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## Beauty Goes Green: Determinants of Sustainable Purchasing Behavior Among Gen X and Z Filipino Consumers

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### ABSTRACT

Several companies have adopted sustainability as a business approach to create long-term value by ensuring that they operate in an ethical way that protects the social, ecological, and economic environments. Nowadays, the demand for sustainable products has increased in various industries, including the cosmetics industry, and customers go through a complex process when deciding which products to buy. Hence, there is a lack of study in terms of determining the disparity between the purchasing behavior of Generation X and Z. With that, this study determined the specific difference between the purchasing behavior of Gen X and Z as green cosmetic product consumers and identified which among the factors; *environmental consciousness, eco-label, attitude, green advertising and price sensitivity* significantly influence their buying behavior as well as their perception towards them. An online questionnaire was distributed to 385 respondents, and the data gathered for this quantitative study were analyzed through descriptive statistics, t-test, and multiple linear regression. The findings of this study show that while all factors are perceived as important for both generations and have a role in their behavior as a consumer of green cosmetics products, only price sensitivity significantly affect the purchasing behavior of Gen X. On the other hand, both eco-label and price sensitivity significantly affects Gen Z's purchasing behavior toward green cosmetic products.

**Keywords:** Sustainability, Green Cosmetics, Consumer Purchasing Behavior, Gen X, Gen Z

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### INTRODUCTION

The cosmetics industry is one of the industries that is rapidly growing at present. This is due to the products that they provide to the consumers and how important it is in one's daily life. With that, cosmetics are defined to be any mixture or matter that's purpose is to be placed in contact with a human body's external areas such as the skin, hair, nails, lips, etc. Moreover, it aims to improve one's self given that these products tend to clean, perfume, protect and keep each consumer in good condition (Bom et al., 2019).

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Moreover, it is evident that this industry has a very competitive market environment since there are several players that offer similar products to consumers. Hence, they also have the pressure to constantly innovate and adapt to changes in society in order for them to remain relevant in the ever-growing market.

However, there have been several issues pertaining to the operations of companies in the cosmetics industry such as deforestation, animal testing, use of toxic chemicals, and improper disposal of waste resulting in a decline in the growth of the industry. These companies then started creating products that contain green ingredients, use recyclable packaging, and create initiatives that contribute to the betterment of the environment. In addition, these companies also started using these initiatives to differentiate themselves from the rest and also position themselves as a company that has adopted sustainability.

This research will be focusing on the purchasing behavior of Generations X and Z specifically because of their wide difference due to their age gap and the society they grew up in. To differentiate, Generation X was born in the years when the world is slowly transitioning to the internet while Generation Z was born in the years when the internet has already been part of an individual's everyday life. Moving on, it should be noted that in the Asia-Pacific region, the number of consumers that are interested in green products is the highest (Amberg & Fogarassy, 2019). With that, it is a great opportunity for cosmetic companies in the Philippines, for example, to introduce green cosmetic products and to emphasize how they can strengthen their sustainable initiatives given that there is a market they can serve.

With that, this paper aims to determine the factors that mainly influence Generations X and Z's purchase behavior on Green Cosmetic Products. Moreover, to uncover the perception of Generations X and Z towards green cosmetic products. Also, to be able to determine the disparity between Generations X and Z as derived from the factors of sustainable purchasing behavior. In addition, to identify how the significance of these factors can help in further innovations in the cosmetic industry and lastly, to be able to discover and propose specific and effective marketing strategies for green cosmetic products.

## **LITERATURE REVIEW**

### ***Cosmetic Industry***

According to Zollo et al. (2021), the cosmetic industry is a rapidly growing industry. Thus, the desire to look young and well-groomed among consumers and people, in general, has also enabled the cosmetics industry to grow at an evident rate in the last decade (Degirmen et al., 2022). Hence, the fleeting increase in demand for cosmetic products has driven global competition – motivating the industry to become more innovative and creative. The cosmetic industry has seven (7) categories to which oral care, skin care, sun

care, hair care, makeup, body care, and fragrances belong (Cosmetics Europe, 2022). On the other hand, according to Statista Research Department (2022), in the Philippines, the most consumed products of cosmetics come from the personal care, skin care, perfumes, and makeup categories, sequentially.

### ***Green Cosmetics: Sustainability in the Cosmetic Industry***

Green cosmetics are defined as products that utilize natural components of the environment that create a big impact on the conservation of the environment. In addition, according to Feng (2016), a cosmetic product can be called sustainable or 'green' if first; the product does not have a short nor a long-term potential hazardous impact. Second, if the product is manufactured in a sustainable process that utilizes raw materials for their formula, packaging, distribution, and the like. Several studies have shown that environmentally friendly products are preferred more than conventional products, and a growing interest in responsible consumption and production, which is one of the critical issues determined within the context of the Sustainable Development Goals (SDGs), have been observed (Degirmen et al., 2022). Hence, the eco-category is no longer exclusive to the niche players. Sustainable innovation is the key to helping cosmetic companies survive in this new market change trend (Feng, 2016).

In support of this, today's adaptation to become "Green" is not only a basic need but also an opportunity for both companies and consumers. Hence, companies adopting green marketing in order to support green products is a strategic move that will not only attract the interest of consumers who are environmentally aware, but it will also get to retain them (Kapoor et al., 2019; Zollo et al., 2021). Innovation is and has always been key, which is why companies now treat sustainability as the innovation's new cutting edge (Feng, 2016). On the basis of (Khan et al., 2021), it is observed that due to the threat of climatic changes, global warming, and environmental issues like the use of detrimental ingredients in cosmetics not only affect consumer health but also creates a huge and long term effect on the environment and consequently, all life.

### ***Environmental Consciousness***

Environmental consciousness reflects an individual's knowledge about environmental issues and the impact of environmental-friendly practices. Moreover, a consumer who is environmentally conscious is aware of how their consumption of products may potentially affect the environment. Such consciousness stems from an individual's belief, disposition, and concern for the environment, which may potentially shape one's buying decision (Tan et al., 2019). Thus, being environmentally conscious makes one knowledgeable of the harmful chemical ingredients that cosmetic products consist of which makes them prefer natural and organic products in order to potentially reduce harmful impacts on the environment (Feng, 2016). In support of this, as stated by Degirmen et al. (2022) and Tan et al. (2019), the number of consumers leaning towards

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desiring to reduce their environmental footprint by cutting out the purchase of products made of synthetic chemicals is rapidly increasing. For that reason, they are able to recognize that their purchasing behavior may have a direct impact on the environment (Feng, 2016).

**H1:** Environmental consciousness significantly influences the purchase behavior of Gen X and Z on green cosmetic products.

**H1.1:** Environmental consciousness significantly influences the purchase behavior of Gen X on green cosmetic products.

**H1.2:** Environmental consciousness significantly influences the purchase behavior Z on green cosmetic products.

### ***Eco-label***

According to the study of Degirmen et al. (2022), the development of national eco-labelling criteria has been considered necessary in order to decrease the environmental pollution that comes from the production and consumption of these products. In addition, eco-labels are the symbol or logo on the product that depicts that the product is sustainable and safe for the environment. Specifically, eco-labeling has been defined as any recognizable symbol attached to the product or its packaging, indicating a company, or a product's performance is orientated by environmental friendliness which is why it is regarded as one of the most recognizable attributes of green products to inform consumers (Song et al., 2019). In accordance with Kumar & Singh (2019), eco-labels are often helpful to consumers when they purchase products for the packaging is the most appealing factor which initially creates an impact on a consumer's purchasing decision which then paves way to make the consumer environmentally aware. As per Tan et al. (2019) and IHEMEZIE et al. (2018), the possibility of consumers purchasing green products can be more likely when there are opportunities for them to access relevant information on the products.

**H2:** Eco-labelling of products significantly influences the purchase behavior of Gen X and Z on green cosmetic products.

**H2.1:** Eco-labelling of products significantly influences the purchase behavior of Gen X on green cosmetic products.

**H2.2:** Eco-labelling of products significantly influences the purchase behavior of Gen Z on green cosmetic products

### ***Attitude***

In research on green consumer psychology, the phenomena of attitude have consistently been highlighted as one crucial precursor of behavioral intention and actual

conduct. According to Wang et al. (2020), attitude is defined as the degree to which a person assesses a specific behavior positively or negatively. Based on a study, attitudes have been identified as a significant determinant of behavior, behavioral intentions, as well as explanatory variables of individual behavior (Kaufmann, et al., 2012).

In accordance with Kaufmann, et al. (2012), recent times have seen an increasing threat to consumer health and wellness worldwide from the existing deplorable environmental circumstances. As a result, consumers are becoming more environmentally conscious in their attitudes, preferences, and purchases. When someone has a positive attitude toward the environment, they are more concerned with environmental problems and pay more attention to eco-social advantages. Some individuals are hesitant to purchase environmentally friendly products due to various reasons, one of which is green skepticism. According to Goh & Balaji (2016), green skepticism is a state or the tendency to mistrust the environmental promises or environmental performance of green products. However, consumers are more inclined to accept the ethical principles of green products if they have a positive attitude toward the company, which positively influences their purchasing habits.

**H3:** Gen X and Z's attitude towards the environment is directly associated with influencing their purchase behavior on green cosmetic products.

**H3.1:** Gen X's attitude towards the environment is directly associated with influencing their purchase behavior on green cosmetic products.

**H3.2:** Gen Z's attitude towards the environment is directly associated with influencing their purchase behavior on green cosmetic products.

### **Green Advertising**

Green marketing refers to the promotion of goods that are safe for both the environment and society at large (Sharma & Trivedi, 2018). Hence, to be more in-depth, green advertising is viewed as a crucial component of a business's entire environmental marketing strategy, which can help it achieve exceptional performance and create a lasting competitive edge (Kao & Du, 2019). Environmental marketing aids in shaping a consumer's values and influencing that consumer to buy environmentally friendly goods (Delafrooz, et al., 2014). Information on green products and a firm's environmental beliefs and efforts are disseminated through advertisements with the aim of promoting and marketing them in light of their environmental benefits. Environmental certifications granted to businesses, their products, as well as other environmental achievements are shared with consumers through green advertising (Kumar, 2017). In the perspective of the consumers, green advertising serves the purpose of promoting a green image and increasing environmental consciousness (Kao & Du, 2019). Using these policy methods is crucial for changing consumer buying habits to favor environmentally friendly goods and

minimizing the harmful effects of synthetic items on the environment (Delafrooz, et al., 2014).

**H4:** Gen X and Z's perception of green advertising greatly impact their purchase behavior on green cosmetic products.

**H4.1:** Gen X's perception of green advertising greatly impacts their purchase behavior on green cosmetic products.

**H4.2:** Gen Z's perception of green advertising greatly impacts their purchase behavior on green cosmetic products.

### **Price Sensitivity**

Price sensitivity is the level of awareness and response consumers exhibit when they discover differences in the prices of goods or services. Price has proven to have a substantial influence on consumers' assessment of alternative products and their choice of purchase. Price serves as both an informational cue and a measure of sacrifice in customers' evaluations of alternative products; the former corresponds to the amount of money consumers must pay, while the latter alludes to the quality and prestige implied by ownership of the goods (Hsu et al., 2017). According to the study conducted by Yue et al. (2020), a major factor influencing purchasing intentions is price sensitivity.

Meanwhile, according to Erdil (2018), due to increased overhead expenses, green products typically cost more to produce than traditional products. Price has thus been recognized as a key barrier to green consumption (Chaudhary & Bisai, 2018). Customers who were eager to buy green items were willing to pay a relatively high price since they believed that price had little bearing on their decision to buy. However, not all eco-conscious consumers are prepared to shell out more money for eco-friendly goods.

**H5:** Gen X and Z's price sensitivity significantly influences the purchase behavior on green cosmetic products.

**H5.1:** Gen X's price sensitivity significantly influences the purchase behavior on green cosmetic products.

**H5.2:** Gen Z's price sensitivity significantly influences the purchase behavior on green cosmetic products.

### **Consumer Purchase Behavior**

The belief that the planet is already suffering from extremely high levels of pollution and deterioration has fueled the emergence and development of the "movement" for the protection of the environment and the rapid expansion of a new market segment called "green consumers" was also observed. They are the consumers who are more likely to

adopt environmentally friendly practices (Paço et al., 2018). In line with this, there is now an increasing trend toward having a 'clean' and 'healthy lifestyle' hence, the demand for green cosmetics is acquiring more popularity (Borges & Paananen, 2020). Green behaviors typically go hand in hand with green consumption (Paço et al., 2018). It is a procedure that involves various complexity levels at various stages. The said stages are: 1) Identification of problems and needs, 2) Searching for alternatives, 3) Evaluation of alternatives, 4) Making the purchase decision, and 5) Post-purchase behavior (Sharma and Trivedi, 2018).

A study conducted by Castillo (2018) mentioned that the unique purchasing behavior of Filipino consumers is what they are known for since it has already become a way of life and this can be seen through Filipino consumers' clear understanding of the products and services being offered to them. It is of interest to examine the relationship between external and internal factors, and the behavioral responses of the consumers in order to understand the needs and trends of the consumers so that a firm's competitive advantage can be produced (Duong et al., 2021). According to Ramya & Ali (2016), psychological, social, cultural, economic, and personal factors affect the consumer's decision-making process, habits specifically in terms of shopping, buying behavior, and the brands or merchants he/she acquires. In connection, the study on consumer behavior will provide information regarding the needs and wants of consumers, and how they deliberate and choose a certain branded product (Bhuvaneshwari & Kanchana, 2020).

**H6:** There is a significant difference on Gen X and Z's purchasing behavior on Green Cosmetic Products

### **Generation X**

Those in the Gen X were born between 1965 and 1976. It is also stated in the study that they are one of the most educated generations (Adiba, 2019). They look for products that can aid them with their issues (Ng & Law, 2015). They are also said to have grown up in a time of rapid consumer change, which made them more flexible to change (Fuciu, 2021). However, marketing for Gen X can be sometimes difficult since they are the digital and traditional generation. Gen X can be triggered by several factors in the marketing process. (Slootweg & Rowson, 2018). When buying, they are motivated inherently and are still using traditional methods in decision-making with risk avoidance (Sedik et al., 2018). Moreover, factors such as social influence, concern for the environment, self-image, and effectiveness also affect Gen X's green behavior (Fauzi & Hashim, 2015).

### **Generation Z**

People who belong to Gen Z are born between 1995-2010 (Djafarova & Foots, 2022). This generation is dependent on technology and they are highly aware of the most recent news and global crises (Djafarova & Foots, 2022). Moreover, Gen Z is found to be more

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inclined to new technologies, physical stores, and brand loyalty (Sedik et al., 2018). Those who belong to Gen Z are the ones who are most eager to incorporate sustainability into their daily lives among the current consumer generations (Djafarova & Fouts, 2022). In addition, this generation is more environmentally conscious and has a better attitude about buying green products (Lavuri et al., 2021). The restricted purchasing power of young consumers means that price is a key factor when they are making buying decisions (Chaudhary & Bisai, 2018). However, a study by Simangunsong (2018) showed that members of Gen Z are consumptive buyers since they tend to be impulsive when it comes to products that they desire. The members of Gen Z demonstrate a strong interest in social responsibility. Hence, they look for environmentally friendly products and services that uphold social responsibility, protect the environment, protect workers, and aid local communities. Although some research indicates that Gen Z looks for companies that they believe have a beneficial impact on the environment, other studies indicate that this generation is more environmentally conscious in terms of attitudes than in terms of behavior (Djafarova & Fouts, 2022).

### Hypotheses of the research

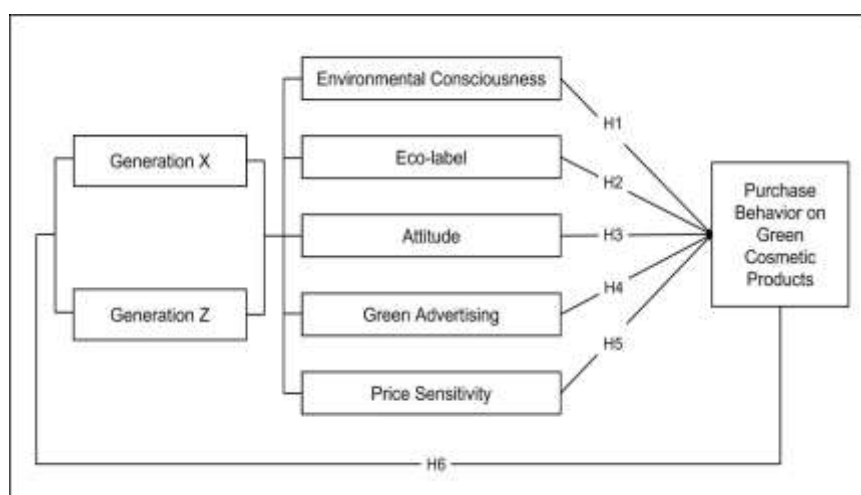


Figure 1. Hypothesis of the research

The model above shows a comparison on the results between two (2) generations, Gen X and Gen Z, about how the five (5) determinants of green purchasing behavior which are environmental consciousness (IV1), eco-label (IV2), attitude (IV3), green advertising (IV4), and price sensitivity (IV5), individually affect (represented by individual arrows) their purchase behavior on green cosmetic products (DV). At the end of the study, the researcher aims to determine how the two (2) generations differ in their green purchasing behavior.

The framework shown presents the independent and dependent variables which have the following hypotheses: H1: Environmental consciousness significantly influences the purchase behavior of Gen X and Z on green cosmetic products; H2: Eco-labelling of



products significantly influences the purchase behavior of Gen X and Z on green cosmetic products; H3: Gen X and Z's attitude towards the environment is directly associated with influencing their purchase behavior on green cosmetic products; H4: Gen X and Z's perception of green advertising greatly impact their purchase behavior on green cosmetic products; H5: Gen X and Z's price sensitivity significantly influence the purchase behavior on green cosmetic products; and H6: There is a significant difference on Gen X and Z's purchasing behavior on Green Cosmetic Products.

## **METHODOLOGY**

The researchers made use of a quantitative approach in order to accurately analyze the data and at the same time, provide an interpretation of the result. To be more specific, the research is descriptive quantitative research since it focuses on describing the characteristics of the researchers' chosen population. Moving forward, this study aimed to determine the difference between Gen X and Z's responses toward the factors influencing green purchasing behavior. Furthermore, a stratified sampling method was utilized to determine the respondents of the research specifically in terms of the generation they belong to. According to Lynn (2019), most surveys make use of stratified sampling given that one of its benefits includes precision gains. This guided the researchers in the analysis of data, interpretation of the survey results, and testing of the hypotheses previously presented.

Moreover, the instrument used for the quantitative data collection of this study is a researcher-made and adapted survey questionnaire, concurrently. With a confidence level of 95%, a margin error of 5%, and a response distribution of 50%, a total sample size of 385 is obtained. The qualified respondents are from National Capital Region (NCR), belonging to either Gen X, those born from years 1965 to 1980, or late Gen Z, those born from years 1997 to 2004. With that said, respondents coming from Gen Z but are born from 2005 onwards are not qualified as they are still under legal age as of the time of the study. Additionally, the respondents went through a screening process hence, all qualified respondents are cosmetic product users who are aware of sustainable efforts done by cosmetic companies.

On the other hand, descriptive statistics were deployed in the study thus, the mean and standard deviation of each factor was computed. This gave the researchers a summary of the data which made it able to include measures of averages, variability, and the like. The means of the data are interpreted as follows: 5.16 - 6.00 (Strongly Agree), 4.33 - 5.15 (Agree), 3.50 - 4.32 (Slightly Agree), 2.67 - 3.49 (Slightly Disagree), 1.84 - 2.66 (Disagree), and 1.00 - 1.83 (Strongly Disagree).

Furthermore, a t-test was also utilized to determine whether there is a significant difference between the two generations; Gen X and Gen Z, for each factor that is present. Withal, multiple linear regression was applied upon the completion of data

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gathering, seeing that there are multiple independent variables present such as environmental consciousness, eco-label, attitude, green advertising, and price sensitivity. Hence, this analysis allowed the researchers to assess the strength of the influence between the dependent variable and several independent variables that serve as predictors (Takemura, 2021).

### RESULTS

From the 385 respondents, it shows that most of the respondents were female for both Gen X (78.31%) and Gen Z (87.24%). Moreover, 56.07% of Gen X are married while 99.49% of Gen Z are single, with the majority of both generations belonging to SEC AB accounting to 43.39% and 46.43%, respectively. The highest educational attainment for most of Gen X is a Bachelor's degree (61.90%) while a high school diploma (35.71%) for Gen Z. Lastly, both generations were dominated by those residing in Quezon City, with a total 39.68% for Gen X and 39.80% for Gen Z.

**Table 1. Independent Sample T Test**

	Generation	Mean	Std. Deviation	t	p
Environmental Consciousness	Gen X	4.348	.9351	-2.56	.011*
	Gen Z	4.583	.8668		
Eco-Label	Gen X	4.079	1.0735	-2.91	.004*
	Gen Z	4.383	.9765		
Attitude	Gen X	4.375	.9259	-2.48	.014*
	Gen Z	4.611	.9378		
Green Advertising	Gen X	4.213	.8920	-3.23	.001*
	Gen Z	4.507	.8886		
Price	Gen X	4.316	.7472	-2.75	.006*
	Gen Z	4.533	.8053		

Table 1 shows the factors mainly influencing the purchasing behaviors of Gen X and Z – *environmental consciousness, eco-label, attitude, green advertising, and price sensitivity*. The results reveal that there are significant differences in all the factors of green purchasing behavior between the two (2) generations.

**Table 2. Descriptive Statistics for Generation X (N = 189) and Generation Z (N=196)**

	Generation X				Generation Z			
	Mean	Std. Dev.	p	Interpretation	Mean	Std. Dev.	p	Interpretation
Environmental Consciousness	4.348	.9351	.011*	Agree	4.583	.8668	.011*	Agree
Eco-Label	4.079	1.0735	.004*	Slightly Agree	4.383	.9765	.004*	Agree
Attitude	4.375	.9259	.014*	Agree	4.611	.9378	.014*	Agree
Green Advertising	4.213	.8920	.001*	Slightly Agree	4.507	.8886	.001*	Agree
Price Sensitivity	4.316	.7472	.006*	Slightly Agree	4.533	.8053	.006*	Agree

\*Significant at  $p < 0.05$

Table 2 describes the perception of the respondents from Gen X and Z for each factor, represented by their level of agreement through the interpretation of each mean score. For both generations, there are *significant differences* in all the factors given. In terms of their level of agreement, Gen X only shows two variabilities, *agreeing* to environmental consciousness and attitude, while *slightly agreeing* to eco-label, green advertising, and price sensitivity. On the contrary, Gen Z exhibits no variability in terms of their level of agreement for each factor. The results reveal that Gen Z *agrees* that environmental consciousness, eco-label, attitude, green advertising, and price sensitivity contribute to their green purchasing behavior.

**Table 3. Regression Analysis for Generation X**

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.024	.261		7.741	.000
Environmental Consciousness	.017	.091	.021	.184	.854
Eco-Label	.150	.078	.218	1.918	.057
Attitude	-.050	.104	-.062	-.477	.634
Green Advertising	.091	.079	.110	1.151	.251
Price	.416	.084	.420	4.946	.000

Dependent Variable: Consumer Purchase Behavior

Note:  $R^2 = 0.391$ , (N = 189,  $p = 0.00$ )

In line with Table 3, a multiple regression was calculated to predict which factors of green purchasing behavior influences Gen X. A significant regression equation was found ( $F(5,183) = 23.503$ ,  $p < 0.00$ ), with  $R^2$  of 0.391. This means that 39.1% of the variation in Gen X's purchase behavior is because of the variation in several factors of green purchasing behavior. Gen X's purchase behavior is equal to  $2.024 + 0.416Pr$ , where  $Pr$  is price sensitivity. With this, the respondents' predicted purchase behavior increases by 0.416 for every one-unit increase in price. On the other hand, all other factors were found to be *insignificant* in affecting the purchase behavior of Gen X.

Table 4. Regression Analysis for Generation Z

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.537	.258		5.970	.000
Environmental	.183	.095	.202	.1923	.056
Eco-Label	-.170	.078	-.211	-2.185	.030
Attitude	.112	.113	.134	.992	.323
Green Advertising	.098	.096	.110	1.015	.311
Price	.469	.091	.480	5.176	.000

Dependent Variable: Consumer Purchase Behavior

Note: R<sup>2</sup> = 0.480, (N = 196, p = 0.00)

Table 4 displays the results of multiple regression that was used to predict which factors of green purchasing are significant. A significant regression equation was found ( $F(5,190) = 35.106, p < 0.00$ ), with R<sup>2</sup> of 0.480. This means that 48.0% of the variation in Gen Z purchase behavior is because of the variation in several factors of green purchasing behavior. Gen Z's purchase behavior is equal to  $1.537 - .170EL + 0.469Pr$ , where *EL* is eco-label and *Pr* is price sensitivity. This means that the respondents' predicted purchase behavior decreases by 0.170 for every one-unit increase in eco-label while it increases by 0.469 for every one-unit increase in price. Moreover, all the other factors were found to be *insignificant* in affecting the purchase behavior of Gen Z.

## DISCUSSION

The study finds that H1.1 and sub-hypothesis H1.2 are both rejected in which it is stated that Environmental Consciousness significantly influences the purchase behavior of Gen X and Z on green cosmetic products. This is due to the statistical analysis resulting in an insignificant value. This is contrary to the findings of Bhavana & Thiruchanuru (2018) and Brand et al. (2022) who state that 66% of Gen Z revealed their concern about the environment before making a purchase. Hence, it was also discussed in the aforementioned studies that Gen Z is more interested in the betterment of the environment and that they are more inclined in purchasing sustainable products as they are more concerned about global warming and environmental degradation.

In substantiating H2.1, the statistical results depict that eco-labels do not produce a significant effect on the purchasing behavior of Gen X given that the statistical value meant that eco-labels bear no importance and impact when it comes to the purchasing behavior of Gen X. According to Brand et al. (2022), one of the possible reasons as to why Gen X is not aware of the sustainable initiatives nowadays could be the fact that throughout most of their lives, environmental issues such as climate change, pollution, and the like did not receive as much media attention and public interest during their time contrary to how it is given attention as they do today. Meanwhile, based on the results for Gen Z consumers, it is found that eco-labels are one of the main factors that affect their purchasing behavior. Having that information, sub-hypothesis H2.2 affirms that Gen

Z consumers are impacted by eco-labels for they are essential in green cosmetic products. In line with this, according to Brand et al. (2022), Gen Z are influenced by eco-label more significantly as compared to Gen X. This is due to the fact that Gen Z consumers are more aware and knowledgeable of what they are and what their relevance to green products is.

As per H3 and sub-hypothesis H3.1 which states that Gen X and Z's attitude towards the environment is directly associated with influencing their purchase behavior on green cosmetic products, the statistical results show that both Gen X and Z find this factor insignificant. This is contrary to the findings of Hsu et al. (2017) and Pop et al. (2020) that attitude and subjective norms positively impacts the intention of consumers to purchase green cosmetic products. Moreover, Gen Z maintains a strong personal and moral attitude on issues related to ethics and the environment. The younger generation is highly conscious of their consumer impact and they do not want to harm the environment for future generations (Djafarova & Fouts, 2022). Furthermore, based on the study of Bhavana & Thiruchanuru (2018), 44% of gen Z have said that they would favor products which are made of recycled materials.

Subsequently, H4 and sub-hypothesis H4.1 state that green advertising greatly impacts Gen X and Z's purchase behavior on green cosmetic products and is found to be ineffective due to its statistical value. Hence, this translates that green advertising is not a main factor that produces a big impact on both generations' purchase behavior towards green cosmetics. This contradicts the findings of Delafrooz et al. (2014) that environmental advertising significantly influences a consumer's purchasing behavior. To add, the findings of the current study is in line with the results of the study conducted by Moore (2022) which states that green advertising is not as effective as they may have been for Gen Z because they are more susceptible to being influenced by superficial aspects considering that they are less invested in green advertising.

Sequentially, H5.1 and sub-hypothesis H5.2 point out that Gen X and Z's price sensitivity significantly influences the purchase behavior of green cosmetic products. The study results indicate that price greatly influences their purchase behavior as per the statistical result for both generations. Hence, we can conclude that price plays a vital role in the intention of Gen X and Z of purchasing green products seeing that it is the main factor for both generations. This is in line with the study of Hsu et al. (2017) and Yue et al. (2020) that proves price to have a substantial influence on consumers' purchasing behavior on products and their choice of purchase. As per Brand et al. (2022), Gen Z's motivation to buy green products seems to be stronger and they are willing to pay a premium for sustainability attributes. Meanwhile, Gen X consumers embody higher purchasing power, due to a higher disposable income compared with other generations. Thus, they are more attentive towards product characteristics while at the same time they take a higher degree of accountability, as well as evaluating aspects such as quality, price, opinions, and environmental issues; making them more cautious when pursuing

new purchases (Brand et al., 2022 & Navas et al., 2021). Given this, if a product will increase its price, Gen X and Gen Z consumers are more likely to divert their purchase decision. As with green products, they are typically price-sensitive, and the price factors influence their purchasing behavior (Erdil, 2018). In support of this, as stated by Chaudhary & Bisai (2018), the price can also serve as a key barrier to green consumption in view of the fact that highly price sensitive consumers are greatly influenced by the price changes.

On account of this, it is evident that there is a significant difference between the purchasing behavior of Gen X and Z towards green cosmetic products which validates H6. To be more in depth, Gen Z consumers are much more likely to purchase green cosmetic products due to the fact that there are significant differences in all the factors of green purchasing behavior between Gen X and Z. As per Gen Z, they are leaning more towards the positive side of the factors for green purchasing behavior seeing that the statistical result indicate that they are more environmentally conscious. Subsequently, eco-labels are much more relevant to them as well while their attitude greatly impacts their purchasing behavior. Moreover, it is also found that green advertising and price influence them as well as compared to Gen X. Given that information, the aforementioned factors play a pivotal role in how both generations purchase green cosmetic products. In addition, in accordance with Bhavana & Thiruchanuru (2018) and Brand et al. (2022), one of the distinctive attributes of Gen Z consumers is that they have no tolerance to waste thus, they prefer products that are ecologically safe. Contrastingly, Gen X consumers have a lower result which means that they are not as aware and environmentally inclined to purchase green cosmetic products.

### ***Implications***

The present study has been able to explore some factors that can significantly affect the buying behavior of Gen X and Z when it comes to green cosmetics products. However, the researchers suggest that a similar study be done to explore areas that were not explored or covered by this study (e.g. other generations and mediating variables). Moreover, it is also suggested that a mediating variable be added to future studies to gain valuable insights regarding the relationship between the variables. Future researchers can utilize and benefit from this study by identifying what specific innovations can be done by companies to improve the products and operations of companies to obtain more sustainable realized outcomes. To add, researchers can utilize this study to compare and have a more in-depth analysis of the different consumer segments and their willingness to purchase green products. Lastly, since this study focused on Filipino consumers, future researchers can test the same factors with consumers with different cultural backgrounds to see whether there is a significant difference in their buying behavior. By following the aforementioned recommendations, future researchers will be able to determine which factors of sustainable consumption influence the purchasing behavior of various generations.

## CONCLUSIONS

The study finds that while all factors are perceived by both Gen X and Gen Z to play an important role in their sustainable purchasing behavior, each generation has different levels of agreement. While Gen X acknowledges the connection between environmental consciousness and attitude more as compared with all other factors, Gen Z gives equal weight for all of the factors.

As to the actual behavior of Gen X, the findings indicate that price is the only factor that influences their sustainable purchasing behavior. This means that the said generation is considered to be price-sensitive especially in situations where they need to decide whether to buy a green cosmetic product. While for Gen Z, both price and eco-label are crucial upon purchasing a green cosmetic product. Aside from being price-sensitive, the said generation sees that the presence of eco-labels are important when determining whether they will buy such products, as the absence of eco-labels can result in Gen Z consumers being less likely to purchase.

### ***Limitations and Recommendations***

The researchers focused on the cosmetics industry for this study since this industry has an adverse impact on the environment and, thus, provides a lot of areas to improve on to be more sustainable. This study has provided new insights regarding the green purchasing behavior of Gen X and Z and what factors significantly affect their buying behavior. Accordingly, carefully considering how environmental consciousness, eco-label, attitude, green advertising, and price sensitivity of consumers may contribute to the improvement and further innovation of the cosmetics industry would help formulate effective marketing strategies. Thus, the researchers make the following recommendations to:

**Marketers:** Focus their marketing efforts towards Gen Z since based on the results of this study, they are more knowledgeable and environmentally aware of issues and initiatives. In sub-hypothesis H2.2, Price and Eco-label are the factors that significantly affect their buying behavior, suggesting that they are more conscious of how their purchasing habits can impact the environment and that they value economical products. On the other hand, marketers should increase their efforts in reaching and spreading awareness among Gen X regarding sustainability and green products since only price affects their purchasing behavior. This suggests that they value affordability more than sustainability.

**Cosmetic Business and Company Owners:** The findings of this study can greatly help businesses in the industry strategize to penetrate their target audience. According to the results, Price and Eco-labelling are the main factors affecting the buying behavior of Gen Z, while Price significantly affects the buying behavior of Gen X. These factors should be the key priorities of businesses in the industry if their target market are Gen X

and Z. Furthermore, cosmetics businesses can use this study as a basis on how to improve their operations to become sustainable.

**Product Development:** Since sustainable factors affecting green purchasing products are identified, research and development teams of business owners in the cosmetics industry can make use of these findings and focus on where they can improve; specifically on maximizing the use of eco-labels on product packaging to be able to depict authenticity. With that, the R&D team should dwell more into determining the right price for their consumers as stated in H2 and H5 since it is pivotal for price-sensitive consumers who care a lot about this – it is important to execute a plan that attracts and captures their interest.

**Promotion Efforts and Strategy:** As stated in H3, green advertising do not significantly influence the purchasing behavior of Gen X and Z towards green cosmetic products as they believe that this is just a scheme of companies, hence, marketing strategies should be heightened, be more convincing, and authentic. Consumers of cosmetic products are not that aware and knowledgeable about green initiatives yet, thus, this could be an opportunity for businesses to innovate, promote, and increase awareness not only for green cosmetic products but for sustainable initiatives as well. Promotions should be inclusive and real in order to gain the trust of consumers.

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