# The Relationships between Green Labelling, Social Influence and Green Awareness, and Purchase Intention Towards Environmentally Friendly Products

Kamilah Ahmad[1,*], Venessa Jumbau Geruka[1], Shafie Mohamed Zabri[2], Fadillah Ismail[1], Moh. Danang Bahtiar[3]

[1] Department of Production and Operations Management, Faculty of Technology Management and Business, Universiti Tun Hussein Onn Malaysia, 86400 Batu Pahat, Johor, Malaysia
[2] Johor Business School, Universiti Tun Hussein Onn Malaysia, 86400 Batu Pahat, Johor, Malaysia
[3] Faculty of Economics and Business, Universitas Negeri Surabaya, Indonesia.

| ARTICLE INFO | ABSTRACT |
|---|---|
| <br><br> | The importance of sustainable consumption practices has grown significantly, becoming a major concern for both the market and society in developed and developing countries. This study seeks to investigate the factors that influence consumers' attitudes and decision-making when shopping for environmentally friendly products. This study investigates the influence of green labelling, social influence, and green awareness and belief on purchase intention. This research focuses on consumers from Kuching, Sarawak, where the questionnaires were distributed online via social media platforms. The analysis reveals a positive and significant relationship between purchase intention and green labelling, social influence, and green awareness and belief. Therefore, all the hypotheses are supported. This study contributes new empirical evidence regarding the factors that influence consumers' attitudes and decision-making towards environmentally friendly products. The findings enhance our understanding of consumer awareness and intentions regarding environmentally friendly purchases in developing countries, particularly in regions rich in natural and renewable resources. |

## 1. Introduction

Today's consumers are gradually embracing environmentally responsible purchasing as a result of growing concerns about the impact of climate change claimed that consumers' household purchases were already responsible for forty percent of the harm to the environment [1,2]. By changing their attitude and mindset through the purchase of environmentally friendly products, consumers can make a difference to the environment in reducing pollution and waste [3]. The availability of environmentally friendly products has broadened the range of green purchases

---

* Corresponding author.
*E-mail address: kamilah@uthm.edu.my*

available to consumers [4]. Additionally, these products not only enhance the competitive advantages of companies but also consumer satisfaction.

Nonetheless, consumer awareness plays a significant role in selecting environmentally friendly products. Research has identified the causes and possible limitations of growth in the market for environmentally friendly products, which signifies customer hesitancy in purchasing such products discovered that despite the rise of green products, there is a low level of awareness about green product purchasing behaviour among consumers in Malaysia [5,6]. Meanwhile, Alamsyah et al., [7] revealed that only 30% of young consumers have knowledge of buying green products. This reluctance is directly linked to consumer buying behaviour. It is crucial to prioritise efforts in raising consumer knowledge to enhance consumer attention towards environmentally friendly products. While numerous studies have been conducted investigating factors that affect green or sustainable purchases, there remains lack of evidence in the context of consumers from a region abundant in natural resources and diverse local cultures, which relies heavily on these resources for both livelihood and tourism attractions. Understanding the dynamics of eco-friendly purchasing habits and influencing factors is crucial for strengthening future actions aimed at enhancing sustainability strategies.

Specifically, this study seeks to answer two research questions: What are the levels of purchase intentions for environmentally friendly products among consumers aged 18 to 60 and are there any significant relationships between green purchase intention and factors such as green labelling, social influence, green awareness, and consumer belief. The consumers from Kuching, Sarawak, are selected to be part of the research. Sarawak, a state in Malaysia, is dedicated to promoting a sustainable and environmentally friendly economy. This study offers empirical evidence in green purchasing, which enriches the existing literature in this field. The findings provide valuable insight into customer attitudes towards green purchases and help relevant policymakers in evaluating and developing appropriate policies to promote future environmentally friendly initiatives. It also aids organisations in continually creating marketing strategies aimed at increasing customer purchases of environmentally friendly products.

## 2. Literature Review

Growing concerns regarding climate change and environment have motivated many consumers to consider environmentally friendly products. Consumers change their buying habits to reduce the negative impacts of their consumptions on the environment, by shifting to their normal purchases to green purchase [8]. Green consumers put greater emphasis on products that demonstrates environment and sustainability concerns [9]. The following sections discuss environmentally friendly products and factors that affect consumers attitude towards green products.

*2.1 Purchase Intention Towards Environmentally Friendly Product*

An environmentally friendly product helps reduce waste, protects natural resources, and effectively minimizes negative environmental influences [10]. Certain product features, including packaging, green certification, and materials used, differentiate environmentally friendly products from conventional ones [11]. Consumers have a tendency to purchase environmentally friendly products they like, and they process their decision to purchase based on a number of factors, such as the usefulness of a product [12]; green labelling; social influence; and green awareness and beliefs [1]. This study focuses on green labelling; social influence; and green awareness and beliefs and their influence on customers purchase intention.

## 2.2 Factors Influencing Consumer's Attitude Towards Environmentally Friendly Products

This section discusses three selected factors that may influence consumer attitudes towards environment friendly product.

### 2.2.1 Green labelling

Green labelling provides the relevant information about the environmental elements of the product, which consumers may find useful in making purchase decisions [13]. Green labelling can directly influence purchasing behaviour as it provides consumers with a timely and effective means of discovering environmentally friendly product elements at the point of purchase. Even though green products are frequently more expensive, consumers are becoming more eager to buy. This is because customers are willing to pay more for the perceived benefits of the products. Previous studies have demonstrated that green labelling may have a significant influence on green purchasing decisions [14]. Drawing from the ongoing discussion, we propose the following hypothesis:

H1: There is a significant relationship between green labelling and purchase intention towards environmentally friendly products

### 2.2.2 Social influence

Social influence refers to the extent to which social environment can influence the individual's attitude. A range of people, including family members, friends, colleagues and celebrities, can exert social influence. Social influence plays a significant role, as consumers make decisions and act within specific social contexts. Social influence shapes behavioural patterns and perceptions, and it appears to be a solution to individuals limited cognitive abilities [15]. Social influence conveys information and activates emotional reactions that lead consumers to not only buy the product for functional value but also to impress others or to improve their social status [16]. Based on the discussion, the following hypothesis is proposed:

H2: There is a significant relationship between social influence and purchase intention towards environmentally friendly products

### 2.2.3 Green awareness and belief

Environmental or green awareness is essentially the understanding and knowledge of the environment and the roles of humans to preserve the natural system [17,18]. Consumers with high levels of environmentally friendly product awareness expect to appreciate all efforts to preserve the environment. Similarly, consumer belief is a set of perceptions or commitments consumers hold toward environmental principles and the role of individual and collective actions in protecting the environment [19]. Green awareness and belief create the basis for environmental and sustainable actions and campaigns [20]. This factor motivates individuals and communities to adopt proactive measures for sustainability. Green purchasing suggests that consumers with high levels of environmental awareness and belief have higher green purchasing intention. If the consumer is convinced that certain products can have a positive environmental impact, they may be willing to purchase them [21]. Based on the discussion, the following hypothesis is proposed:

H3: There is a significant relationship between green awareness and belief and purchase intention towards environmentally friendly products

## 3. Research Methodology

This research employs quantitative research, aims to analyse the purchase intentions for environmentally friendly products among consumers aged 18 to 60 and to test if there are any significant relationships between factors such as green labelling, social influence, green awareness, and consumer belief, and purchase intention towards environmentally friendly products. This study employed the questionnaire survey using Google Forms for collecting the data from the target respondents. The questionnaire is organised into five sections: A, B, C, D, and E. Part A includes demographic questions such as gender, age, race, occupation, and marital status. Part B seeks information on purchase intentions towards environmentally friendly products. Part C, D, and E are about labelling, social influence, and green awareness and belief, respectively. The questions were adapted from several prior studies with a total of 26 items. The items in all section except section A were measured using scale from 1 to 7, which is 1 (strongly disagree) to 5 (strongly agree). The questionnaires were distributed to consumers resident in Kuching, Sarawak via social media platforms such as WhatsApp, Facebook, and Instagram. This study requires a minimum of 300 participants in order to obtain a meaningful interpretation of the results. After several follow-ups, 300 replies were gathered. Reliability test shows that all key variables used in this study have Cronbach's alpha values greater than 0.70 which is considered acceptable.

## 4. Data Analysis

This section explains the research and findings in data collected from 300 random respondents that are analysed using the Statistical Package for Social Sciences (SPSS). The results are statistically analysed using descriptive analysis, reliability tests, Spearman's rho correlation analysis to investigate the relationship between independent and dependent variables, and multiple linear regression analysis.

*4.1 Descriptive Analysis*
*4.1.1 Demographic profile*

Table 1 shows the majority of the respondents for this study are female, accounting for 53% of total populations, while 47% represent men. 49.0 percent of respondents are between the ages of 18 and 30, followed by 37.7 percent between the ages of 31 and 40. Regarding type of occupation, 42.3% of total respondents are employed, 39% are students, and 10.7% are self-employed. 48.7% of total respondents are single, followed by 45.3% married. 5.7% of total respondents are divorced or separated individuals. In terms of race, 53% of the total respondents identify as Iban, while 18.3 percent identify as Malay. The Bidayuh race makes up 12%, followed by Chinese 7.3%, and others, 9.3% of total respondents.

**Table 1**
The demographic profile of respondents.

| Profiles | | Descriptions | N | (%) |
|---|---|---|---|---|
| 1. | Gender | Male | 141 | 47.0 |
| | | Female | 159 | 53.0 |
| | | Total | 100 | 100 |
| 2. | Age | 18-30 | 147 | 49.0 |
| | | 31-40 | 113 | 37.7 |
| | | 41-50 | 30 | 10.0 |
| | | 51-60 | 10 | 3.3 |
| | | Total | 100 | 100 |
| 3. | Race | Iban | 159 | 53.0 |
| | | Malay | 55 | 18.3 |
| | | Chinese | 22 | 7.3 |
| | | Bidayuh | 36 | 12.0 |
| | | Others | 28 | 9.3 |
| | | Total | 100 | 100 |
| 4. | Occupation | Student | 117 | 39.0 |
| | | Employee | 127 | 42.3 |
| | | Self- Employed | 32 | 10.7 |
| | | Retired | 10 | 3.3 |
| | | Unemployed | 14 | 4.7 |
| | | Total | 100 | 100 |
| 5. | Marital Status | Single | 146 | 48.7 |
| | | Married | 136 | 45.3 |
| | | Divorce / Separated | 11 | 3.7 |
| | | Widowed | 6 | 2.0 |
| | | Others | 1 | .3 |
| | | Total | 100 | 100 |

*4.1.2 Descriptive analysis of dependent and independent variables*

The item 'I feel like purchasing an environmentally friendly product' has the highest mean value of 4.38, with a standard deviation of .769. This is followed by 'I feel like purchasing an environmentally friendly product' with a mean value of 4.35. Item 'I will consider purchasing environmentally friendly products' has a mean score of 4.24 and a standard deviation of .732, while item 'I will prioritise environmentally friendly products for shopping' has the lowest mean of 4.23 and a standard deviation of .809. Overall, the results indicate that the level of purchase intention is high.

**Table 2**
Descriptive analysis of purchase intention

| No. | Items | Mean | Std. Deviation |
|---|---|---|---|
| 1 | I will consider purchasing environmentally friendly products. | 4.24 | .732 |
| 2 | I will prioritize environment friendly products for shopping. | 4.23 | .809 |
| 3 | I feel like purchasing environment friendly product. | 4.38 | .769 |
| 4 | The possibility of choosing environment friendly product in my next purchase is high. | 4.29 | .798 |
| 5 | I will recommend an environment friendly product to people around me. | 4.35 | .754 |

Table 3 presents the descriptive statistics of the dependent variable and all three independent variables. The average score for purchase intention toward environmentally friendly products is 4.3, which is high. Similarly, there is high agreement on green labelling, social influence, and awareness and belief, with average mean scores exceeding 4.2.

**Table 3**
Descriptive Statistic

|  | Min | Max | Mean | Std. Dev |
|---|---|---|---|---|
| Purchase intention | 1 | 5 | 4.299 | 0.529 |
| Green labelling | 2 | 5 | 4.347 | 0.515 |
| Social influence | 1 | 5 | 4.273 | 0.569 |
| Awareness and belief | 2 | 5 | 4.392 | 0.532 |

### *4.1.3 Spearman's rho correlation*

Table 4 shows the result of spearman's rho correlation between green labelling, social influence and green awareness and belief, and purchase intention. We used non-parametric approach as the distribution of data for dependent and independent variables are not normally distributed.

**Table 4**
Spearman's rho correlation

| Variables | Correlation coefficient | Sig. |
|---|---|---|
| Green labelling | .536 | .000 |
| Social Influence | .399 | .000 |
| Green awareness and belief | .415 | .000 |

Table 4. shows the result of Spearman's correlations between dependent variables and independent variables. The purpose of the correlation analysis was to identify the relationship between the independent and dependent variables. Since the data is not normally distributed, Spearman's correlation analysis was used in this part. Table 4 shows the coefficient value of the relationship between purchase intention and green labelling was a strong positive correlation, where the value of the coefficient is 0.536, < 0.05. Next, the relationship between purchase intention and social influence was 0.399, $p < 0.05$, which is significant with a moderate and positive correlation. Lastly, the relationship between purchase intention and green awareness and belief was also significant with a moderate positive correlation where the coefficient value is 0.415, $p < 0.05$.

### *4.2 Discussions*

Table 5 provides a summary of all hypotheses based on the analysis. All of three hypotheses are supported. The study concludes that there are significant and positive relationships between green labelling, social influence and green awareness and belief and green purchase intention.

**Table 5**
Summary of hypothesis result

|  | Hypothesis | P – Value | Result |
|---|---|---|---|
| H1 | There is a significant relationship between green labelling and purchase intention towards environmentally friendly products | .000 | Supported |
| H2 | There is a significant relationship between social influence and purchase intention towards environmentally friendly products | .000 | Supported |
| H3 | There is a significant relationship between green awareness and belief and purchase intention towards environmentally friendly products | .000 | Supported |

The study reveals that the green labelling significantly influences consumers' attitudes and purchasing decisions for environmentally friendly products. The study also supports the idea that green labelling is an excellent communication tool for environmentally friendly products to attract customers [22]. The results indicate that social influence has a significant and positive influence on consumers purchase decisions whenever shopping for environmentally friendly products. Prior to making a purchase, consumer can be influenced by their social network, such as family and friends. Scholars believe that green awareness and belief significantly impact customers' green purchase decisions. Environmentally friendly product consumption practices are a manifestation of consumers' obligations and commitment. The influence of green awareness and belief on the intention to buy environmentally friendly products may be due to the consumer's changes in lifestyle [23]. Green awareness and belief have a substantial influence on customer green purchase decisions. Environmentally friendly product consumption practices are a manifestation of consumers' obligations and commitment [24]. The consumer's transition to a lifestyle may be the reason for the impact of green awareness on the intention to purchase environmentally friendly products.

## 5. Conclusions

This study examines the level of purchase intentions for environmentally friendly products and the relationships between green purchase intention and factors such as green labelling, social influence, green awareness, and consumer belief. The study suggests that green purchase intention is quite high among respondents in Sarawak, Malaysia. Key variables, such as green labelling, social influence, and green awareness and belief, play important roles in influencing consumers' attitudes and decision-making when shopping for environmentally friendly products.

The result of this study contributes to the body of knowledge in the area of customer purchase intentions towards environmentally friendly products. It also supports the TPB framework from the perspective of green purchasing, hence enriching empirical evidence supporting the theory. This study provides industry players with knowledge that could influence people's actions and decision-making when purchasing environmentally friendly products. Concerning the first variable, green labelling helps communicate the quality and features of the products. The labelling information ensures that the product is compliant with environmental principles and is safe to use. The green labelling signifies that the item is safe for the environment and is in accordance with the consumer's values. In terms of social influence, the information or activities from customers social circles enable customers to obtain preliminary insight on some particular environmentally friendly product and increase their intention to purchase the items. The effect from social influence can increase awareness about environmentally friendly products. Similarly, the green awareness and belief will influence the customers to not buy suspicious or environmentally noncompliant products. It is essential to establish effective communication with customers to increase their awareness.

The study's shortcomings stemmed from its limited data locations, which focused only on the Kuching Sarawak area. A wider sample is necessary for enhanced data validity. In addition, deficiencies in the questionnaire affected the data collection of the study. Questions are written in English only. This will impact the results, as different age groups and races use different languages when interacting. Furthermore, the use of English may reduce replies, as not all participants are proficient in the language or fully understand the subject matter. Potential respondents may skip the survey or answer the question improperly. Future research should improve surveys and reduce errors by including English translation in the Malaysian language, which is the country's primary language. This helps attract more potential respondents, as the survey is simple to understand and contains at least two major languages that the locals can understand. Secondly, future studies can use a variety of data collection methods, such as interviews, as an alternative to surveys. Additionally, this study strongly recommends sending some surveys to respondents by hand or face-to-face, even if it takes time, as it allows one to learn whether respondents are having difficulty replying. This strategy yields a higher response rate, as it allows the study to quickly obtain 100% of the responses, even if it takes some time. The findings could be more accurate and dependable if respondents react immediately rather than by Google Form. This allows the resolution of any issues or challenges that may arise.

## Acknowledgement

## References

[1] Tewari, Alok, Smriti Srivastava, Divya Gangwar, and Vimal Chandra Verma. "Young consumers' purchase intention toward organic food: exploring the role of mindfulness." *British Food Journal* 124, no. 1 (2022): 78-98. https://doi.org/10.1108/BFJ-12-2020-1162

[2] Joshi, Yatish, and Zillur Rahman. "Consumers' sustainable purchase behaviour: Modeling the impact of psychological factors." *Ecological economics* 159 (2019): 235-243. https://doi.org/10.1016/j.ecolecon.2019.01.025

[3] Vehmas, Kaisa, Anne Raudaskoski, Pirjo Heikkilä, Ali Harlin, and Aino Mensonen. "Consumer attitudes and communication in circular fashion." *Journal of Fashion Marketing and Management: An International Journal* 22, no. 3 (2018): 286-300. https://doi.org/10.1108/jfmm-08-2017-0079

[4] Hashim, Hana Fateha, Haliza Abdul Rahman, and Izzah Nadhirah Mohamed Zain. "Knowledge and practice on green purchasing of personal care products among undergraduate students in Universiti Putra Malaysia." *Geografia-Malaysian Journal of Society and Space* 19, no. 1 (2023): 165-178. https://doi.org/10.17576/geo-2023-1901-12

[5] Joshi, Yatish, and Zillur Rahman. "Predictors of young consumer's green purchase behaviour." *Management of Environmental Quality: An International Journal* 27, no. 4 (2016): 452-472. https://doi.org/10.1108/MEQ-05-2015-0091

[6] Ahmed, Naveed, Cai Li, Asadullah Khan, Sikandar Ali Qalati, Shumaila Naz, and Faisal Rana. "Purchase intention toward organic food among young consumers using theory of planned behavior: role of environmental concerns and environmental awareness." *Journal of Environmental Planning and Management* 64, no. 5 (2021): 796-822. https://doi.org/10.1080/09640568.2020.1785404

[7] Alamsyah, D., N. Othman, and H. Mohammed. "The awareness of environmentally friendly products: The impact of green advertising and green brand image." *Management Science Letters* 10, no. 9 (2020): 1961-1968. http://dx.doi.org/10.5267/j.msl.2020.2.017

[8] Yadav, Rambalak, and Govind S. Pathak. "Determinants of consumers' green purchase behavior in a developing nation: Applying and extending the theory of planned behavior." *Ecological economics* 134 (2017): 114-122. https://doi.org/10.1016/j.ecolecon.2016.12.019

[9] Gomes, Sofia, João M. Lopes, and Sónia Nogueira. "Willingness to pay more for green products: A critical challenge for Gen Z." *Journal of Cleaner Production* 390 (2023): 136092. https://doi.org/10.1016/j.jclepro.2023.136092

[10] Tan, Christine Nya Ling, Adedapo Oluwaseyi Ojo, and Ramayah Thurasamy. "Determinants of green product buying decision among young consumers in Malaysia." *Young Consumers* 20, no. 2 (2019). https://doi.org/10.1108/YC-12-2018-0898

[11]    Kianpour, Kamyar, Ahmad Jusoh, and Maryam Asghari. "Environmentally friendly as a new dimension of product quality." *International Journal of Quality & Reliability Management* 31, no. 5 (2014): 547-565. https://doi.org/10.1108/IJQRM-06-2012-0079

[12]    Okada, Takanori, Tetsuya Tamaki, and Shunsuke Managi. "Effect of environmental awareness on purchase intention and satisfaction pertaining to electric vehicles in Japan." *Transportation Research Part D: Transport and Environment* 67 (2019): 503-513. https://doi.org/10.1016/j.trd.2019.03.011.

[13]    Hossain, Imran, Md Nekmahmud, and Maria Fekete-Farkas. "How do environmental knowledge, eco-label knowledge, and green trust impact consumers' pro-environmental behaviour for energy-efficient household appliances?." *Sustainability* 14, no. 11 (2022): 6513. https://doi.org/10.3390/su14116513

[14]    Huang, Li, Yasir Ahmed Solangi, Cosimo Magazzino, and Sheeraz Ahmed Solangi. "Evaluating the efficiency of green innovation and marketing strategies for long-term sustainability in the context of Environmental labeling." *Journal of Cleaner Production* 450 (2024): 141870. https://doi.org/10.1016/j.jclepro.2024.141870

[15]    Lazaric, Nathalie, Fabrice Le Guel, Jean Belin, Vanessa Oltra, Sébastien Lavaud, and Ali Douai. "Determinants of sustainable consumption in France: the importance of social influence and environmental values." *Journal of Evolutionary Economics* 30 (2020): 1337-1366. https://doi.org/10.1007/s00191-019-00654-7

[16]    Tjokrosaputro, Miharni, and Cokki Cokki. "The role of social influence towards purchase intention with value perception as mediator: A study on Starbucks coffee as an environmentally friendly product." In *8th International Conference of Entrepreneurship and Business Management Untar (ICEBM 2019)*, pp. 183-189. Atlantis Press, 2020. 10.2991/aebmr.k.200626.034

[17]    Khaleeli, Majdi, and Adnan Jawabri. "The effect of environmental awareness on consumers' attitudes and consumers' intention to purchase environmentally friendly products: Evidence from United Arab Emirates." *Management Science Letters* 11, no. 2 (2021): 555-560. 10.5267/j.msl.2020.9.011

[18]    Ansu-Mensah, Peter. "Green product awareness effect on green purchase intentions of university students': an emerging market's perspective." *Future Business Journal* 7, no. 1 (2021): 48. https://doi.org/10.1186/s43093-021-00064-7

[19]    Spiller, Stephen A., and Lena Belogolova. "On consumer beliefs about quality and taste." *Journal of Consumer Research* 43, no. 6 (2017): 970-991. https://doi.org/10.1093/jcr/ucw065

[20]    Liu, Minghui, Jiayi Zhu, Xin Yang, Dongxu Chen, and Yu Lin. "From Green Awareness to Green Behavior: The Impact of Information Disclosure Scenarios on Greener Shopping Channel Choices." *Sustainability* 16, no. 18 (2024): 7944. https://doi.org/10.3390/su16010012

[21]    Indriani, Ida Ayu Debora, Mintarti Rahayu, and Djumilah Hadiwidjojo. "The influence of environmental knowledge on green purchase intention the role of attitude as mediating variable." *International Journal of Multicultural and Multireligious Understanding* 6, no. 2 (2019): 627-635. http://dx.doi.org/10.18415/ijmmu.v6i2.706

[22]    Rajagopal, Shambavi, Sitalakshmi Ramanan, Ramanan Visvanathan, and Subhadra Satapathy. "Halal certification: implication for marketers in UAE." *Journal of Islamic Marketing* 2, no. 2 (2011): 138-153. https://doi.org/10.1108/17590831111139857

[23]    Djafarova, Elmira, and Sophie Foots. "Exploring ethical consumption of generation Z: Theory of planned behaviour." *Young Consumers* 23, no. 3 (2022): 413-431. https://doi.org/10.1108/yc-10-2021-1405

[24]    Nguyen, Hoang Long, and Que Nhu Duong. "Analyzing the Influencers Affecting Gen Z Customer'Purchasing Behaviour on e-Commerce and Cosmetics in Vietnam." *Journal of Advanced Research in Business and Management Studies* 35, no. 1 (2024): 26-43. https://doi.org/10.37934/arbms.35.1.2643.