

Kindly Enhanced my Responsibility and Consciousness before Asking me to Purchase Green Products

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To Link this Article: <http://dx.doi.org/10.6007/IJARBS/v12-i8/14524>

DOI:10.6007/IJARBS/v12-i8/14524

Published Date: 26 August 2022

Abstract

With the increase in the ecological consequences caused by unsustainable consumption behaviours, this study attempted to explore the factors that significantly influence the green products' purchase intention among Generation Z consumers in Malaysia. By employing the Norm Activation Model (NAM) as a foundation, four factors were proposed in this study, namely attitudes, subjective norms, perceived environmental responsibility and environmental consciousness. The purposive sampling technique has been used to collect the responses from Generation Z consumers in Malaysia and 173 valid responses were collected and further analysed using partial least squares structural equation modelling (PLS-SEM). The results showed that attitudes, perceived environmental responsibility, and environmental consciousness significantly affect purchase intention on green products, while subjective norms played no significant impact on the purchase intention of Generation Z consumers. Stakeholders could utilize the findings of the study in formulating their policy and strategies to encourage Generation Z consumers to move towards sustainable consumption by purchasing green products.

Keywords: Green Products, Purchase Intention, Environmental Responsibility, Environmental Consciousness, Generation Z, Norm Activation Model

Introduction

The industrialization process of the transformation from agricultural economies into manufacturing economies has caused several issues in the ecosystem such as pollution, environmental degradation and global warming (Duong *et al.*, 2022). The living standard of an individual has been affected by the continuing revolution in industrialization and technology; and ultimately created threats to the stakeholders (Qureshi *et al.*, 2022). Furthermore, environmental degradation was mainly caused by overpopulation, an increase

in consumers' demand, as well as, an increase in production and manufacturing (Naz *et al.*, 2020). Therefore, it can be concluded that economic activities were the main reasons for environmental issues (Zheng *et al.*, 2021). Sustainable and environmentally friendly business practices are needed to overcome these issues (Naz *et al.*, 2020). With that, sustainable development has become the priority issue globally to minimize the impact on the community. One of the initiatives is the introduction of the Sustainable Development Goals (SDGs), more precisely SDGs12: Responsible Consumption and Production that sustainably encourage consumption and production to reduce the consequences of the unsustainable pattern.

Practically, numerous initiatives have been taken by the stakeholders (Mazhar *et al.*, 2022), to prevent the continuing degradation of the environment and to achieve SDGs12. For instance, the main focus is the conversion of unsustainable consumption and production practices into sustainable ways. Consumers, in specific, played an important role in this manner as they represent the demand side of the markets. Consumers' awareness of the ecological problems has increased in recent years and this has led to behavioural changes from unsustainable practices to more sustainable ways, such as purchasing environmentally friendly or green products (Emekci, 2019). The emergence of green products is contributed by the increase in consumers' concern for environmental issues (Mazhar *et al.*, 2022). Therefore, consumers could contribute to environmental protection by purchasing green products that do not harm the environment, contain fewer toxic materials and are recyclable (Qureshi *et al.*, 2022). Unfortunately, the consumers didn't practice in such a way as they didn't convert their interest into actual behaviour even though there are awareness and consciousness of the pro-environmental practices. The main reason was the consumer's ignorance and misconception caused by the lack of understanding and insufficient information on green consumerism (Mamun *et al.*, 2018). Therefore, there is a need to further study the factors driving consumers to purchase green products.

Consumers could be divided into a few generations, namely Generation Z, Millennials, Generation X and Baby-Boomers. Consumers under Generation Z are those who were born between 1995 to 2010, and therefore are aged between 12 to 27 years old. When compared with previous generations, Generation Z consumers are more unique as they are involved in ethical consumerism (Djafarova & Fouts, 2022). They also have different ecological ideas and are highly self-confident and socially responsible (Kautish & Sharma, 2019). Not only that, Generation Z consumers are likely to do research before purchasing as they are well-educated, and have more access to information via the internet. These consumers are also more flexible, willing to work together and embrace innovation to show their anxiety for society (Kanchanapibul *et al.*, 2014). Moreover, the purchasing power of Generation Z consumers is much higher and is expected to increase further in future (Shin *et al.*, 2022). As mentioned by Bain and Company (2019), Generation Z consumers accounted for around 40% of the Asian population in 2035. Thus, it is projected that they will be dominating the market in the next decade. Therefore, exploring the determinant factors that are affecting Generation Z consumers to purchase green products is crucial for stakeholders in encouraging sustainable consumption behaviour and offering a better understanding of this subject, as a clear understanding is required for the businesses to enhance the consumption of green products and execute marketing strategies effectively.

Numerous studies have been carried out on the factors that affect consumers' environmentally friendly behaviour such as green purchase intention or behaviour (Channa *et al.*, 2022; Qureshi *et al.*, 2022; Kautish & Sharma, 2021). These studies mainly utilized the Theory of Planned Behaviour (TPB) in exploring the factors influencing consumers in practising sustainable behaviour (Chang *et al.*, 2022; Duong *et al.*, 2022; Mazhar *et al.*, 2022). Even though extant evidence has been found in the literature regardless of the factors of environmentally friendly behaviours, inconsistent findings were still reported (Emekci, 2019; Hamzah & Tanwir, 2021; Xu *et al.*, 2020; Zheng *et al.*, 2021). Moreover, there is relatively limited evidence on the pro-environmentally behavioural intention that employs Norm Activation Model (NAM), especially for Generation Z consumers in Malaysia. Therefore, this study uses NAM to propose a comprehensive model that attitudes, subjective norms, perceived environmental responsibility and environmental consciousness as the significant predictors of intention to purchase green products among Generation Z consumers in Malaysia, to fill the existing research gap.

In comparison to previous studies, this study provided several different perspectives. Firstly, this study used NAM as the underlying theory to explore the green product purchase intention and it could offer slightly different perspectives from previous studies which mainly adopted TPB as the foundation of the studies. Next, this study particularly focused on Generation Z consumers in Malaysia. This could provide crucial information on the purchase intention of green products of the younger generation in an emerging market like Malaysia, compared to abundant evidence in a developed market as there may appear different perspectives between developed and emerging markets. Hence, the comprehensive understanding of the purchase intention of green products for Generation Z consumers in Malaysia could further enrich the literature.

Literature Review

Underlying Theory: Norm Activation Model

The Norm Activation model (NAM) is a model introduced by Schwartz (1977) and is widely used to explain environmentally friendly behaviour (Fang *et al.*, 2019). As proposed by NAM, the individuals' altruistic behaviour was determined by their personal norms, which in turn affected their decision-making on pro-environmental behaviour (Hamzah & Tanwir, 2021). Three key dimensions used in the NAM to explain environmentally friendly behaviour were personal norms, the ascription of responsibility and awareness of consequences (Fang *et al.*, 2019). Personal norms are referred to as the individual's self-concept of the moral obligation towards a particular behaviour. Awareness of consequences means the perception of an individual on the severity of their behaviour towards the welfare of others. While the ascription of responsibility shows personal feelings about their responsibility for the consequences of their behaviour. Yue *et al.* (2020) remarked that the individual's altruistic behaviour will be cultivated if the social norms have been internalized into personal norms and they feel that they are responsible for it. Therefore, NAM focused more on personal environmentally friendly motivations and moral obligations (Hamzah & Tanwir, 2021). Thus, it could be concluded that it is important to consider an individual's motivations and moral obligations to cultivate the green product's purchase intention besides personal attitudinal factors such as attitude, subjective norms, perceived behavioural control, and others. For that reason, this study employed NAM as the underlying theory to explain the purchase intention of generation Z consumers in Malaysia on green products.

Hypotheses Development

Attitudes

Ajzen (1991) defined attitudes as the level of favourable or unfavourable reactions of individuals towards certain behaviour. Theoretically, an individual could have a positive or negative attitude towards a particular behaviour and this attitude will influence their intention and behaviour. When individuals have favourable feelings towards green products, they are likely to involve in that pro-ecological behaviour like purchasing them (Duong, 2022). Therefore, attitude is expected to significantly influence environmentally friendly behaviour, such as purchase intention on the green product. Empirically, the significant role of the attitude towards environmentally friendly behaviour has been widely recognized in the literature (Duong, 2022; Emekci, 2019; Zheng *et al.*, 2021). For instance, Nguyen and Nguyen (2021) revealed that attitude possesses a significant relationship with purchase intention. The significant association between the attitude and green consumer behaviour among the younger consumers in Bangladesh is further revealed in Taufique and Islam's (2021) study. Although the significant effect of attitude on pro-environmental behaviour is dominated in literature, however, some other studies still revealed the insignificant effect of attitudes towards environmentally friendly behaviour such as (Hamzah and Tanwir, 2021; Mazhar *et al.*, 2022; Xu *et al.*, 2020). Thus, the following hypothesis is suggested to be examined in this study.

H₁ : Attitudes positively influenced green product purchase intention.

Subjective Norms

Subjective norms denote the perceived social pressure from the people in the social context and it may influence the behaviours of an individual (Ajzen, 1991). Besides, the subjective norm is also referred to as the perception of individuals on the level of encouragement from the people who are important to them in performing certain behaviour (Vu *et al.*, 2021). If the people in the social context like family members, friends and others have a favourable reaction to a particular behaviour, then it will be cultivating the individual to engage with that behaviour. For example, individuals are likely to purchase green products if people surrounding them are encouraging them to do so. With that, the purchase intention of green products is projected to be influenced by the subjective norm, and this is supported by numerous empirical studies (Joshi *et al.*, 2021; Minbashrazgah *et al.*, 2017; Zheng *et al.*, 2021). Liu *et al* (2020) revealed that subjective norms significantly impacted the purchase intention of green products in China. Similarly, the significant role of subjective norms on green purchase intention is also documented in different research contexts such as millennials in Pakistan (Qureshi *et al.*, 2022), residents' waste mobile recycling behaviour in China (Chang *et al.*, 2022), and green apparel in India (Joshi & Srivastava, 2020). However, the insignificant effect of the subjective norm on pro-environmental behaviour is also reported in the literature by (Hamzah and Tanwir, 2021; Nguyen and Nguyen, 2021; Xu *et al.*, 2020). Therefore, the hypothesis below is proposed to be examined in this study.

H₂ : Subjective norms positively influenced green product purchase intention.

Perceived Environmental Responsibility

Perceived environmental responsibility is defined as the perception of individuals on the level of behavioural responsibility towards ecological welfare and also environmental wellbeing

(Duong *et al.*, 2022; Hamzah & Tanwir, 2021). Individuals tend to behave pro-environmentally by purchasing green products if they feel that they are responsible or obligated for environmental welfare. Channa *et al.* (2022) further remarked that if individuals were aware of the vulnerability of the natural environment, they would be environmentally responsible and will purchase green products to protect the sustainability of the environment. With that, it is expected that perceived environmental responsibility has a positive significant association with the intention to purchase the green product. The significant role of the perceived environmental responsibility on environmentally friendly behaviour has been documented in previous studies (Minbashrazgah *et al.*, 2017; Yue *et al.*, 2020). For instance, Hamzah and Tanwir (2021) revealed that environmental responsibility played a significant effect on the intention to purchase hybrid vehicles in Malaysia. Channa *et al.* (2022) also remarked the same tone, whereas perceived environmental responsibility is significantly linked with purchase intention on eco-friendly athletic wear. However, some other studies also revealed the insignificant effect of perceived environmental responsibility towards green behaviour (Duong *et al.*, 2022; Zheng *et al.*, 2021). Therefore, it required a further investigation of the influence of the perceived environmental responsibility on the purchase intention of green products and the hypothesis below is formulated.

H₃ : Perceived environmental responsibility positively influenced green product purchase intention.

Environmental Consciousness

As suggested by Kumar *et al.* (2021), individuals are tending to engage in environmentally friendly behaviour if they are more conscious of the environmental issues. Therefore, environmental consciousness could refer to the level of the consciousness of an individual towards ecological problems. To promote pro-environmental behaviour such as purchasing green products, it is crucial to increase the level of consciousness towards the environment of an individual (Kautish & Sharma, 2021). Therefore, this study postulates that green product purchase intention could be significantly impacted by environmental consciousness as found in prior studies (Kautish & Sharma, 2021; Kumar *et al.*, 2021). Kautish and Sharma (2021) revealed that environmental consciousness significantly influences green products' behavioural intention. Similarly, Kumar *et al.* (2021) also revealed the same effect in a study on environmentally friendly apparel purchase intention. However, inconsistent conclusions regarding the effect of environmental consciousness as an insignificant effect of environmental consciousness have also been reported in some other studies (Costa *et al.*, 2021; Xu *et al.*, 2020). For this reason, the following hypotheses are suggested.

H₄ : Environmental consciousness positively influenced green product purchase intention.

With the discussion on the hypothesis's development about, the research model presented in Figure 1 is proposed for the study.

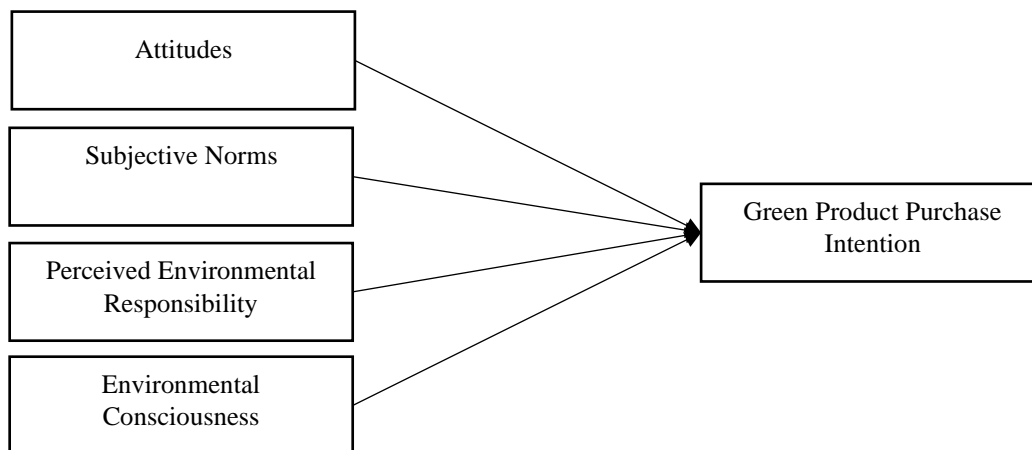


Figure 1: Proposed Research Model

Research Methodology

In this study, the quantitative approach was utilized to collect the primary responses from the targeted population using the purposive sampling technique. The target population are Generation Z consumers who are aged between 18 to 25 years old as these consumers can make their purchasing decision autonomously. To collect the responses, the Google Form was used as it is a convenient approach to collect the responses from a large population at no cost. In total, 173 valid responses were collected and it is sufficient for this study as it is greater than the minimum sample size of 129 as suggested through power analysis that has been calculated with an effect size of 0.15, 95 per cent of power level, and four predictors. To develop the questionnaire of the study, the measurement items from previous studies have been adopted. For instance, attitudes towards green products were measured using five items from Nguyen and Nguyen (2021). Four items of the subjective norm were borrowed from Minbashrazgah *et al* (2017), while four items of perceived environmental responsibility were adapted from Hamzah and Tanwir (2021). Besides, five items of environmental consciousness were derived from (Xu *et al.*, 2020). Lastly, the green product's purchase intention is measured with five items borrowed from (Duong, 2022). Therefore, a total of 23 items were used to measure the five constructs in the study. To better measure the level of agreement and disagreement on the respective constructs, the seven-point Likert scale is used. The respondents have to provide their responses in a range of 1 to 7 which represents strongly disagree to strongly agree. In addition, four respondent profile questions were also asked in the questionnaire to know the background of the respondents. As the items adapted from prior studies were dominated in English, to avoid any misunderstanding, the questionnaire was prepared in a dual language where the translation of Bahasa Malaysia language was also provided.

Results

The demographic profiles of the respondents were provided in Table 1 and showed that approximately 62% of respondents are female. Regarding the age distribution, around 33% of respondents were aged 18 – 19 years old and also 20 – 21 years old, while 25% are from 22 – 23 years old and only 9% are aged 24 – 25 years old. The majority of the respondents (77%) received their living expenses from their parents, followed by doing a part-time job (9%), education loan (6%) and scholarship holders (5%). Lastly, most of the respondents spent less

than RM250 (38%) and also in between RM251 to RM 500 (36%), and only around 10% spent more than RM751.

Table 1
Respondent Profile

Characteristics	Frequency	Percentage
Gender		
Male	65	37.57
Female	108	62.43
Age		
18 -19-Year-Old	56	32.37
20 – 21-Year-Old	57	32.95
22 – 23-Year-Old	44	25.43
24 – 25-Year-Old	16	9.25
Sources of Monthly Living Expenses		
Parents	134	77.46
Scholarship	8	4.62
Education Loan	11	6.36
Part-time job	16	9.25
Others	4	2.31
Estimated Monthly Living Expenses		
RM250 and below	66	38.15
RM251 - RM500	58	33.53
RM501 – RM750	31	17.92
RM751 – RM1000	9	5.20
RM1001 and above	9	5.20

The study continues to examine the common method bias by employing both Harman's single factor test and the full collinearity test. The result of Harman's single factor test showed that the dominant factors accounted for less than 50% (40.96%) of the total variances and thus, the CMB doesn't exist (Podsakoff *et al.*, 2003). Similar findings were also reported from the full collinearity test whereas the variance inflation factors (VIF) for all constructs provided in Table 2 is less than the threshold value of 3.3 (Kock, 2015). In addition, the multivariate normality test was also conducted to check the normality of the collected data by using Mardia's coefficient procedure. The result showed that the dataset is not normally distributed as the p-value of skewness ($\beta = 6.5245$, $p < 0.01$) and kurtosis ($\beta = 55.7049$, $p < 0.01$) is lower than 0.05. Therefore, as suggested by Hair *et al.* (2019), the appropriate approach to analyze this not normal distributed dataset is partial least squares structural equation modelling (PLS-SEM).

Next, the reliability and validity tests were carried out to evaluate the measurement model of the study and the results were provided in Table 2. All items of the study have loading values that are greater than 0.7080 and this signified that the convergent validity is established (Hair *et al.*, 2019). Similarly, the convergent validity at the construct level is also obtained as the average variance extracted (AVE) value for all constructs is higher than the standard value of 0.5000 (Bagozzi & Yi, 1988). Besides, the Composite Reliability (CR) values for all constructs were also greater than 0.7000 and this indicated that internal consistency was also achieved in this study (Gefen *et al.*, 2000). For the discriminant validity, the

Heterotrait-Monotrait (HTMT) ratio of correlation was employed and found that all HTMT values are smaller than the conservation level of 0.8500 (Kline, 2011) and this implied that discriminant validity was also established in this study. From these reliability and validity tests, the results showed that the measurement model of the study is reliable and valid.

Table 2
Construct Reliability and Convergent Validity

Construct	Items	Loading	AVE	CR	VIF
Attitudes (ATT)	ATT1	0.792	0.621	0.891	1.987
	ATT2	0.836			
	ATT3	0.776			
	ATT4	0.783			
	ATT5	0.750			
Subjective Norms (SN)	SN1	0.810	0.682	0.896	1.780
	SN2	0.841			
	SN3	0.814			
	SN4	0.838			
Perceived Environmental Responsibility (PER)	PER1	0.798	0.635	0.874	2.537
	PER2	0.803			
	PER3	0.812			
	PER4	0.775			
Environmental Consciousness (EC)	EC1	0.823	0.635	0.896	2.200
	EC2	0.851			
	EC3	0.702			
	EC4	0.818			
	EC5	0.781			
Green Product Purchase Intention (GPI)	GPI1	0.788	0.635	0.896	2.037
	GPI2	0.817			
	GPI3	0.862			
	GPI4	0.705			
	GPI5	0.803			

Table 3
Discriminant Validity using HTMT

	ATT	SN	PER	EC	GPI
ATT					
SN	0.502				
PER	0.671	0.788			
EC	0.762	0.408	0.687		
GPI	0.639	0.524	0.739	0.694	

To assess the structural model and validate the proposed hypotheses, the bootstrap re-sampling 5000 in SmartPLS has been used. The R-squared (R^2) value of 0.5090 showed that 50.90% of the variances in GPI were explained by the four proposed factors, namely attitudes, subjective norms, perceived environmental responsibility, and environmental consciousness. Besides, the results of the structural model assessment are summarised in Table 4 and Figure 2. The results revealed that three of the four hypotheses were supported (H_1 , H_3 , and H_4),

while only H₂ was not supported. Environmental consciousness ($\beta = 0.3080$) is the most influential factor, followed by perceived environmental responsibility ($\beta = 0.2890$) and attitudes ($\beta = 0.1750$), while subjective norms have no significant association with green products' purchase intention. In addition, the effect size (f^2) values also suggest that environmental consciousness, perceived environmental responsibility and attitudes have a medium effect on purchase intention on green products, while subjective norms have no effect as the effect size is smaller than 0.02 (Cohen, 1988).

Table 4
Path Coefficients and hypotheses Testing

Hypo.	Relationship	Beta	t-value	P-value	BCI-LL	BCI-UL	f ²	Decision
H ₁	ATT -> GPI	0.1750	2.0610	0.0200	0.0330	0.3110	0.0320	Support
H ₂	SN -> GPI	0.0700	0.7950	0.2130	-	0.2080	0.0060	Not Support
H ₃	PER -> GPI	0.2890	2.7770	0.0030	0.1220	0.4770	0.0770	Support
H ₄	EC -> GPI	0.3080	4.4340	0.0000	0.1930	0.4200	0.0960	Support

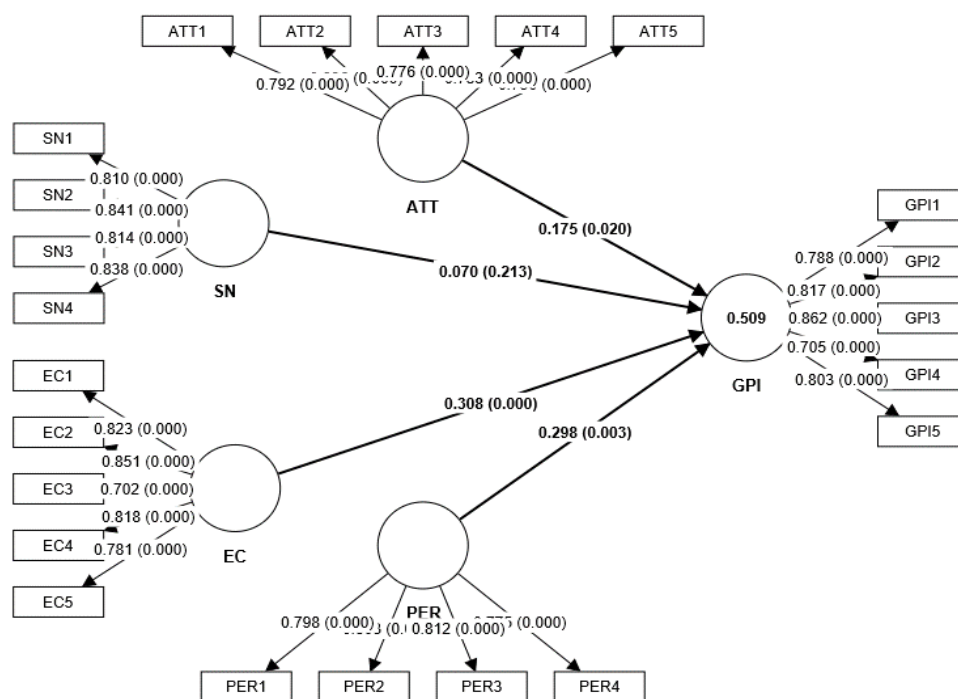


Figure 2: Research model with Path Coefficient and P-values

Conclusions and Discussions

The objective of the study is to identify the factors that significantly influence the purchase intention of Generation Z consumers in Malaysia on the green product. Based on the NAM, four factors were proposed in the research framework to understand better the intention to purchase green products among Generation Z consumers in Malaysia. The online survey has been carried out to collect the responses from Generation Z consumers in Malaysia and a total of 173 valid responses were gathered. The results showed that all factors played a significant effect on purchase intention on green products, except subjective norms.

Specifically, the significant relationship of attitudes towards green products' purchase intention is in line with the findings of Duong (2022), Nguyen and Nguyen (2021), and Taufique and Islam (2021). This finding showed that consumers' perceptions towards green products are crucial to cultivate their purchase intention, as the consumers are likely to purchase green products if they have favourable and/or positive attitudes towards them. The significant role of perceived environmental responsibility was further validated in this study and indicated that if Generation Z consumers felt they are responsible to protect the environment, then they tend to engage in environmentally friendly behaviour such as purchasing green products. This is consistent with some empirical studies which also found the significant role of perceived environmental responsibility such as (Channa *et al.*, 2022; Hamzah and Tanwir, 2021; Yue *et al.*, 2020).

As consistent with Kautish and Sharma (2021); Kumar *et al* (2021), the intention to purchase green purchase from Generation Z consumers is also significantly affected by environmental consciousness. This showed that if consumers are highly conscious and concerned with the ecological problems, they are likely to involve in the environmentally friendly purchase. Surprisingly, the significant role of subjective norms on the intention to purchase green products failed to support in this study and this is opposed to some of the previous studies like (Liu *et al.*, 2020; Qureshi *et al.*, 2022; Joshi and Srivastava, 2020). This finding suggests that even though Generation Z consumers are considered young consumers with less information about the products and/or ecological issues, their decision to purchase doesn't significantly influence by people in their social contexts like their family members, friends and others. The possible reason could be that Generation Z consumers are technology savvy and highly educated, therefore, their behaviour isn't easily influenced by others as they may have their own views and thoughts regarding the products that they want to purchase.

Implications

Several implications are provided in this study, especially for the theoretical implications and practical implications. This study contributed to the literature as the findings were derived from different perspectives. For instance, this study utilized NAM to understand the intention to purchase green products of Generation Z consumers in Malaysia. As discussed in the previous section, most of the previous studies adopted TPB as their foundation and limited studies evaluate the pro-environmental behaviours from the perspective of NAM. As proven in this study, both factors of the NAM (perceived environmental responsibility and environmental consciousness) played a significant role in affecting Generation Z consumers to purchase green products. This finding added new evidence to the literature as not only personal factors like attitudes, subjective norms, and perceived behavioural control could significantly influence consumers' environmentally friendly behaviour, but other factors like perceived environmental responsibility and environmental consciousness also act as strong factors for these pro-environmental behaviours.

Furthermore, in order to achieve the SDGs12: Responsible Consumption and Production, stakeholders like government and businesses could refer to the findings of the study for their policy and strategy formation as several practical implications are offered in this study. For example, the stakeholders have to focus on the three significant factors that could increase purchase intention on green products for Generation Z consumers in Malaysia. Firstly, these stakeholders have to develop a favourable and positive attitude towards

Generation Z consumers on green products. The benefits and advantages of green products have to be spread publicly and disseminated widely to ensure they have a better understanding of the green products as they will intend to purchase green products if they have a good attitude towards them. Besides, the news of the ecological issues and crisis also has to be disseminated to the public as they will become more conscious of the environmental problems if they understand the consequences of unsustainable behaviour. Moreover, when Generation Z consumers have more information about the ecological problems, they tend to feel more responsible to protect the environment, and ultimately increase their intention to purchase green products. With these, it could possibly enhance the purchase intention of Generation Z consumers on green products which would help to reduce ecological problems.

Limitations and Suggestions for Future Study

Similar to other studies, this study consists of several limitations and it would be interesting if future studies would consider these limitations in their study to provide more robust findings regarding the topic. Firstly, this study only evaluates the purchase intention of the green products in common. However, there is a variety of green products marketed. Therefore, it would be interesting if future studies could narrow down the research context to focus only on a specific green product. Next, this study assumed all respondents are homogenous and possess the same perception. Perhaps, future studies may make a comparison between the sub-group within the respondents, like males versus females. In addition, this study only consists of two-level in the research framework. Thus, the future study may also include some new factors and/or mediator or moderator in the proposed framework as consumers' purchase intention is a complex concept and require a more complex and comprehensive framework to understand it. More comprehensive and robust findings could be derived if the future study could overcome these limitations.

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