

Understanding The Impact Of Sustainable Marketing Influences Towards Malaysia's Gen Z's Green Consumption Intentions

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Abstract

This study addresses a research gap by investigating the impact of sustainable advertising on consumption intentions among Malaysia's Generation Z (Gen Z), particularly those with limited sustainable consumption experience. Using a quantitative approach, 160 Gen Z respondents in Malaysia are involved. Alongside sustainable advertising, the study introduces variables like environmental distresses, perceived control, subjective norms, and cost, aiming to comprehend factors influencing sustainable consumption intentions. Primary data focuses on participants' perceptions of sustainable marketing's impact, environmental information, issues, and eco-friendly consumption intentions. The study emphasizes sustainable advertising's role in shaping green consumption intentions among Malaysia's Gen Z, highlighting the effectiveness of sustainable marketing in promoting environmentally conscious behavior. It identifies pivotal factors influencing Gen Z's inclination towards sustainable consumption practices. These insights recommend educational initiatives for environmental awareness and collaboration with businesses for sustainable consumption guidelines. Valuable for marketers, the study informs impactful strategies resonating with Gen Z and fostering sustainable consumption. By revealing the link between sustainable advertising and consumption intentions, the research advances informed environmental consciousness within this demographic.

Keywords: Marketing, Gen Z, Green Consumption, Malaysia, and Sustainable Development.

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1. Introduction

Consumption patterns are becoming more of a challenge for social and environmental determinants. Belk (1985, 1988) asserts that society's excessive consumption has a detrimental effect on the sustainability of local communities. Environmental deterioration is a result of human activity and economic development. Because of this, there has been significant climate change, deforestation, degradation of the flora and fauna, pollution of the air and water, among other effects, because of the recurrent occurrence of bad environmental catastrophes. Despite marketers' continued efforts to use sustainable marketing strategies, the question of whether marketing practices have a link to rising or falling consumer welfare (O'Shaughnessy & O'Shaughnessy, 2002) is still being debated by academics (Mont & Plepys, 2008).

Advertising's ability to persuade customers to adopt sustainable behaviors and foster positive connotations is regularly used by marketers (Goldstein, Cialdini, & Griskevicius, 2008). To defend the product's high price, sustainable advertising is utilized (D'Souza, Taghian, Lamb, & Peretiatkos, 2006). To appeal to a larger market share, it enables marketers to increase and maximize revenues (Chekima, Wafa, Igau, Chekima, & Sondoh, 2016). Approaches like the triple-bottom-line (TBL) approach make it clear how important it is for businesses to act in a way that is both socially and environmentally responsible and produces favorable financial results.

TBL is a crucial tool for evaluating commercialized value in industries where environmental responsibility serves as a driving force behind sustainable consumption. While acknowledging socially acceptable sustainability concepts, customers might not act in the behavior (Zinkhan & Carlson, 1995). Therefore, we must encourage a thorough approach to highlighting sustainable consumption patterns as the major obstacles to societal well-being.

With a 3.9% annual growth rate, Malaysia spent RM2.55 billion on environmental protection in 2015. Despite these efforts, the nation has 2.4 million tonnes of recorded air pollutants and enormous amounts of garbage. Public awareness has increased because of Malaysia being identified as one of the worst plastic pollutants in the world (Balasegaram, 2019). In response, the government has used social advertising to inform the public and promote sustainable consumption. The promotion of environmentally friendly behaviors and the influence on public involvement have been significantly impacted by these rules.

By increasing information and understanding about reducing single-use plastics and boosting recycling, the use of this media encourages individual sustainable consumption (Viscusi, Huber, & Bell, 2011). In 2020, Malaysia's population might reach up to 26% Gen Z, who were born between 1995 and 2010. As a result of the younger generation's heightened susceptibility to environmental deterioration (Ouz & Kavas, 2010), proper environmental knowledge and skill must be created. Thus, the objective of this essay is to make clear how sustainable marketing's information and content impacts Gen Z consumers' values, beliefs, and attitudes about the pursuit of sustainable consumption.

By examining the precise impact of sustainable marketing impacts on the green purchasing intentions of Malaysia's Gen Z population, the research aims to close a research gap left by earlier studies to attain this important study goal. There is a dearth of thorough research that examines the direct link between sustainable marketing influences and Gen Z's green consumption intentions, particularly in the context of Malaysia. While sustainable marketing and green consumption intentions have been studied separately in the past. By filling in this knowledge vacuum, the study seeks to enhance our comprehension of the variables impacting Generation Z's ambitions for sustainable consumption and provide crucial data for Malaysian marketers and lawmakers.

In addition to introduction, the paper includes five sections. Section 2 mentions literature review. Section 3 clarify the study methodologies as well as model specification. Section 4 is involved with results. Section 5 discuss the results and their implications. Section 6 concludes.

2. Literature Review

As corporations continue to intertwine their marketing strategies with environmental considerations and emphasize sustainable consumption, the significance of sustainable marketing has escalated (Kotler et al., 2017). Within this context, Generation Z (born between the mid-1990s and early 2000s) emerges as a pivotal target audience for sustainable products and services (Mohamad et al., 2019). However, there remains a deficiency in comprehending the implications of sustainable marketing on the environmentally conscious consumption intentions of Generation Z, particularly within the Malaysian setting.

According to Peattie and Charter (2003), sustainable marketing centres on promoting items, services, and endeavours that ensure

minimal environmental impact, conserve resources, and fulfil societal demands. Additional investigations by Chen and Chai (2010), delve into communication tactics emphasizing the environmental advantages of products, influencing consumer purchasing decisions through methods like green advertising, eco-labelling, and corporate social responsibility initiatives. These studies ascertain that sustainable marketing can foster favourable attitudes, perceptions, and intentions among customers towards adopting sustainable consumption practices.

Green consumption intentions, defined by Auger et al. (2003), denote individuals' willingness and motivation to adopt ecologically responsible purchasing habits. Inquiry by Li, et al. (2023) underscore the potent impacts of environmental issue, perceived behavioral control, subjective norms, and perceived price on environmental matters. Specifically, environmental issues signify individuals' awareness and solicitude for environmental issues, while perceived behavioral control pertains to their perceived ability to engage in sustainable consumption. Subjective norms encompass the social influences and pressures exerted by significant others, such as family, friends, and society, in the realm of sustainable consumption (Mohd Suki et al., 2021). Perceived pricing encapsulates individuals' perceptions regarding the costs linked to environmentally friendly products vis-à-vis conventional alternatives (Mohd Suki et al., 2021).

Generation Z has earned a reputation as an environmentally conscious cohort, proactively seeking sustainable options and patronizing brands that resonate with their principles. Sustainability, social responsibility, and environmental safeguarding hold paramount value for this generation (Lindeman et al., 2019). However, investigations into the green consumption intentions of Generation Z, especially within the Malaysian framework, are significantly limited. Grasping the determinants influencing Generation Z's inclination towards sustainable consumption proves indispensable for marketers and policy legislators aiming to cultivate sustainable behaviours within this demographic (Mohd Suki et al., 2021).

Despite the growing traction in the realm of sustainable marketing and green consumption, a notable research void exists regarding the impact of sustainable marketing on Generation Z's green consumption intentions within Malaysia. The prevailing literature predominantly concentrates on developed nations and has yet to delve into the distinctive dynamics of sustainable marketing in the Malaysian context (Chin et al., 2014). The present study endeavours to fill this gap by

scrutinizing the influence of sustainable marketing factors on the green consumption intentions of Malaysia's Generation Z populace.

3. Study Methodology and Model Specification

3.1 Analytical Framework and Model Hypotheses

The Theory of Planned Behavior (TPB) should be deepened and expanded, according to Ajzen (1991). There is mounting evidence that adding more components improves the framework's capacity for prediction (Yazdanpanah & Forouzani, 2015). Ethics and moral principles greatly influence behavior in the current consumer landscape (Shaw & Shiu, 2003). As a result, businesses use appropriate marketing strategies to demonstrate their value-based positioning and draw in customers (Sen & Bhattacharya, 2001).

In a 2011 study, Hillenbrand, Money, and Ghobadian showed how sustainable marketing directly affects attitudes, driving the desire for sustainable behavior. Thus, the TPB is extended by the inclusion of four constructs: sustainable advertising, environmental knowledge, environmental concern, and perceived pricing. These constructs show how sustainable information develops, binds, and regulates inside people to influence behavior.

Many researchers (e.g., Sidique, Joshi, & Lupi, 2010; Ramayah, Lee, & Lim, 2012) use the TPB to analyze ethical decision-making. The TPB is used in this study to examine how members of Generation Z practice sustainable consumption. By promoting environmental awareness and influencing attitudes toward sustainable consumption, sustainable marketing shapes behaviors.

However, while gathering pertinent data that could eventually mold certain actions, sustainable behaviors are optional. Therefore, through modifying purchase patterns to incorporate sustainable behaviors, the behavior theory encourages consumers to demonstrate environmental responsibility (Cherrier, 2012).

The expanded Theory of Planned Behavior is used in this study to investigate and clarify the key behaviors of Gen Z consumers toward sustainable advertising materials. To produce and deepen results, other factors were introduced, demonstrating how sustainable advertising increases people's general environmental awareness and fosters environmental care. In addition, a mediated connection is implemented, with environmental concern acting as the mediator. To strengthen and extend the designed framework, additional

independent variables are included, such as perceived behavior control, subjective norms, and perceived price.

Below is an illustration of how tales may be revised. Based on the literature research, the conceptual framework's overall layout was created, and four more factors were added to the mix to make the conclusions more nuanced. The recommended research methodology for this study is depicted in Figure 1 and replaces the research agenda by focusing on the viewpoint and comprehension of sustainable advertising among the Gen Z age group.

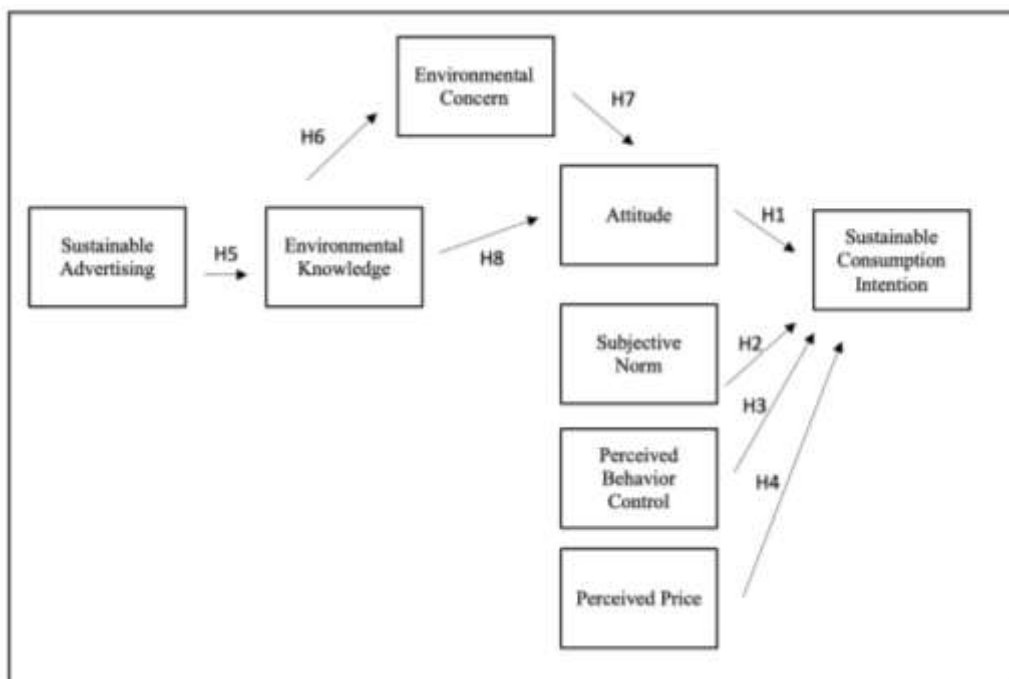


Figure 1. Research Model.

3.2 Research Hypotheses

Hypothesis 1: Attitudes impact consumers' desire to engage in sustainable consumption in a favorable way. According to Leonard, Cronan, and Kreie (2004), attitude is an individual's general disposition and justification for whether an action is favorable or unfavorable. This includes whether the person will engage in the activity. In their 2000 study, Kotchen and Reiling showed that attitude is a powerful predictor of behavioral intention and acts as a psychological motive for the evaluation procedure. Positive attitudes frequently coincide with good intentions (Chen & Tung, 2014). In the area of sustainable consumption, attitude and behavioral intention are consistently found to have a favorable link across cultural boundaries (Mostafa, 2007).

In the context of this study, attitude refers to how Generation Z members evaluate sustainable marketing stimuli on a positive or negative basis. Generation Z in Malaysia is more likely to adopt sustainable consumerism if they have a favorable impression of it, which increases their intention to do so. According to Rios, Martinez, Moreno, and Soriano (2006), consumers think that sustainable consumption promotes societal welfare and benefits, resulting in sentiments of pride, success, and compassion (Hoeffler & Keller, 2002). This internal drive induces a mental change and increases Gen Z customers' readiness to make informed decisions about sustainable items. Consequently, the following theory is put forward.

Subjective norms may impact customers' willingness to engage in sustainable consumption, according to hypothesis 2. According to Lindbeck, Nyberg, and Weibull (1999), subjective norms are the collection of accepted agreements on what behavior is suitable or inappropriate. According to other studies (Vallerand, Deshaies, Cuerrier, Pelletier, & Mongeau, 1992), subjective standards affect how attitudes about conduct are formed. According to studies by Moscovici (1976, 1980, 1985), the maintenance of the status quo through compliance with social pressures is the fundamental driver of the persuasive strength of external stimuli. Additionally, Han et al. (2010) found that exposure to favorable subjective standards frequently results in the development of positive behavioral intentions.

Social norms have a part in encouraging sustainable and ethical behavior. Consumers' choices while making purchases are strongly influenced by the extent of impact that family and social groups have. Consumers are more likely to embrace sustainable buying habits when those in their immediate social circle support eco-friendly shopping activities (Kumar, 2012). People who engage in sustainable consumerism are motivated by external support from their family and social networks. This social impact operates as a sort of incentive, reinforcing the choice to adopt the behavior (Ajzen, 1991), therefore strengthening people's drive to comply. Therefore, social norms have a positive impact on Generation Z consumers' decision to engage in sustainable buying.

The third theory is perceived behavior. The intention of consumers to engage in sustainable consumption is favourably influenced by control. The capacity to exert control over one's conduct is referred to as perceived behavioral control. Drawing on prior experiences and predicted difficulties, it expresses a person's feeling of agency in engaging in a regular action and indicates the perceived ease or difficulty in doing so (Ajzen, 1991). Several research show that a

person's self-confidence and ability have a favorable impact on their intention to engage in an activity (Baker, Al-Gahtani, & Hubona, 2007; Cheng, Lam, & Hsu, 2006). According to Ajzen (2005) perceived behavioral control refers to a person's perception of their capacity to engage in a certain activity in the presence of sufficient resources and opportunities.

Consumers' intentions to adopt sustainable purchasing habits are significantly influenced by factors including convenience, time, resources, opportunity, and confidence (Ajzen, 199). These factors are especially important for members of Generation Z because many of them spend most of their time studying or working. As a result, achieving goals for sustainable consumption is constrained by considerations like convenience and time. However, customers are more confident in carrying out the behavior if they have a strong subjective grasp of the items because they are more conscious of the effects of their decisions. As a result, Generation Z's decision to engage in sustainable consumerism is heavily influenced by perceived behavioral control.

Hypothesis 4: Perceived price impacts consumers' intentions to engage in sustainable consumption in a negative way. Price can signify a financial hardship faced to purchase goods or act as a barometer of quality (Lichtenstein, Ridgway, & Netemeyer, 1993). Consumers' sensitivity to a product's price is referred to as perceived pricing (Zeithaml, 1988). It plays a significant part in how consumers decide what to buy (Chiang & Jang, 2007). The intention to buy increases when a price is thought to be acceptable. However, consumers frequently ignore product prices, recalling only those they consider important by labelling them "cheap" or "expensive" (Zeithaml, 1983; 1988).

According to Manafi et al. (2011), the level of green consumption depends on the consumer's financial situation. When people have an adequate income level, they are more inclined to spend more on sustainable goods. According to Yadav & Pathak's (2016) findings, 83% of respondents believe that the high cost of organic food prevents them from consuming it. According to researchers (D'Souza et al., 2006), sustainable advertising may be used to persuasively explain the benefits of a product and support a higher price. Studies show that consumers are more prepared to pay more for green products when they have a greater understanding of the environment (Amyx, DeJong, Lin, Chakraborty, & Wiener, 1994).

Young consumers are an important target market for businesses in many sectors because they have more discretionary money and different buying habits (Jang, Kim, & Bonn, 2011). Consumer views regarding product features and pricing change as wealth rises, playing a significant effect in buying decisions (Dong & Fuller, 2010). However, customers may be deterred from buying sustainable items by their impression of the cost (Kim & Rha, 2014). Due to issues with material procurement and certification, environmentally friendly goods can cost more (Ling, 2013). As a result, pricing directly prevents people from engaging in sustainable activity, which gives rise to the following hypotheses.

Hypothesis 5: Environmental knowledge is directly influenced favorably by sustainable advertising. Through extrinsic signals that denote quality, advertising is used to create favorable brand perceptions for items (Milgrom & Roberts, 1986). The relationship between a product and the biophysical environment is addressed by sustainable marketing (Banerjee, Gulas, & Iyer, 1995). The emphasis on social responsibility and the promotion of a sustainable lifestyle are both included in the material. The goal of environmental advertising is to instil in customers ideals that promote the use of environmentally friendly products (Baldwin, 1993).

The value of information that is narrowly focused on a subject helps develop suitable attitudes to direct the decision-making process. Consumption increases when pro-environmental conduct is consistent with customers' self-interest. Therefore, consumers' attitudes toward purchase intention, brand loyalty, and preference are improved when the attractiveness of sustainable advertising messages is in line with their cognitive processes (Tu, Kao, Tu, & Chen, 2011).

According to the viewpoint, advertising plays a crucial function in delivering pertinent information to Generation Z customers and enhancing their environmental understanding. Chekima et al. (2016) talk about how customers understand the benefits of choosing sustainable items. This results from the distinction between green and conventional items and the perceived legitimacy of socially responsible environmental knowledge. The spread of environmental communications makes it possible for customers to comprehend the advantages of building up their purchasing power, which supports the green market (Litvine & Wüstenhagen, 2011).

This has the benefit of being kind and inspiring admirable emotions (Ferreira, Avila, & De Faria, 2010). Additionally, compared to earlier generations, Gen Z customers have more information at their

fingertips, suggesting a better media literacy rate that builds additional environmental awareness through sustainable marketing appeals. As a result, the following theory is put forth.

Hypothesis 6: Environmental Concern is influenced favorably by Environmental Knowledge

Environmental knowledge refers to a person's ability to understand and evaluate how important the environment is to society, as well as the amount of information they have learned about environmental concerns. Increasing one's knowledge has a favorable impact on one's propensity to buy and use eco-friendly items (Werner & Alvensleben, 2011). According to studies (Kollmuss & Agyeman, 2002; Mobley, Vagias, & DeWard, 2010), consumers are more likely to take action to safeguard the environment if they have a deeper grasp of ecological challenges and solutions. Additionally, those who are more knowledgeable about environmental issues are more likely to engage in pro-environmental activities and have an impact on consumer behavior (Oguz & Kavas, 2010).

Promotional materials influence how consumers perceive sustainable consumption by educating and enhancing their awareness of environmental concerns, as found in Chekima et al. (2016). As a result, more people will be motivated to buy products (Laroche, Bergeron, & Barbaro-Forleo, 2001). Informed by past environmental knowledge, attitudes and purchasing patterns are changed when environmental challenges are recognized (Scott & Vigar-Ellis, 2014). Increasing societal understanding encourages a favorable perception of products and improves consumers' attitudes toward sustainability (Yadav & Pathak, 2017).

Customers that are more environmentally conscious have greater expectations for buying sustainable items since they are more aware of how human actions affect the environment (Rahbar & Wahid, 2011). Positive attitudes are thought to be encouraged by increased environmental awareness. Consequently, sustainable advertising materials have an impact on customer sustainable behavior.

According to this survey, Generation Z consumers are more conscious of environmental concerns as they learn more. This turns out to be an important factor affecting attitudes and behavior toward sustainable consumption (Mostafa, 2009). The value of environmental information encourages favorable attitudes, which inspire Gen Z customers to make sustainable purchases and solidify their opinions on environmental issues. The following hypotheses were developed considering the reasons and empirical data presented above.

Hypothesis 7: Environmental awareness has a favorable impact Viewpoint about the desire to practice sustainable consumption. Concern for the environment is an attitude that involves both cognitive and emotive assessments of how things influence the environment (Bamberg, 2003). In environmental research, consumer environmental concern plays a crucial role has a big impact on how people make decisions (Diamantopoulos, Schlegelmilch, Sinkovics, & Bohlen, 2003). It has a favorable relationship with the desire to consume, the procurement of sustainable items (Kalafatis et al., 1999), and overall, environmentally conscious consumer behavior (Abeliotis et al., 2010).

One important aspect that affects attitudes toward implementing sustainable activities is the increased concern for the environment among Gen Z customers. Their capacity to form firm and supportive ideas because of environmental education heightens their care for the environment and boosts their propensity to buy environmentally friendly goods (Kalafatis et al., 1999). Customers are now actively looking for sustainable items because of this behavioral change. As a result, customers become more concerned about the environment, which increases their propensity to engage in sustainable activities.

This increased understanding of their environmental effect (Newton et al., 2015) translates into a stronger desire to buy environmentally friendly products. The direct impact of environmental concern mediates the road toward a favorable attitude and an inclination to engage in sustainable consumption, according to the debate that came before it. Consequently, based on the above-mentioned empirical facts and reasons, two hypotheses are put forth.

3.2 Data Collection and Sample

This investigation is a quantitative investigation. Williams (2003) asserts that surveys produce useful data, accomplish desired response rates, and offer anonymity. They aid in promoting openness and candor in replies, which helps to lessen prejudice. A self-administered online questionnaire survey was used to collect research data in keeping with the sustainable agenda. To access the survey, participants were given a QR code and internet link.

The study's target population includes Gen Zers from populous states like Kuala Lumpur and Selangor who are 18 to 25 years old. Data from participants were gathered using a purposeful sample, considering the age requirements. A sample frame or random selection of persons could not be formed due to the lack of databases or records. The youthful sample has been determined to be trustworthy by researchers despite this constraint (Cheah & Phau, 2011). When

individuals have a greater concern for the status of the environment today, they may express their preferences for eco-friendly items. The computed minimum sample size, according to the 5 times rule, is 180 responses. However, the intended sample had 160 responses in it. Participants' ages were checked as a pre-screening measure to make sure they the required specific age cohort of the study.

3.3 Measures

This study used measuring scales that had been shown in other studies. There were 8 constructs and 28 items total in the questionnaire, including questions about sustainable advertising (Rahbar & Wahid, 2011), environmental knowledge environmental concern (Mostafa, 2009), attitude and subjective norm (Chan & Lau, 2002), perceived behavior control (Kim & Han, 2010), perceived and sustainable consumption intention.

There were two sections to the questionnaire. The questions in the first part were intended to explore the variables affecting and deciding responses from the Gen Z respondents' intentions to make sustainable purchases. Before the survey started, participants' agreement was acquired after being fully informed of the study's goal. The goals of the study and the participants' rights were described on the information sheet. To maintain the integrity of the data gathering and protection process, participant replies were handled in a private manner.

For data analysis, Partial Least Squares Structural Equation Modeling (PLS-SEM) using SMART PLS was employed to compute the collected data and derive analytical conclusions

4.0 Results

4.1 Demographics

Demographic information (Table 1) indicates that most respondents are female (68.6%) and belong to Generation Z (aged between 18 and 20), currently pursuing their tertiary education. However, if a respondent is not familiar with the concept of environmental sustainability, they may encounter difficulty in providing accurate responses to the presented variables that contribute to the research findings. Therefore, by targeting the student population, it was assumed that they possessed education and knowledge related to environmental sustainability. Moreover, 81.9% of respondents earn a personal income of less than RM1000 per month. This statistic underscores the significance of examining whether individuals'

economic resources can impact their perception of the price of sustainable products.

TABLE 1: Demographics

Demographic		n	%	Demographic		n	%
Gender	Male	45	28.1	Occupation	Employed for wages	14	8.8
	Female	110	68.6		Self employed	7	4.4
	Prefer not to say	5	3.3		Out of work and looking for work	4	2.5
					Out of work but not currently looking for work	1	0.6
Age Group	18-20	86	53.8	Personal Income	Student	130	81.3
	21-22	60	37.5		Unable to work	3	1.9
	23-24	8	5		Others	1	0.6
	25 and above	6	3.8				
Marital Status	Single	159	99.4	Personal Income	≤ RM1000	131	81.9
	Married	1	0.6		RM1000-RM3000	20	12.5
Nationality	Malaysian	155	96.9		RM3000-RM5000	6	3.8
	Non-Malaysian	5	3.1		RM5000-7000	1	0.6
Education Level	High School	22	13.8	Personal Income	RM9000-12000	1	0.6
	Diploma	24	15		≥ RM12000	1	0.6
	Degree	107	66.9				
	Post-Graduate	7	4.4				

Normality and Common Method Variance Assessment

The assessment of univariate normality indicates that all variables have skewness and kurtosis values within ± 2 , except for Sustainable Advertising (with kurtosis $> \pm 2$) (George & Mallery, 2010). Additionally, the assessment of multivariate normality (Mardia's coefficient) reveals skewness and kurtosis values exceeding ± 2 and ± 20 , respectively. This validates the use of SMARTPLS for analysis as it does not rely, as does covariance-based structural equation modeling (Hair, Ringle, & Sarstedt, 2014), on the constrictive assumption of multivariate normal distribution.

Given that the data was collected from a single source, there is a potential for self-reported bias. To address this concern, we conducted tests to identify Common Method Bias, following the recommendations of Kock and Lynn (2012) and Kock (2015), which involve examining full collinearity. In this approach, all variables are regressed against a common variable, and if the VIF (Variance Inflation Factor) is ≤ 3.3 (or in some cases 5), it indicates that there is no significant bias stemming from the single source data. The analysis (shown in Table 2) yielded VIF values below 3.3, suggesting that single source bias is not a substantial issue with our dataset

TABLE 2: Variance Inflation Factor Check Using Unmeasured Marker for CMV

Latent Variables	VIF
Attitude	1.689
Environmental Concern	1.517
Environmental Knowledge	1.511
Perceived Price	1.524
Perceived Behavioural Control	1.416
Subjective Norm	1.622
Sustainable Advertising	1.586
Sustainable Consumption Intention	1.733

Data Analysis

The analysis method used in this study is SMART PLS (Partial Least Squares) Structural Equation Modeling (SEM), employing the SMART PLS 3.0 software (Ringle, Wende, and Becker, 2015). PLS-SEM is designed to model relationships between latent variables and is capable of handling multiple dependent constructs within a single model. It is important to note that this study aims to explore the enhancement of a well-established theory rather than seeking theory confirmation, making PLS-SEM a more suitable choice (Henseler & Chin, 2010). Following the analytical approach recommended by Anderson and Gerbing (1988), a two-stage process was employed. Firstly, the measurement model, which assesses the validity and reliability of the measures, was examined. Subsequently, the structural model, which tests the hypothesized relationships, was analyzed. To determine the significance of the path coefficients, a bootstrapping method involving 5000 resamples was applied (Hair et al., 2014).

Measurement Model

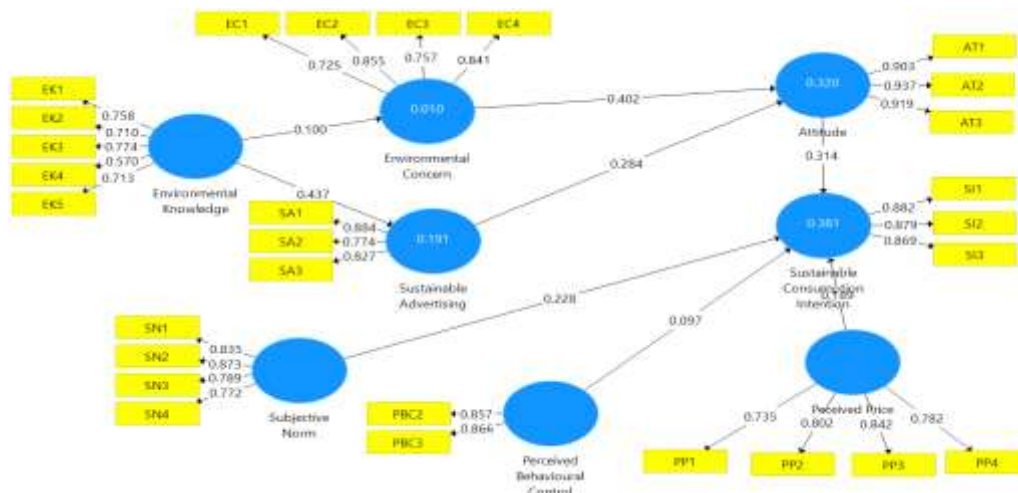
The measurement model of the current study has been assessed using indicators of Indicator Reliability, Convergent Reliability, Internal Consistency, and Discriminant Validity. The results of these assessments are presented in Table 3, while Figure 1 displays the outer loadings and standardized betas of the models. All reflective indicator loadings, except for EC5 (-0.111) and PBC1 (0.457), are retained since they exceed 0.5, indicating indicator reliability. To evaluate convergent reliability, the Average Variance Extracted (AVE) is calculated, and all latent variables exhibit satisfactory convergent reliability with AVE values surpassing 0.5. The Internal Consistency of constructs is assessed using Dhillon-Goldstein Rho (also known as Composite Reliability or CR) to gauge the reliability of the indicators. All latent variables have a composite reliability above 0.7, indicating robust

convergence and internal consistency (Gefen, Straub, and Boudreau, 2000). The full measurement model is presented in Table 3.

TABLE 3: Full Measurement Model

Construct	Item	Loadings ^a	AVE ^b	CR ^c
Attitude	AT1	0.903	0.846	0.943
	AT2	0.937		
	AT3	0.919		
Environmental Concern	EC1	0.725	0.634	0.874
	EC2	0.855		
	EC3	0.757		
	EC4	0.841		
Environmental Knowledge	EK1	0.758	0.502	0.833
	EK2	0.710		
	EK3	0.774		
	EK4	0.570		
	EK5	0.713		
Perceived Behavioural Control	PBC2	0.857	0.742	0.852
	PBC3	0.866		
Perceived Price	PP1	0.735	0.626	0.870
	PP2	0.802		
	PP3	0.842		
	PP4	0.782		
Subjective Norm	SN1	0.835	0.669	0.890
	SN2	0.873		
	SN3	0.789		
	SN4	0.772		
Sustainable Advertising	SA1	0.884	0.688	0.868
	SA2	0.774		
	SA3	0.827		
Sustainable Consumption Intention	SI1	0.882	0.768	0.909
	SI2	0.879		
	SI3	0.869		

- a. All Item Loadings > 0.4 indicates Indicator Reliability
- b. All Average Variance Extracted (AVE) > 0.5 as indicates Convergent Reliability
- c. All Composite reliability (CR) > 0.7 indicates Internal Consistency

FIGURE 1: Measurement Model**Discriminant Validity**

Utilizing the Heterotrait-Monotrait (HTMT) ratio of correlations, the discriminant validity is evaluated. The HTMT may be applied in one of two ways to evaluate discriminant validity: as a criterion or as a statistical test. To pass the discriminant validity test in the first approach (1), the HTMT value must be higher than HTMT.85, a value of 0.85 or HTMT.90, a value of 0.90. The technique for the second approach (2) entails comparing the alternative hypothesis (H_1 : $HTMT < 1$) to the null hypothesis (H_0 : $HTMT \geq 1$). If the confidence interval includes one (i.e., H_0 is supported), it means that discriminant validity is not present. As demonstrated in Table 2, all values have successfully met both the HTMT.85 criterion and the HTMT.90 criterion. The HTMT95% Confidence Interval analysis also reveals that none of the constructs have a confidence interval containing the value 1, confirming the establishment of discriminant validity. The results of the Heterotrait-Monotrait analysis for confirming Discriminant Validity are presented in Table 4

TABLE 4: Heterotrait-Monotrait (HTMT) Assessment for Discriminant Validity

	ATT	EC	EK	PP	PBC	SN	SA
ATT: Attitude							
EC: Environmental Concern	0.580						
EK: Environmental Knowledge	0.261	0.131					
PP: Perceived Price	0.373	0.228	0.463				
PBC: Perceived Behavioural Control	0.500	0.454	0.388	0.475			
SN: Subjective Norm	0.397	0.326	0.483	0.527	0.557		
SA: Sustainable Advertising	0.492	0.425	0.520	0.508	0.500	0.309	
SCI: Sustainable Consumption Intention	0.556	0.503	0.448	0.485	0.497	0.509	0.400

* All values are significantly different from 1 indicating achievement of Discriminant Validity < HTMT0.80

Structural Model

To evaluate the structural model, Hair et al. (2014) recommended assessing the R^2 , beta values, corresponding t-values, and effect sizes (f^2) through a bootstrapping procedure involving 5000 resamples. The bootstrapping analysis is employed to examine the direct effects of all the hypothesized relationships, which are subjected to statistical testing to validate the hypotheses. The structural model following the bootstrapping procedure is depicted in Figure 2. For determining hypothesis support, a calculated t-value exceeding 1.645 at a 5% level of significance (for a one-tailed test) signifies support for the hypothesis; otherwise, it indicates lack of support (Peng and Lai, 2012). Referring to the results in Table 5 and Figure 4 shows that three constructs were found to have significant positive relationship with Sustainable Consumption Intention (SI), Attitude (H1: $\beta = 0.387$, $t = 3.837$, $p < 0.01$), Perceived Price (H4: $\beta = 0.189$, $t = 2.475$, $p < 0.01$) and Subjective Norm (H2: $\beta = 0.228$, $t = 3.014$, $p < 0.01$). However, there was no significant association between Perceived Behaviour Control (H3: $\beta = 0.097$, $t = 1.128$, $p > 0.05$) and Sustainable Consumption Intention. Despite this, although H4 and the dependent variable, Sustainable Consumption Intention, were previously thought to be in a negative relationship, the connection is now reported to be positive. H1 and H2 are therefore supported, however H3 and H4 are not. The association between Sustainable Advertising and Environmental Knowledge is also favourable (H5: $\beta = 0.437$, $t = 8.146$, $p < 0.01$). H5 is therefore supported.

The relationship between Environmental Knowledge and Environmental Concern (H6: $\beta = 0.084$, $t = 1.063$, $p > 0.01$) was not supported. But a significant positive relationship is noted between the relationship of Environmental Concern (H7: $\beta = 0.402$, $t = 5.413$, $p < 0.01$) and Sustainable Advertising towards Attitude (H8: $\beta = 0.284$, $t = 3.728$, $p < 0.01$). Thus, H7 and H8 are both supported. The mediation analysis, following the procedures by Preacher and Hayes (2014) noted that the mediation relationship of Environmental Knowledge $\rightarrow$ Environmental Concern $\rightarrow$ Attitude ($\beta = 0.046$ [-0.017, 0.095]; $p > 0.05$) was not significant in the analysis of the model (see Table 6).

Figure 2: Structural Model

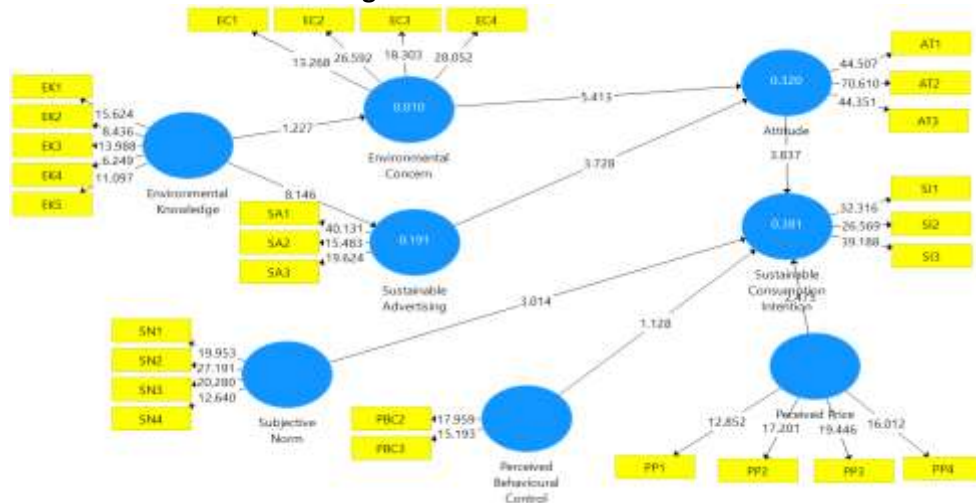


Table 5: Structural Model Hypothesis Testing

Hypothesis	Direct Relationships	Std Beta	Std Error	t-value	Decision	p-value	f ²	95%CI LL	95%CI UL	VIF
H1	Attitude -> Sustainable Consumption Intention	0.314	0.082	3.837**	Supported	0.000	0.124	0.175	0.441	1.280
H2	Subjective Norm -> Sustainable Consumption Intention	0.228	0.075	3.014**	Supported	0.001	0.058	0.098	0.346	1.439
H3	Perceived Behavioural Control -> Sustainable Consumption Intention	0.097	0.086	1.128	Not Supported	0.130	0.011	-0.044	0.235	1.343
H4	Perceived Price -> Sustainable Consumption Intention	0.189	0.076	2.475**	Supported	0.007	0.043	0.055	0.306	1.344
H5	Environmental Knowledge -> Sustainable Advertising	0.437	0.054	8.146**	Supported	0.000	0.236	0.334	0.510	1.000
H6	Environmental Knowledge -> Environmental Concern	0.100	0.081	1.227	Not Supported	0.110	0.010	-0.049	0.218	1.000
H7	Environmental Concern -> Attitude	0.402	0.074	5.413**	Supported	0.000	0.209	0.268	0.513	1.133
H8	Sustainable Advertising -> Attitude	0.284	0.076	3.728**	Supported	0.000	0.104	0.156	0.404	1.133

** p<0.01, *p<0.05

R² (Environmental Concern = 0.01; Sustainable Advertising = 0.191; Sustainable Consumption Intention = 0.381); Effect Size impact indicator are according to Cohen (1988), f² values: 0.35 (large), 0.15 (medium), and 0.02 (small)

Table 6: Mediation Hypothesis Testing

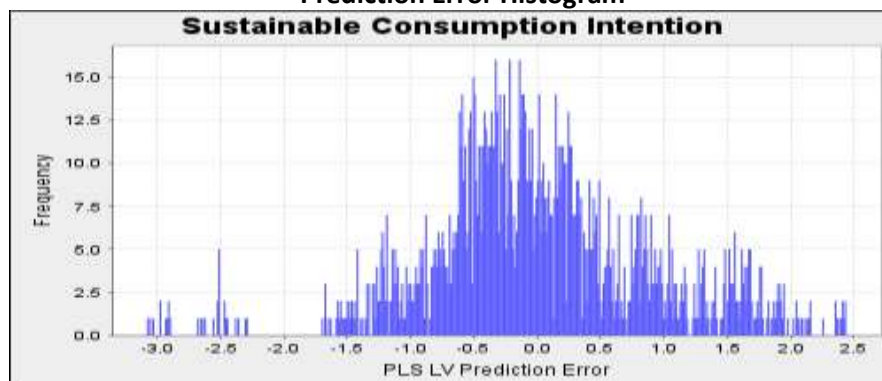
Hypothesis	Std Beta	Std Error	t-value	Decision	p-value	95%CI LL	95%CI UL
Environmental Knowledge -> Sustainable Advertising				Not Supported			
Environmental Concern -> Attitude	0.046	0.035	1.152	Supported	0.125	-0.017	0.095

** p<0.01, *p<0.05

Predictive Power and Model Fit

Shmueli et al. (2019) developed PLSPredict, a strategy that uses a holdout sample-based methodology, to assess the model's prediction power. Using PLS-Predict and an 8-fold technique to judge predictive relevance, this procedure delivers predictions at the case level, both at an item and construct level. They recommend examining the histogram of prediction errors of the PLS-dependent latent variable (in this case: Sustainable Consumption Intention). As depicted in Figure 3, a highly symmetrical distribution is observed, suggesting that the Residual Mean Standard Error (RMSE) should be employed to compare the differences between the errors of the Linear Model (LM) and the Partial Least Squares (PLS) model. This comparison helps determine the prediction capability of the model.

FIGURE 3: Sustainable Consumption Intention Latent Variable Prediction Error Histogram



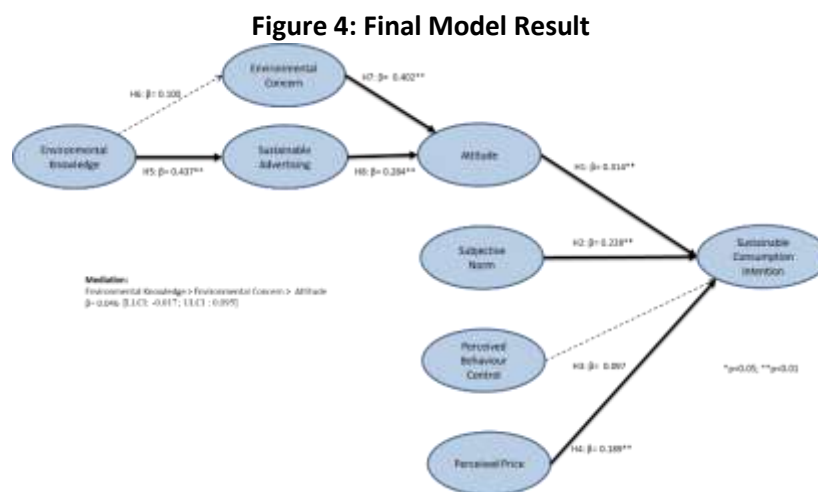
According to Shmueli et al. (2019), there is strong predictive power if all item differences (PLS-LM) are lower than '0,' predictive relevance is not confirmed if all are higher, there is moderate predictive power if the majority is lower than '0,' and there is low predictive power if the minority is lower than '0'. We may infer that our model has a modest predictive potential from Table 7's finding that the majority of the PLS model's errors were lower than those of the LM model.

TABLE 7: PLS-LM Model Errors for Assessing Model Predictive Power

Item	PLS RMSE	LM RMSE	PLS-LM RMSE	Q ² _predict
AT1	0.931	0.866	0.065	0.046
AT2	1.044	1.013	0.031	0.034
AT3	1.123	1.174	-0.051	0.03
EC1	1.022	1.057	-0.035	-0.007
EC2	1.118	1.155	-0.037	-0.007
EC3	1.085	1.157	-0.072	0.012
EC4	1.071	1.11	-0.039	-0.011
SA1	0.924	0.863	0.061	0.125
SA2	1.199	1.229	-0.03	0.134
SA3	1.029	1.027	0.002	0.078

SI1	0.86	0.902	-0.042	0.217
SI2	0.949	1.006	-0.057	0.084
SI3	1	1.025	-0.025	0.256

Three fit measures were used to further ascertain if the model have sufficient predictive relevance. The Standardised Root Mean Residuals (SRMR = 0.042), Norm Fit Index (NFI = 0.78) NFI; and RMS theta (0.13) further indicates that the theoretical model application is appropriate for this research as well as the data and the model for this research is a good fit.



5.0 Discussion

5.1 Theocratic al Implications

The results of the research offer a potentially useful tool for academics and professionals to create original and fascinating recommendations within the current theoretical framework, by examining the effect of sustainable advertising on consumers' intentions in sustainable consumption. The Theory of Planned Behavior (TPB) is used by the conceptual framework to develop linkages between components that support the purpose of sustainable consumption. The TPB is extended to include new findings and results due to the addition of new structures (Ajzen, 1991). To close the attitude-behavior gap in the literature, this study investigates how sustainable advertising affects a particular generational cohort's desire to engage in eco-friendly consumption. All things considered; the findings of variable correlations offer empirical perceptions into forecasting sustainable consumption intention. Further, It draws attention to the roles played by many factors in determining how sustainable consumers behave. The results show that environmental concern (EC), which was included

as a mediating factor, has a detrimental effect on the connection between attitude (AT) and intention. Future studies might modify this mediation paradigm to get findings that differ from those of this one. If consumers do not have the appropriate knowledge, tools, and opportunity to voluntarily adopt the habit, quick behavioral change among them is improbable (Rex, Lobo, & Leckie, 2015). According to the study's findings, there is no statistically significant link between perceived behavior control (PBC) and the desire to engage in sustainable consumption (SI). This result adds to the argument that PBC may not be a substantial factor in determining voluntary activities.

5.2 Managerial Implications

The increasing interest in pro-environmental behavior has led to the creation and marketing of sustainable products (Garetti & Taisch, 2012). Consequently, the marketing landscape is rapidly evolving due to the growing emphasis on pro-environmental conduct. Developing countries are expected to adopt environmentally sustainable practices due to globalization and heightened economic activities (Diallo, 2012). However, conveying the concept of sustainability effectively to consumers has proven challenging for marketers. This study provides valuable insights for retailers and companies targeting the Gen Z consumer segment, offering essential behavioral insights into the public's intentions regarding sustainable consumption.

The analysis reveals a positive correlation between environmental concern and attitude, suggesting that effective marketing communication strategies can heighten concern levels among Gen Z individuals. The research findings offer guidance for marketers in creating dynamic communication efforts to foster positive associations with the benefits of sustainable behaviors. Additionally, the study suggests implications for crafting compelling advertising strategies to influence sustainable consumption intentions. This could involve disseminating pertinent environmental information through various promotional channels to broaden the reach of sustainable advertising to individuals.

Given the significance of environmental knowledge and concern in predicting sustainable behavior, marketers should include factual background information in their communication messages about pertinent environmental issues. This approach can illustrate how product usage contributes to reducing ecological harm and enhancing understanding of pressing environmental matters (e.g., pollution reduction and resource conservation). Consequently, businesses should invest substantially in advertising campaigns aligned with environmental conservation, reinforcing a strong sustainable brand

position (Van Ossel, 2005) by reinforcing socially responsible behaviors in consumers' consumption choices.

According to Tajfel's (1982) description of subjective norms in social identity theory, these standards have a significant impact on how people behave. People describe themselves depending on societal and personal characteristics. Studies have shown how the social identity theory affects consumer behavior. By emphasizing how green purchasing differs from conventional choices or fits with customers' personal and social identities within a particular social group, marketers may create strategies that resonate with consumers. Advertisers can use hedonic and social values to encourage individuals to engage in sustainable behavior, increasing the possibility that they will act in line with the group to which they aspire.

For instance, members of Generation Z are technologically adept, frequently acquiring knowledge through digital media, and frequently sharing subjective experiences online via channels like videos and links (Glum, 2015). Their regular use of the internet, social media, and digital advertising should be incorporated into their marketing strategy (Glum, 2015). Utilizing a viral marketing strategy to spread the word about green consumerism on social media platforms might help encourage people to make green decisions by highlighting the effect of social norms.

Drawing conclusions from this study, it is necessary for marketers to address the perceived problems among customers because of the non-significant association between perceived behavioral control (PBC) and sustainable consumption intention. This might entail procuring techniques, extending the choice of green items, and successfully conveying the accessibility of sustainable products to increase perceived availability. Infomercials showcasing the use of green items or carefully putting products in handy areas might be used by marketers to increase PBC by lowering consumers' levels of confusion and complexity and increasing their engagement in altruistic actions.

5.3 Policy Makers

It is urgently necessary to create proper policies that can handle severe environmental issues including the rise in unsustainable consumption and the weight of the environment on society. As a result, the suggested framework provides essential information that policymakers may use to develop compelling consumer values that can influence sustainable consumption practices.

The observed significant positive correlation between Sustainable Advertising (SA) and Environmental Knowledge (EK) underscores the

influential role of advertisement mediums in enhancing individuals' environmental knowledge. This role is vital in providing pertinent information that enriches individuals' overall understanding of the environment.

Given the critical nature of this aspect, it becomes imperative for environmental policy legislators to gain a comprehensive understanding of consumer behavior and design policies that foster positive shifts towards green consumerism. Such policies should focus on augmenting overall environmental knowledge and societal well-being. Collaborative efforts between environmental and governmental entities can lead to policies aimed at enriching society's environmental knowledge. An example would be the enforcement of stringent laws governing the use of single-use plastic containers in retail and vendor settings, effectively ingraining responsible actions, and minimizing ecological footprints. A notable instance is Sweden's imposition of a \$0.31 tax on commercially produced or imported plastic bags ("Sweden: Details about plastic bag tax," 2020), incentivizing individuals to adopt reusable bags.

Like this, increasing consumer perception of the value of sustainable products necessitates public policy change. This entails establishing pricing ceilings and rules that are consistent with society's capacity to pay, successfully influencing consumer behavior in favor of sustainability. Strategic product placement might also make green items more prominent and make non-green alternatives harder to find. For instance, Tesco and other supermarkets in Malaysia charge RM0.50 for each plastic bag while providing an RM0.20 return for bags that have been used before ("With 'unforgettable bag', Tesco pays shoppers to cut plastic waste, 2018"). Similarly, implementing educational promotional initiatives can impart additional information to individuals, elevating their environmental knowledge. Targeting most Gen Z individuals in high school or tertiary education, hosting educational programs to encourage environmental practices becomes a potent form of sustainable advertising. Singapore, for instance, has proactively fostered a larger talent pool in sustainability by mandating sustainability and climate design courses for technology and design students in higher tertiary institutions. This strategy raises awareness and knowledge about sustainability among the youth, enabling companies to involve fresh minds in projects contributing to the country's environmental welfare.

In conclusion, the integration of comprehensive policies is pivotal to addressing environmental challenges and fostering sustainable behaviors. By leveraging advertising mediums, reinforcing product values, and implementing educational initiatives, policy legislators can drive positive shifts towards a greener future.

6.0 Conclusion

In summary, this study provides valuable insights into the field of consumer behaviour and its implications for sustainable consumption. The findings contribute to the existing scientific literature by shedding light on the factors that influence human choices and by extending the theoretical framework of the Theory of Planned Behaviour (TPB). The study emphasizes the role of sustainable advertising in driving the intention to engage in sustainable consumption, particularly among the Gen Z cohort. It also highlights the mediating effect of environmental concern on attitude and suggests that perceived behavioural control may not be a significant determinant of voluntary sustainable behaviours.

From a managerial perspective, the study offers practical implications for retailers and companies targeting the Gen Z market segment. It emphasizes the importance of effective marketing communication tactics to raise environmental concern and promote positive attitudes towards sustainable consumption. Marketers are encouraged to provide information about environmental issues and highlight how their products contribute to reducing ecological harm. By doing so, they can shape consumers' attitudes and influence their purchasing decisions, ultimately establishing a strong sustainable brand position.

The study also holds relevance for policy legislators who are seeking to address environmental challenges and promote sustainable consumption. The findings emphasize the need for appropriate policies that enhance environmental knowledge and welfare within society. Governments are encouraged to develop and implement policies that enrich individuals' environmental knowledge, such as passing laws to control the usage of single-use plastic containers or implementing taxes on plastic bags. Additionally, public policy interventions can be employed to set price thresholds, regulate product placement, and promote educational programs to increase awareness and knowledge about sustainability among the youth.

By understanding the factors that influence sustainable consumption, it opens avenues for future research and offers guidance for developing effective marketing strategies and implementing policies that encourage environmentally responsible behaviour. With the growing global concern for environmental sustainability, the findings of this study contribute to the ongoing efforts to address the pressing environmental challenges we face today. The study suggests that it is crucial for marketers to prioritize effective communication strategies that increase environmental concern and cultivate positive attitudes by utilizing various channels, particularly social media, to disseminate

accurate information and highlight the advantages of adopting sustainable behaviours. Policy legislators wield a significant influence in advancing sustainability through the implementation of educational initiatives tailored to distinct age cohorts, notably students. These initiatives are designed to augment individuals' comprehension of environmental matters and stimulate the uptake of sustainable behaviours. By directing resources towards education and fostering a broader talent reservoir within the realm of sustainability, policy legislators can effectively drive enduring shifts in behaviour and foster comprehensive environmental well-being.

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