement, and support toward environmental protection, greening activities, and environmental quality. The result indicates that the higher the involvement the higher the tendency for young consumers to buy green products. Thirdly, as opposed to the previous study by Soomro et al. (2020) on young generations, this study revealed that media exposure to environmental messages could enhance GBP among the young generation. Hence, the findings extend the literature on the relationship between media exposure and GPB especially among the young generation.

Practically, green marketers should stimulate a favorable attitude toward green products. Interestingly, media exposure could play a significant role in shaping one's mind, attitude, and behavior. The higher exposure and repetition of environmental messages via various platforms such as television, radio, Internet, or social media could form positive attitudes toward green products and subsequently affect their GPB. This study also discovers that subjective norms (surrounding people, friends, and family members) as the most influential determinant of GPB among the young generation. In today's digital revolution, marketers can employ 'influencers' to attract more consumers of green products. Social media networks or brand communities should take advantage of using 'influencers' to attract their followers or brand community members to purchase more green products. The study also found that when consumers believe that they are in control (PCB), they will consider buying green products. This may include their resources, time, and opportunity toward green products. Consumers who are willing to buy green products ready to pay premium prices and devote enough time to searching and evaluating green products before the purchase. Hence, green marketers should ensure product availability in the market to improve green product adoption.

Despite the interesting findings, the finding could not be generalized to a broader population such as Malaysia population as this sample only comes from students of one management university in Malaysia. Therefore, future studies should be more comprehensive, and representative of the whole nation. Future studies also should consider other predictors that possibly influence GPB or integrate mediating and moderating variables in the existing model. This present study is considered sufficient, especially in addressing the gaps of inconsistent findings of the TPB construct and the lack of studies on environmental involvement and media exposure among the young generation.

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REFERENCES

1. Abdullah, A. S., Sheikh Mohammad, R. H., Muhammad, H., & Mohd Noor, M. S. (2014). The role of subjective norms in theory of planned behavior in the context of organic food consumption. British Food Journal, 116(10), 1561 - 1580.

2. Akan, Ş. & Özdemir, E. & Bakır, M. (2022). Purchase intention toward green airlines and willingness to pay more: extending the theory of planned behavior. 10.1007/978-981-16-9276-5_7.

3. Al-Swidi, A., Saleh, R.M. (2021). How green our future would be? An investigation of the determinants of green purchasing behavior of young citizens in a developing country. Environ Dev Sustain, 23, 13436–13468 https://doi.org/10.1007/s10668-020-01220-z

4. Barry, T. E. (1987). The development of the hierarchy of effects: an historical perspective. Current Issues and Research in Advertising, 10(1–2), 251–295. https:// doi.org/ 10.1080/ 01633392. 1987. 10504921

5. Chen C-C, Chen C-W, Tung Y-C (2018). Exploring the consumer behavior of intention to purchase green products in belt and road countries: an empirical analysis. Sustainability, 10(3):854. https://doi.org/10.3390/su10030854

6. Cheng, ZH., Chang, C.T. & Lee, YK. (2020). Linking hedonic and utilitarian shopping values to consumer skepticism and green consumption: the roles of environmental involvement and locus of control. Rev Manag Sci, 14, 61–85. https://doi.org/10.1007/s11846-018-0286-z

7. Coakes, S. J. & Steed, L. G. (2003). SPSS: Analysis Without Anguish Using SPSS Version 11.0 for Windows. Wiley.

8. Emekci, S. (2019). Green consumption behaviours of consumers within the scope of TPB, Journal of Consumer Marketing, 36 (3), 410-417. https://doi.org/10.1108/JCM-05-2018-2694

9. Jaiswal, D. & Kant, R. (2018). Green purchasing behaviour: A conceptual framework and empirical investigation of Indian consumers. Journal of Retailing and Consumer Services, 41 (2018), 60-69, https://doi.org/10.1016/j.jretconser.2017.11.008.

10. Kamalanon P, Chen J-S, Le T-T-Y. (2022). Why do we buy green products?" an extended theory of the planned behavior model for green product purchase behavior. Sustainability, 14(2), 689. https://doi.org/10.3390/su14020689

11. Kanchanapibul, M., Lacka, E., Wang, X. & Chan, H. K. (2014). An empirical investigation of green purchase behaviour among the young generation. Journal of Cleaner Production, 66, 528-536.

12. Kaufmann, H.R., Panni, M.F.A.K. & Orphanidou, Y. (2012). Factors affecting consumers' green purchasing behavior: an integrated conceptual framework. Amfiteatru Economic, 15(31), 50-69.

13. Khaleeli, M., Oswal, N. & Sleem, H. (2021). The moderating effect of price consciousness on the relationship between green products purchase intention and customers' purchase behavior: Does environmental knowledge matters? Management Science Letters, 11(5), 1651-1658.

14. Krejcie, R. V. & Morgan, D. W. (1970). Determining sample size for research activities. Educational and Psychological Measurement, 30(1), 607-610.

15. Kumar, G. & Nayak, J. K. (2023). A meta-analysis of TPB model in predicting green energy behavior: The moderating role of cross-cultural factors. Journal of International Consumer Marketing, 35(2), 147–165. https://doi.org/10.1080/08961530.2022.2070900

16. Lantos, G.P. (2014). Marketing to millennials: Reach the largest and most influential generation of consumers ever. Journal of Consumer Marketing, 31(5),401-403. https://doi.org/10.1108/JCM-03-2014-0909

17. Lee, K. (2009). Gender differences in Hong Kong adolescent consumers' green purchasing behavior. Journal of Consumer Marketing, 26(2), 87-96.

18. Lee, K. (2010) The green purchase behavior of Hong Kong young consumers: The role of peer influence, local environmental involvement, and concrete environmental knowledge. Journal of International Consumer Marketing, 23:1, 21-44, DOI: 10.1080/08961530.2011.524575

19. Li, S., Rasiah, R., Zheng, S., & Yuan, Z. (2023). Influence of environmental knowledge and green trust on green purchase behaviour. Environment-Behaviour Proceedings Journal, 8(26), 353–358. https://doi.org/10.21834/e-bpj.v8i26.5141

20. Liu, M.T., Liu, Y. & Mo, Z. (2020). Moral norm is the key: An extension of the theory of planned behaviour (TPB) on Chinese consumers' green purchase intention. Asia Pacific Journal of Marketing and Logistics, 32(8), 1823-1841. https://doi.org/10.1108/APJML-05-2019-0285

21. Mabkhot H. (2024). Factors affecting millennials' green purchase behavior: Evidence from Saudi Arabia. Heliyon.,10(4): e25639. doi: 10.1016/j.heliyon.2024. e 25639. PMID: 38390060; PMCID: PMC10881310.

22. Maichum, K., Parichatnon, S., & Peng, K. (2016). Application of the extended theory of planned behavior model to investigate purchase intention of green products among thai consumers. Sustainability, 8(1077).

23. Ministry of Economy (2021). Sustainable Development Goals. Retrieved online via https:// www. ekonomi.gov.my/en/sustainable-development-goals

24. Mostafa, M. (2007). Gender differences in Egyptian consumers' green purchase behavior: the effects of environmental knowledge, concern and attitude. International Journal of Consumer Studies, 31(3), 220-229.

25. Naz, F., Oláh, J., Vasile,D. & Magda, R. (2020). Green purchase behavior of university students in Hungary: An empirical study, Sustainability, 12 (23), Article 10077.

26. Nizam, N. Z., Rajiani, N. M., & Yahaya, S. N. (2014). Understanding green purchasing behaviour among gen Y in Malaysia by examining the factors influenced. Interdisiplinary Journal of Contemporary Research in Business, 6(2), 1-14.

27. Rusyani E, Lavuri, R, & Gunardi, A. (2021). Purchasing eco-sustainable products: interrelationship between environmental knowledge, environmental concern, green attitude, and perceived behavior. Sustainability, 13(9):4601. https://doi.org/10.3390/su13094601

28. Sekaran, U. (2003). Research Methods for Business a Skill-Building Approach (4th ed.). New York: John Wiley and Sons Ltd.

29. Sekaran, U., & Bougie, R. (2013). Research Methods for Business: A Skill-Building Approach (6th ed.). John Wiley & Sons Ltd.

30. Shaik Ismail, M. H. (2014). Intention to Use Green Products Among Consumers. Master Thesis, Universiti Utara Malaysia.

31. Sharma, K., Aswal, C. & Paul, J. (2023). Factor affecting green purchase behavior: A systematic literature review. Business Strategy and the Environment, 32, 2078-2092, https:// doi.org/ 10. 1002/ bse.3237

32. Soomro, R.B., Mirani, I.A., Sajid Ali, M. & Marvi, S. (2020). Exploring the green purchasing behavior of young generation in Pakistan: Opportunities for green entrepreneurship. Asia Pacific Journal of Innovation and Entrepreneurship, 14(3), 289-302. https://doi.org/10.1108/APJIE-12-2019-0093

33. Statista (2024). Sustainable Practices in the Past Year among Malaysian as of December 2023. Retrieved online via https://www.statista.com/statistics/1320904/malaysia-sustainable-practices-in-the-past-year/

34. Tarigan, E.D.S., Putri, Y.S. & Sabrina, H. (2021). Green buying behavior using theory of TPB in online shop in Medan City. International Journal of Science, Technology & Management, 2(3), 604-607. https://doi.org/10.46729/ijstm.v2i3.223

35. Trong Nguyen, L., Nguyen, T. H., Ngoc Nguyen, H., Dai Nguyen, L., Thi Thu Nguyen, D., & Duy LE, L. (2023). Determinants of green consumer behavior: A case study from Vietnam. Cogent Business & Management, 10(1). https://doi.org/10.1080/23311975.2023.2197673

36. Uddin, S.M.F. & Khan, M.N. (2016). Exploring green purchasing behaviour of young urban consumers: Empirical evidences from India. South Asian Journal of Global Business Research, 5(1), 85-103. https://doi.org/10.1108/SAJGBR-12-2014-0083

37. Wang, Y., Zhao, J. & Pan, J. (2024). The investigation of green purchasing behavior in China: A conceptual model based on the theory of planned behavior and self-determination theory. Journal of Retailing and Consumer Services, 77 (2024), 103667, https://doi.org/ 10.1016/ j.jretconser. 2023. 103667.

38. Witek, L. & Kuźniar, W. (2020). Green purchase behavior: The effectiveness of sociodemographic variables for explaining green purchases in emerging market. Sustainability. 13. 209. 10.3390/ su 13010209.

39. Yadav, R., & Pathak, G. S. (2017). Determinants of consumers' green purchase behavior in a developing nation: Applying and extending the theory of planned behavior. Ecological Economics, 134, 114-122.

40. Yang, X., Jiang, J. & Chen, S.C. (2022). Achieving sustainability: Determinants of conscious green purchasing behavior during the COVID-19 pandemic. Business Strategy and Environment, 32(4), 2229-2244. https://doi.org/10.1002/bse.3245

41. Zahan, I., Chuanmin, S., Fayyaz, M. et al. Green purchase behavior towards green housing: an investigation of Bangladeshi consumers. Environ Sci Pollut Res **27**, 38745–38757 (2020). https://doi.org/10.1007/s11356-020-09926-3