

# Green Purchase Intention of Indonesian Young Consumers: Extending VAB Framework

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## **ABSTRACT:**

The study aims to investigate the determinants of green purchase intention of generation Y and Z in Indonesia, more specifically on the green straws. Quantitative methodology was carried out through disseminating the online survey and analyzing the collected used of PLS-SEM. From 394 respondents, the findings showed the value-attitude-behavior (VAB) framework was successfully applied in this study. It meant perceived green value and green attitude significantly impacted on the green purchase intention. In addition, environmental concerns were proven to be the predecessor of the VAB framework as well. The moderating effect of gender only appeared on the relationships of perceived green value-green purchase intention and green attitude-green purchase intention; not on the environmental concerns-green purchase intention. From the theoretical perspective, this study contributes to the extension of the VAB framework through the inclusion of environmental concerns. From the managerial perspective, it provides the specific approaches for males and females consumer groups to awake their green purchase intentions.

## **Keywords:**

*Perceived green value, green attitude, green purchase intention, environmental concerns, gender.*

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## **1. INTRODUCTION**

Current business trends draw closer to sustainable development by pursuing the leading dimensions of environmental, financial, and social at once along with their business activities (Silvestre & Țircă, 2018). A company should make sure that any effort to do so on fulfilling the consumer's present needs will not ruin the resources for satisfying the future generations (Paul et al., 2016). It implies that any business activities involving supplier, production, marketing, and selling shall avert any detrimental issue on environmental, social, or both dimensions while earning the profits. Unfortunately, such a situation is far from the current reality where environmental degradation occurs due to bad impacts of many business activities. To endorse the environmental conservation from business domains, for years, the business studies with topics of green consumption (Halder et al., 2020), green product (Tan et al., 2019), and green marketing (Chang et al., 2019) are gradually raising. They represent the worldwide concerns on environmental issues as its likely follow-up is the social destruction and the social dimension since the environment is a large part of the human ecosystem.

To develop the sustained social dimension, society and companies agree on having the favorable public health as the priority (Ajmal et al., 2018). However, the challenge is that the quality of public health is constantly decreasing to the worrying level due to the global environmental damage. For instance, National Geographic explains that there are eight million tons of plastic waste will pile up in the ocean and result in the environmental pollution every year (L. Parker, 2019). Indonesia, known as the second largest of plastic waste contributor after China, contributes 1.29 million tons per year (Adharsyah, 2019; Jambeck et al., 2015). Such a huge amount of plastic waste which is certainly hard to degrade in a short time will lead to decreasing creatures' life quality. A chemical release like BPA, PBDE, and phthalate from the plastic can bring bad impacts on the endocrine system and reproduction of humans (Borg et al., 2020; Kumar, 2018; A. T. Nguyen et al., 2020). Acting responsibly towards that issue, Indonesian governments perform plastic waste management supported by the government policies and eco-friendly campaigns like green straws to substitute the plastic straw usages. Nonetheless, Indonesia's demands over green products like green straws are seemingly far lower than other countries, such as Australia and England (Hamdani, 2019).

Seeking a significant means to increase the pro-environmental behavior as green purchase, the consumer groups from gen Y and Z are necessary to pay further attention. According to the Indonesian census by 2020, they belong to the dominant generations within the Indonesian demographic structure which is about 25.87% and 27.94% of 270.20 million Indonesian populations (BPS RI, 2021). It puts them to have great influences among all generations, including their stances on resolving the current environmental issues. Gen Y and Z possess stronger comprehension than the previous generation, especially in the fact that human activities play large parts in resulting on the environmental damage (K. Parker et al., 2019). However, it is seemingly not enough to convert the comprehension into the real green behavior from both generations and yielding the intention-behavioral gap (Echegaray & Hansstein, 2017; ElHaffar et al., 2020; Naderi & Van Steenburg, 2018). The reluctance of consumers to change drastically their habits if necessary when endorsing green behavior could be the primary cause of such a gap (Heo & Muralidharan, 2017). In addition, (ElHaffar et al., 2020) who have extensively reviewed the past studies of the green gap argued that it was critical to continuously investigate the causes to provide the effective means on modifying the gap.

One of the widely used theories to study green behavior in a rational approach is Value-Attitude-Behavior (VAB) framework, developed by (Homer & Kahle, 1988). For instance, (M. F. Y. Cheung & To, 2019; Kang et al., 2015; Kautish & Sharma, 2019; Shin et al., 2017) VAB framework deems value as the antecedent of green behavior after mediated by attitude. However, according to (ElHaffar et al., 2020), despite positive VAB occurs, the green gap still might exist due to the absence of environmental concern. Therefore, this study attempts to examine the green purchase intention of Gen Y and Z, specifically for green straws, by including environmental concerns into the VAB framework. This study argues that the environmental concern will act as the precursor of the VAB framework as the past studies have not paid attention to it (e.g. Suki, 2015; Verma et al., 2019; Wei et al., 2018; Woo & Kim, 2019; Zhao & Chen, 2021). Besides that, this study proves the moderating effect on gender as the several past studies have confirmed its effect (Leonidou et al., 2015; T. N. Nguyen et al., 2017; Sreen et al., 2018). Thus, this study can provide more specific suggestions to intervene the female and male consumer groups in both generations.

## 2. LITERATURE REVIEW

To figure out the green behavior or behavioral intention, a framework widely used by many earlier studies is Value-Attitude-Belief (VAB) framework which was discovered by (Homer & Kahle, 1988). It clears up the logical sequences on how to value residing on the abstract dimension subsequently, then get translated into attitude to develop a particular behavior in the end. The framework deemed could clarify the commonly conflicting result about people's little actualization on dealing the environmental issues despite the great environmental values (M. F. Y. Cheung & To, 2019). Rooting from an environmental context, the usage of VAB is not only limited to the studies of green products (e.g. M. F. Y. Cheung & To, 2019; Shin et al., 2017) but also other health products like organic or healthy foods (e.g. Kang et al., 2015; Kautish & Sharma, 2019). From those studies, the distinct contexts of the study still show the consistent relationships among value, attitude, and behavior following the VAB framework.

In the VAB framework, the value is the antecedent of attitude and behavioral intention (Kautish & Sharma, 2019). In this study, perceived green value demonstrates a set of attributes of products that are highly about environmental values (Chen, 2016). This variable stems from the equity theory where the consumers will take more potential benefits into account than the costs needed before conducting a certain behavior (R. Cheung et al., 2015; Zeithaml, 1988). Thus, for perceived green value, the consumers certainly mind the potential environmental benefits of the green product which could illustrate their expectations upon its performance (Song et al., 2019). A value possesses a great influence on the consumer as the guidance in evaluating and doing a particular action (Liao et al., 2020). While considering the value, someone will possess a favorable evaluation (attitude) and result in performing the behavior (Kautish & Sharma, 2019). The great impact of values on consumers' decision-making is necessary to address the company through products with superior values to endorse the consumers' preferences for the product. Focusing on consumers' values, the company will not only get the consumer's purchase intention increased but also develop the long-term relationship due to the consumers' trust in the company's capabilities (R. Cheung et al., 2015; Lam et al., 2016). Aligning with this information, in the green product context, (Steg, 2016) it is explained that perceived green value is a vital precursor of green behavior which has been proven from earlier studies (R. Cheung et al., 2015; Dhewi et al., 2018; Lam

et al., 2016). Meanwhile, the perceived green value impacts on green attitude have been confirmed as well by (Kautish & Sharma, 2019; Liao et al., 2020; Razali et al., 2021).

- H1. Perceived green value positively impacts on green purchase intention
- H2. Perceived green value positively impacts on green attitude

Since the behavioral intention describing someone's readiness to perform certain behavior (Yadav & Pathak, 2017), it is necessary to fully understand any potential determinants to figure out the right strategy for intervening in the behavior. According to the VAB framework, value is not the sole determinant of a green purchase intention; there is an attitude as well (Kautish & Sharma, 2019). In addition, the relationship between attitude and behavioral intention in the VAB framework stems from the grand theory of planned behavior (TPB) developed by (Ajzen, 1985). The constant relationship between the two has been widely proven to be significant in previous studies across contexts, such as Halal food (Amalia et al., 2020), ecolabel product (Mufidah et al., 2018), entrepreneurship (Munir et al., 2019), and tourism (Erul et al., 2020). The attitude presents someone's evaluation of behavior whether he prefers it or not (Ajzen, 1985; J. Chin et al., 2018). If someone shows his favor after the evaluation, thus the intention to do it will be stronger than the opposite situation. In this study, the purchase intention of gen Y and Z over green products is expected to appear once their positive evaluations of the behavior have been established. This presumption is built on the previous studies of green products, for instance (Verma et al., 2019) proving the relationship between attitude and intention of visiting green hotels; (Paul et al., 2016) demonstrating the purchase intention of green products in the developing country, i.e. India; and (Chaudhary & Bisai, 2018) explaining millennials' attitude on the green purchase intention.

- H3. Green attitude positively impacts on green purchase intention

This study attempts to broaden the VAB framework by including environmental concerns with their role as the core determinant. This approach aims to reduce the green gap as identified by (ElHaffar et al., 2020). The environmental concern implies on someone's conscious behavior to be aware of environmental issues and personal attempts to seek solutions (Jiang & Kim, 2015). Someone with high environmental concern likely has a larger green purchase intention as perceiving the benefits of green products for the solution of an environmental issue (Heo & Muralidharan, 2017). The rationale is that environmental concern possesses characteristics in three dimensions of affective, cognitive, and conative, according to (Bouscasse et al., 2018). In the cognitive dimension, it means someone has proper knowledge of environmental problems (Bouscasse et al., 2018). Thus, he develops his affective dimension as feeling troubled about the environmental problems (Bouscasse et al., 2018). Therefore, he shows favor on any attempts on resolving it. A study on the green housing context by (Zhao & Chen, 2021) argued that people with higher environmental concerns will more heavily focus on a product's environmental performance and more easily recognize the perceived green value. Thus, his concern grows to the actions of conserving the environment, for instance having green purchase intention as including the conative dimension (Bouscasse et al., 2018). (Liao et al., 2020) confirms such conative dimension and deems the environmental concern is the prerequisite of pro-environmental behavior. The study of (Wei et al., 2018) confirms it by proving the consumer's visit intention on green hotels

relies on how large the consumers' concerns about the environment are. The consistent pattern about environmental concern exists regardless of the countries, such as Taiwan (Mufidah et al., 2018), Brazil (Junior et al., 2015), and India (Verma et al., 2019; Yadav & Pathak, 2017). In addition, based on (Bouscasse et al., 2018), this study argues that environmental concern can affect the perceived green value, besides its effect on the green attitude as confirmed by (Chaudhary & Bisai, 2018; Verma et al., 2019).

H4. Environmental concern positively impacts on the perceived green value

H5. Environmental concern positively impacts on green attitude

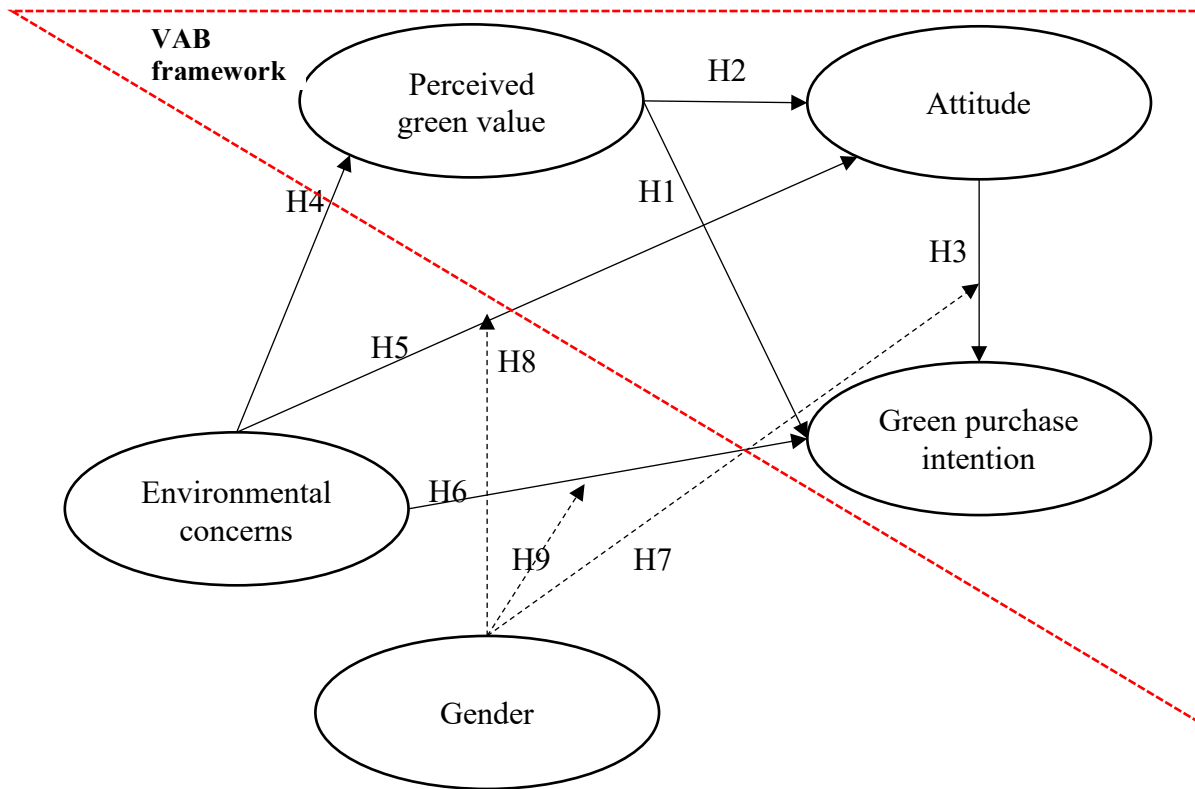
H6. Environmental concern positively impacts on green purchase intention

Consumer's sociodemographic, like age, gender, education, and income level in green products have been examined for a long time, for instance (Chng et al., 2019; Klein et al., 2019; Muralidharan et al., 2015; Quoquab et al., 2020; Witek & Kuźniar, 2020). As there are inconsistent results of sociodemographic on green purchase intention in several different studies, the sociodemographic variable is considered more suitable to be a moderator (Leonidou et al., 2015; Quoquab et al., 2020). They added that among all kinds of sociodemographic, gender is a key criterion for influencing someone's attitude toward green products. A significant difference in environmental interests between females and males has been examined by (He & Jiang, 2019). Specifically, the study was investigated within the context of gender diversity on the company's director's board toward green innovation. It uncovered that the director board with at least two female directors would have higher green innovation rather than the board with one female leader or not at all. The differences in biological and socialization between males and females have caused different value orientations as well among the groups, including environmental orientation (T. N. Nguyen et al., 2017; Sreen et al., 2018). The higher communality (warm, friendly, etc.) on females than males will make them be more aware and sympathetic towards the issues of welfares, including the environmental issue (He & Jiang, 2019; Wood & Eagly, 2015). Corroborating that notion, the studies of (Leonidou et al., 2015; T. N. Nguyen et al., 2017) also showed woman has higher concerns and be pro-environment which result in higher green purchase intention as well. Based on the information, this study argues that gender has a moderating role for all determinants towards green purchase intention.

H7. Gender moderates the relationship between green attitude and green purchase intention

H8. Gender moderates the relationship between perceived green value and green purchase intention

H9. Gender moderates the relationship between environmental concern and green purchase intention



**Figure 1.** Conceptual model

### 3. METHODS

Since this study aims to reveal the factors of Indonesian generation Y and Z on their green purchase intention, specifically on green straws, it performed a quantitative methodology through the survey. Referring to the Indonesian Central Bureau of Statistics, this study set Indonesian born in 1981-1996 for Gen Y and 1997-2012 for Gen Z as profile respondents (BPS RI, 2021). Further, for ensuring the respondents have fully independent decision-making to purchase, the minimum age of respondents allowed to fill in the questionnaire was at age of 17. Due to the age constraints, this study carried out non-probability sampling and referring to Cochran Formula (Cochran, 1963) to define the right sample size. According to (Cochran, 1963), a survey on a large population can be represented by a sample size of 385 along with a margin error of 5%, a confidence interval of 95%, and a variability of 0.5.

For the questionnaire development, this study used a five-point Likert scale and adopted the questions from earlier studies as follows: perceived green value (Chen, 2016; Choi et al., 2015), environmental concern (Goh & Balaji, 2016; Suki, 2015), attitude (Sreen et al., 2018), and green purchase intention (Lee, 2017; Sreen et al., 2018). There were eleven questions written in Bahasa Indonesia to prevent misinterpretations. Besides that, to provide good readability from respondents, the questionnaire is also tested on a pilot scale for 30 people before widespread dissemination. Data were collected by an online survey of a self-administered questionnaire for two months (April-May) and yielded 394 respondents (see table 1). This study applied structural equation modeling (PLS-SEM) for data analysis while putting aside issues of abnormality and small sample size (W. W. Chin et al., 2008; Hair et al., 2017). PLS-SEM requires two stages of analysis: measurement and structural model, which take place sub sequentially (Hair et al., 2017). The first stage, the measurement model, aims

to ensure the qualities of indicators in terms of reliability and validity. It considers as acceptable if the analysis generates results factor loadings, Cronbach's  $\alpha$ , and composite reliability CR larger than 0.7, AVE greater than 0.5, and having discriminant validity, for instance, based on Fornell Larcker criteria. To qualify the structural model, this study scrutinized the predictive power ( $R^2$ ) and the predictive relevance ( $Q^2$ ). The additional analysis, multigroup analysis of gender, was also performed in this study using PLS-SEM. A significant result exists if the p-value is less than 0.05 or more than 0.95 at the margin of error of 5% (Hair et al., 2018; Sarstedt et al., 2011).

#### 4. RESULTS

Of 394 respondents, female respondent was 67.26%, while the rest (32.74%) was the male respondent. The respondents examined gen Y for as much as 21.32% and Gen Z for 78.68%. Thus, in terms of education level, this study was full of respondents of bachelor (51.52%) and senior high school (48.48%). The respondents showed varied occupation types, such as government employee (3.71%), private employee (25.89%), entrepreneur (8.38%), students (54.31%), and others (7.61%). The assorted results also occurred in the income level category, in which those respondents having income levels less than IDR 2.000.000 (55.58%), IDR 2.000.000-Rp 5.000.000 (31.47%), and larger than IDR 5.000.000 (12.94%).

**Table 1.** Respondents profile

Profile	Total number	Percentage
Gender		
- Male	129	32.74%
- Female	265	67.26%
Education level		
- Senior high school	191	48.48%
- Bachelor	203	51.52%
Occupation		
- Government employee	15	3.81%
- Private employee	102	25.89%
- Entrepreneur	33	8.38%
- Students	214	54.31%
- Others	30	7.61%
Income level		
- Less than IDR 2.000.000	219	55.58%
- IDR 2.000.000 – Rp 5.000.000	124	31.47%
- Larger than IDR 5.000.000	51	12.94%
Generation		
- Gen Z	310	78.68%
- Gen Y	84	21.32%

##### 4.1 Measurement model

From eleven questions developed for the survey, all questions were acceptable relating to factor loadings ( $\geq 0.7$ ), Cronbach's  $\alpha$  ( $\geq 0.7$ ), CR ( $\geq 0.7$ ), and AVE ( $\geq 0.5$ ) (see table 2). Further, discriminant validity from Fornell Larcker criteria was also acceptable as shown in table 3. It exists since the square root of the AVE of each variable is larger than the shared variance



between variables. By having satisfying results in the measurement model, the analysis could proceed to the next stage, namely the structural model:

**Table 2.** Reliability and Validity of Indicators

Indicators	Factor loading	Cronbach's alpha	CR	AVE
Perceived green value		0.778	0.871	0.694
Purchasing green products bring benefit for the environment (V1)	0.882			
Using the green product is a way to preserve the environment (V2)	0.713			
I purchase the green product due to its green friendliness (V3)	0.893			
Environmental concern		0.734	0.849	0.652
I have a concern about the environment (EC1)	0.799			
For the ecological reason, switching the non-ecological product is necessary (EC2)	0.788			
A special effort to purchase the green product is acceptable (EC3)	0.835			
Attitude		0.879	0.943	0.892
I prefer green products to conventional products (At1)	0.943			
I am more interested in green products (At2)	0.946			
Purchase Intention		0.734	0.849	0.653
I am willing to pay more for green products (PI1)	0.776			
I will purchase green products (PI2)	0.833			
I recommend green products to my friends/family (PI3)	0.814			

**Table 3.** Discriminant validity (Fornell Larcker criteria)

	Attitude	Env concern	Purchase intention	Value
Attitude	<b>0.945</b>			
Env concern	0.681	<b>0.807</b>		
Purchase intention	0.707	0.780	<b>0.808</b>	
Value	0.570	0.686	0.769	<b>0.833</b>

#### 4.2 Structural model

Path analysis, shown in table 4, verifies the hypothesis set in the previous section. From H1 until H6, the hypotheses are proven to be accepted ( $p < 0.01$ ). H4 possessed the largest  $\beta$  value among all hypotheses, i.e., 0.699. It implies everyone time increase in environmental concern will be followed by a 0.699 increase in perceived green value as well. Further, other  $\beta$  values of the rest hypotheses in descending order are as follows: Environmental concerns towards attitude (H5,  $\beta = 0.552$ ); perceived green value towards green purchase intention (H2,  $\beta = 0.382$ ); environmental concern towards green purchase intention (H6,  $\beta = 0.347$ ); Attitude towards green purchase intention (H1,  $\beta = 0.253$ ); and perceived green value towards green purchase intention (H3,  $\beta = 0.184$ ).



**Table 4.** Hypothesis testing result

	<b>Path</b>	<b><math>\beta</math></b>	<b>t-value</b>	<b>Result</b>
H <sub>1</sub>	Attitude → Green Purchase Intention	0.253	5.559	Accepted*
H <sub>2</sub>	Perceived green value → Green Purchase Intention	0.382	8.729	Accepted*
H <sub>3</sub>	Perceived green value → Attitude	0.184	3.081	Accepted*
H <sub>4</sub>	Environmental concern → Perceived green value	0.699	26.324	Accepted*
H <sub>5</sub>	Environmental concern → Attitude	0.552	10.292	Accepted*
H <sub>6</sub>	Environmental concern → Green Purchase Intention	0.347	8.529	Accepted*

Note: \*) sig. at  $p < 0.01$

The influence of gender as a moderator in relationships of green purchase intention with green attitude, perceived green value, and environmental concern was analyzed through multigroup analysis in PLS-SEM. From table 5, the moderating effects of gender only exist in H7 ( $p > 0.95$ ) and H8 ( $p < 0.05$ ), not in H9 ( $p = 0.238$ ). Females demonstrate a stronger relationship between attitude and green purchase intention (H7), meanwhile, males exhibit a stronger relationship between perceived green value and green purchase intention (H8).

To qualify the structural model, this study evaluated  $R^2$  for endogenous constructs (perceived green value, green attitude, and green purchase intention) (Hair et al., 2017). For green purchase intention, the result of  $R^2$  was 0.743 which means green attitude, perceived green value, and environmental concern have successfully explained the variances in green purchase intention for 74.3% (the effect belongs to almost substantial). Meanwhile, green attitude and perceived green value have  $R^2$  of 0.478 and 0.487 (the effects belong to almost moderate). It implies that perceived green value and environmental concern have explained the 47.8% variances in green attitude, meanwhile 48.7% for green perceived value from an environmental concern only. Further, this study assessed the predictive relevance ( $Q^2$ ) as well for perceived green value, green attitude, and green purchase intention from all datasets. The results were all variables have  $Q^2$  greater than zero which means the predictive relevance exists within the model (Hair et al., 2017).

Table 5 shows the results of the multigroup analysis to examine the moderating effects of gender (H7-H9). Based on the findings, only H7 and H8 were proven to be accepted, not H9. It means gender successfully moderates the relationship of attitude-green purchase intention (H7) and perceived green value-green purchase intention (H8). Meanwhile, there is no significant difference between the male and female groups for environmental concern-green purchase intention (H9). More specifically, from table 5, in the male group, the significant determinant of green purchase intention was perceived green value ( $\beta = 0.529$ ,  $p < 0.01$ ) and environmental concern ( $\beta = 0.394$ ,  $p < 0.01$ ). On the other hand, the attitude did not show a significant relationship with green purchase intention for the male group ( $\beta = 0.068$ ,  $p > 0.05$ ). For the female group, all variables revealed significant relationships toward green purchase intention, i.e., attitude ( $\beta = 0.363$ ,  $p < 0.01$ ), perceived green value ( $\beta = 0.244$ ,  $p < 0.01$ ), and environmental concern ( $\beta = 0.334$ ,  $p < 0.01$ ).

**Table 5.** Multigroup analysis by gender

Hypothesis		$\beta$ Male (t-value)	$\beta$ Female (t-value)	$ \beta$ Male - $\beta$ Female	p-Value (Male vs Female)	Result
H7	Attitude → Green Purchase Intention	0.068 (1.096)	0.363 (7.593) *	0.325	1.000	Accepted
H8	Perceived green value → Green Purchase Intention	0.529 (8.110)*	0.244 (5.102)*	0.284	0.000	Accepted
H9	Environmental concern → Green Purchase Intention	0.394 (5.606)*	0.334 (6.625)*	0.060	0.238	Rejected

Note: \*) significant at  $p < 0.01$

## 5. DISCUSSION

Aiming to clarify the determinant factors of green purchase intention from generation Y and Z, nine hypotheses (H1-H9) involving five variables like environmental concern, perceived green value, green attitude, green purchase intention, and gender were set carefully based on thorough literature reviews in the earlier section. Among all hypotheses, H7-H9 more specifically investigated the moderating effects of gender on each relationship between environmental concern, perceived green value, and green attitude respectively towards green purchase intention. From data analysis using PLS-SEM, the findings told that all hypotheses, except H9, were proven to be significantly accepted.

An anticipated mediator role of green attitude between perceived green value and green purchase intention exists in this study, following the Value-Attitude-Behavior (VAB) framework. The favors on green products the generation Y and Z possessed have actualized the influence of the abstract cognition dimension from the perceived green value on green purchase intention (H1-H3). This flow corroborates (M. F. Y. Cheung & To, 2019; Kautish & Sharma, 2019) who employs VAB as well in explaining the green purchase intention. More specifically, the direct influence of green attitude on green purchase intention is an indisputable relationship as many earlier studies have confirmed it, even in the varied contexts (Chaudhary & Bisai, 2018; Paul et al., 2016; Verma et al., 2019). Further, this finding also strengthens the constant pattern of young consumers to evaluate green products positively as found in the study of (Kautish & Sharma, 2019) in India. On the other hand, the impact of perceived green value on green purchase intention did not only occur indirectly through green attitude, but it also occurs directly. This direct pathway confirms the previous studies (R. Cheung et al., 2015; Dhewi et al., 2018; Lam et al., 2016). The likely reason for VAB applying in this study is that having positive emotions upon evaluation of good values from green products will result in greater willingness to purchase (Woo & Kim, 2019).

While value acting out as a guide for someone to behave, it is natural to consider perceived green value as the precondition someone must have to reinforce the green purchase intention. However, this study attempts to reveal a more profound viewpoint on how that influential perceived green value could be shaped on anyone. Since H4-H6 was proven to accept, the environmental concern could be inferred as the critical asset on developing the following variables like perceived green value and green attitude to induce a green purchase intention. The path of environmental concern-attitude-green purchase

intention which showing the positive relationship between each other (H5-H6) has confirmed the earlier studies, such as (Junior et al., 2015; Mufidah et al., 2018; Verma et al., 2019; Yadav & Pathak, 2017). Aside from that, the perceived green value apparently could be influenced by environmental concerns as well (H4). Unless gen Y and Z do not muchly concern about environmental issues, their recognition of the positive sides of green products (value) cannot gain enough reinforcement. This finding corroborates (Jiang & Kim, 2015; Zhao & Chen, 2021), despite they employ different terms for value, i.e. perceived green benefit.

Gender, the sociodemographic aspect, has greatly been investigated to expand our understanding of provoking green purchase intention in female and male consumers. The findings on H7 and H8, which exploring any moderating effects on the relationships of attitude-intention and value-intention respectively, indicate the necessary different approaches for these two consumers. Surprisingly, a distinct pattern showed up between H7 and H8 while revealing the moderating effect of gender existed. In H7, a greater relationship between green attitude and green purchase intention appeared in females, while the males did not show any relationship for these two variables (see table 5). Regarding it, (Tracie Tung et al., 2017) delineated that females are more associated with affective sides, in this context, which was covered in green attitude. Meanwhile, though green perceived value worked for both genders on influencing the intention (H8), the stronger relationship occurred at males, not females. As green perceived value sounding the functional attributes of green products, it could awake more male's interest in purchasing green product rather than female (Tracie Tung et al., 2017). The fundamental differences in biological, value orientation, and socialization between males and females might lead to the different types and levels of motivation towards green purchasing intention (T. N. Nguyen et al., 2017).

A distinct finding was found in H9 where gender has no moderating effect on the relationship between environmental concern and green purchase intention. Both male and female groups demonstrated significant impacts of environmental concern on green purchase intention at the same level as found by (Alibeli et al., 2011). Yet, it also contradicts with (Xiao & McCright, 2015). They explained females had stronger environmental concerns than males while using 2000-2010 data. The different results may exist since the generation examined are distinct as well. Day by day, environmental problems are informed more clearly and easily which puts the recent generation to get more exposed to such issues. Such exposure makes the current generations become more vulnerable to environmental concerns and strongly sees it as a threat, as explained by (Chan et al., 2019), about the sense of vulnerability to environmental concerns. Therefore, both generations, regardless the gender, feel the same way about environmental concerns as a threat for them and could awake the green purchase intention.

By acknowledging the findings, there are several ways to grow green purchase intention in gen Y and Z as the current significant consumer groups. First, as environmental concern is proven to be the significant determinant of perceived green behavior, green attitude, and green purchase intention, thus environmental concern will naturally be the antecedent drawn the attention of the green suppliers and governments. According to (Alibeli et al., 2011), the environmental concern could be translated into three ways, namely biospheric, social-altruistic, and egoistic. Thus, green suppliers could design marketing campaigns that awaken the consumers' environmental concerns through those three ways. For example, in biospheric, green suppliers should highlight the ideas of non-human's quality of life deteriorating and relates it with the human's responsibility to maintain it. For social-altruistic, the campaign should stimulate the consumers' empathy on the potential suffering of next-

generation or their offspring. For egoistic, the campaign can relate with the possibility of consumers' ruins on pursuing their personal goals due to unstable environmental conditions.

The findings of gender as moderators in the green purchase intention context can offer another practical guidance as well. The marketing campaign evoking perceived green value and environmental concern could be applied for either male or female consumers. Yet, the campaign of green attitude seems only to work in females. Meanwhile, the greater impact of perceived green value on intention occurs in male consumers, not females. Thus, it is necessary to conduct different approaches to boost the intentions of male and female consumers in the current generations. For males, the green suppliers can underline the campaigns relating to any green values (more benefits compared to risks) the consumers can gain from green products. On the other hand, a special marketing campaign designed for females could be employing any campaign resulting in the favor on green products. For instance, the favor on the green product can be promoted by engaging influencers the females are into. Hence, for females, the favor should not necessarily arise from the green values. In addition, as environmental concerns work in male and female consumers on par to affect green intention, thus such an environmentally oriented marketing campaign should be aimed at both groups.

## 6. LIMITATIONS

While investigating the determinants of green purchase intention in the prominent generations of Y and Z, this study provides significant contributions by extending the VAB. The inclusion of environmental concerns within such a framework makes it critical to be the predecessor of VAB. Despite the attempt to lessen the green gap, this study certainly has some limitations to address in future research. First, the study context was specific to the green straws. Thus, the findings should not easily be generalized to other types of green products due to the distinct characteristics of products. If the consumers deem that the green products need compromising to their daily behavior, the determinant paths may differ from the model of this study. Second, the study put the focus on Indonesian consumers whose social-cultural values are different from other countries. Hence, it could curb the generalization of the findings across the countries. Third, though this study tried to fill in the green gap, behavioral intention, a self-report, was used to predict the green purchase. However, the future study should include the actual purchase to gain a more objective evaluation in predicting the green behavior.

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