



# The Impact of Value and Time Orientations on Green Cosmetics Purchase Intention : A Study of Gen Z in Vietnam

Van Tuan Pham<sup>1</sup>, Hoang Tien Dat Du<sup>2</sup>, Thi Hong Nhung Do<sup>3</sup>, Thi Thu Thuy Phan<sup>4</sup>, Kieu Chinh Tran<sup>5</sup>

<sup>1</sup>Associate Professor, Faculty of Marketing, National Economics University, Vietnam

<sup>2</sup>International School of Management and Economics, National Economics University, Vietnam

<sup>3</sup>Faculty of Marketing, National Economics University, Vietnam

<sup>4</sup>International School of Management and Economics, National Economics University, Vietnam

<sup>5</sup>Faculty of Marketing, National Economics University, Vietnam

## ABSTRACT

This study focuses on examining the impact of Value Orientations and Time Orientations on green cosmetics purchase intention of Generation Z (1955-2006) in Vietnam. An extension of Values-Beliefs-Norms Theory (VBN) is applied as the conceptual framework for this study. The data was collected through an online and offline survey questionnaire using the purposive sample of 655 Gen Z Vietnamese consumers in January 2021. The study performed reliability (Cronbach's alpha) and validity test (EFA) before confirmation factor analysis (CFA) and ran the linear model PLS-SEM. Results of the correlation analysis indicate that there is a strong positive correlation between Hedonic value orientation and pro-environmental belief ( $\beta = 0.247$ ), notably Future orientation has the strongest positive impact on green cosmetics purchase intention among Gen Z ( $\beta = 0.376$ ). The findings can be useful for the State in improving the directions for green industry policy development, while retailers and marketers also promptly recognize the trends and behavioral psychology of the future consumer generation in the green cosmetics industry.

## Article Info

Volume 4 Issue 2

Page Number: 37-49

## Publication Issue :

March-April-2021

## Article History

Accepted : 20 March 2021

Published : 28 March 2021

**Keywords :** Green cosmetics, generation Z (generation Z), Purchase intention, value orientation, Theory of Value-Belief-Norm (VBN).

## I. INTRODUCTION

In recent years, consumers are moving towards purchasing more eco-friendly cosmetics products to reduce negative impact on the environment and health in the long term. Green cosmetics are gradually becoming a hot trend in the Vietnam market because of skin-friendly, comparative safety, and efficiency. Q&Me (2020) reported that the

number of cosmetics consumers is increasing among Gen Z. Cosmetics expenses rise 10% in people who frequently make up compared to last year.

Green purchase behavior has been exploited in various studies since the 19th century. Obviously, Gen Z (born in 1995-2006) psychological green consumption is still a shortcoming in social studies. This has resulted in obstacles for the government to

implement practical measures to encourage green cosmetics consumption. Brands meet difficulty in marketing activity to target consumers' pain points and persuade them to change their habit. Hence, this limitation is the driving force that motivated us to research green cosmetics purchase intentions in Gen Z Vietnam.

This study explored intensively individual psychology under theory of value orientations including egoistic orientation, altruistic orientation, and hedonic orientation. Previous researchers have demonstrated that these value orientations have positive indirect impact on green cosmetics purchase intentions through pro-environmental belief and personal norm (Kiatkawsin and Han, 2017; Jaini et al., 2019).

Time orientation is a new factor demonstrated that plays a role in influencing consumers' green purchase intention, especially eco-tourism. Karniol and Ross (1996) emphasize the importance of time orientation in consumer psychological prediction. However, time orientation has not been noticed in previous studies about green cosmetics purchase intentions. To fill this research gap, the present study examines the direct and indirect relationship between time orientation and green cosmetics purchase.

## II. LITERATURE REVIEW

### 1. Green purchase intention and VBN Theory

Since the 1970s, research topics on consumers' behavior towards environmentally friendly products have caught many researchers' attention. Consumer purchase intention was explained by Fishbein and Ajzen (1975) as an important factor in predicting consumer behavior. More specifically with green products, Rashid (2009) concludes that green

purchasing intention is conceptualized as the willingness to purchase green products. Many previous studies have shown that many variables including values and belief (Mostafa, 2009), needs and motivations (Li and Cai, 2012) can be applied to explain the Consumer behavioral intentions related to the purchase of environmentally friendly products. Theory of Value - Beliefs - Norms (VBN Theory) of Stern (2000) has received some empirical proven to be successful in elucidating behavior intentions, which presents in the following section. VBN Theory is the development of three complementary theoretical approaches which are Theory of Basic Human Values (Schwartz, 1981), Norm Activation Model (Schwartz, 1981) and Values-Beliefs-Pro Environmental Action (Stern et al., 1999). VBN Theory demonstrates a causality between personal values and behavioral intention through pro-environmental beliefs and personal norms of consumers. The following part will demonstrate in more detail about the value orientation based on the VBN theory and explore other factors that affect the green cosmetics purchase intention in this research context.

### 2. Conceptual framework and hypotheses development

Value Orientation is conceptualized as important standards that serve as principles in people's lives (Stern et al., 1999). Additionally, Stern (2000) stated that value orientations are a decisive factor in shaping personal beliefs and norms, at the same time, influencing intent through personal beliefs and norms.

Altruistic value orientation has been included by previous scholars as one of the predictors of personal intentions towards the environment (Schultz et al., 2005; Steg et al., 2014). While Kiatkawsin and Han

(2017) confirmed that altruistic value orientation positively affects pro-environmental beliefs, the study of Stern et al., (1999) and Schultz (2005) indicated that there is no relationship between these two variables. The reason for the inconsistency between these studies' results is the difference in research subjects. Therefore, the authors decided to put the altruistic value orientation into the assumption of the research model to re-examine it with Gen Z in Vietnam:

**H1: Altruistic Value orientation (AVO) has a positive impact on Pro-environmental beliefs (PEB)**

Egoistic value orientation describes individuals who have a highly special concern for their own interests in each of their behaviors (Verma et al., 2019). Their self-interest motivates them to purchase green products because they trust these products are beneficial for their health (Prakash et al., 2019). Kang, He and Shin (2020) indicated that Chinese people with high egoistic values try to express luxurious lifestyles by purchasing high-end cosmetic products. However, the study of Maria and Plaloyiannaki (2011), and Pop et al., (2020) gave a completely opposite statement when narrowing down the scope to the natural cosmetic industry. Base on these arguments, this study will apply egoistic value orientation variable to verify this relationship among Gen Z Vietnamese consumers:

**H2: Egoistic Value orientation (EVO) has a positive impact on Pro-environmental beliefs (PEB)**

Hedonic value orientation represents the comfort, pleasure, happiness obtained from using services (Venkatesh and Davis, 2000). Despite just appearing in recent studies about green purchase, it has been demonstrated to influence significantly pro-environmental beliefs than any value orientations in VBN theory (Werff and Steg, 2016). This conclusion

is similar in studies about green cosmetics purchase (Ghazali et al., 2017; Jaini et al., 2019). In other words, it is logical to postulate that hedonic value orientation is an important condition that impact consumer beliefs towards environmental protection, which can be formally hypothesized as follows:

**H3: Hedonic Value orientation (EVO) has a positive impact on Pro-environmental beliefs (PEB)**

Pro-environmental beliefs defined in the Norm Activation Model (Schwartz, 1981) as general beliefs on two aspects: (1) Awareness of consequences (AC beliefs) of environmental pollution and (2) ascription of responsibility (AR beliefs) about the impact of each individual's behavior on the environment. Pro-environment beliefs promote people to realize what they are facing as an ethical decision (Van Liere and Dunlap, 1978). Based on VBN theory, different beliefs act as important predictors of personal norms. The personal norm is defined by Schwartz and Howard (1981) as the sense of a moral obligation to take action for the environment. The relationship between pro-environmental beliefs and personal norms has been proven by several studies in areas such as green tourism, green transportation, and cosmetics. Thus, this relationship can be formally presented as following:

**H4: Pro-environmental beliefs (PEB) has a positive impact on Personal norms (PN)**

Personal norms related to a particular behavior are their sense of personal responsibility or their moral obligation to engage in that act (Schwartz, 1981). As such, environmental issues require the ethical composition of individuals and to behave responsibly towards the environment (Kals and Maes, 2002). Personal norms are the most important predictor of behavioral intention for society and the environment (Huijts et al., 2013). In addition, Jaini et al (2019)

pointed out that personal norms have a significant influence on the behavior of purchasing green cosmetics. Thus, this relationship can be formed the following hypothesis:

**H5: Personal norms (PN) has a positive impact on Green cosmetic purchase intention (GPI)**

According to Gibson et al. (2007), Time Orientation refers to the concentration of an individual's thoughts at a particular time (past, present, or future). Karniol and Ross (1996) emphasized the importance of time orientation explanations for individual behavior influenced by their outlook on the future, past memories, and present expectations. Messick and Brewer (1983) stated that environmental issues not only lead to social conflict (personal and collective interests) but also temporal conflict (short-term and long-term interests). Therefore, Strathman et al (1994), Milfont and Gouveia (2006) concluded that Future orientation individuals are more likely to be interested in and act on environmental issues rather than Present orientation individuals. In the study of Corral-Verdugo et al. (2006) demonstrated that while Present orientation has a negative relationship with water saving action, Past-orientated has no relation. As a result, only Future orientation individuals tend to support water conservation. Once people care about the future, they will pay a lot of attention to the consequences that the next generation will suffer if the environment is overexploited. Future orientation people are closely related and positively associated with environmental awareness (Pham and Khanh, 2020). For above reasons, this study will only test the Future orientation variable, and it would be reasonable to expect that individuals with a time-forward perspective have a degree of environmental protection awareness higher than remaining.

**H6: Future orientation (FTP) has a positive impact on Pro-environmental beliefs (PEB)**

Time orientation (on the edge of past, present, and future) influences personal judgments, decisions, and actions (Zimbardo and Boyd, 1999). In which, only Future orientation has a positive effect on the pro-environment intentions. Adam (2009) concluded that future-oriented older people are also more likely to quit smoking rather than remaining (past orientation and present orientation). Besides, future-oriented people also prefer to choose or willing to pay tourism with less negative impact on the environment (Pham and Khanh, 2020). Time orientation research is intended to predict a consumer's behavioral intent (Boniwell and Zimbardo, 2004). Although researching on Time orientation appears in many studies on ecotourism, Future orientation has not been studied by scholars in the field of green cosmetics. Based on evidence of previous scholars, this study will address that research gap to find out the psychological influence of Gen Z consumers in purchase intention under the dominance of Future orientation.

**H7: Future orientation (FTP) has a positive impact on Green cosmetic purchase intention (GPI)**

From the above hypotheses associated with Gen Z and Vietnamese context, the authors proposes the following conceptual framework to test these relationships:

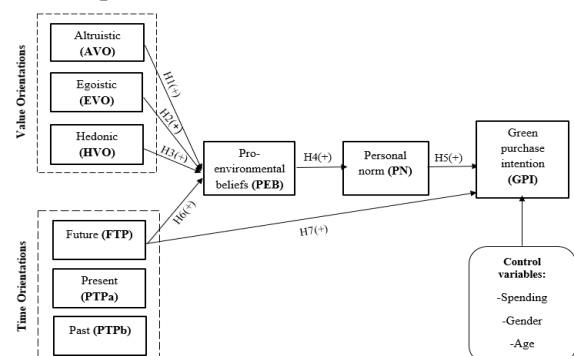


Figure 1 : Conceptual framework

### III. METHODOLOGY

#### 3.1. Sample and Data Collection

The present study explores the impact of value and time orientations on green cosmetics purchase intention. A conceptual model (Figure 1) was built to test the proposed hypotheses. Based on empirical investigation, this study uses a quantitative method, in which questionnaires were used as instruments to collect the data from respondents. The data collection was implemented in January/2021 in Hanoi, Ho Chi Minh City, and Danang using a convenience sampling technique on both offline and online platforms. According to Comrey (1973), the size of the sample should be at least 5 times the total number of observed variables. The number of observed variables in this study is 40, thus, the size of the sample should be at least  $5 \times 40 = 200$  respondents. In fact, there are 655 valid answers.

In our result, there are more females (74.8%) than males (23.7%). The respondents were mostly within the age ranges of 18-22 years old (66.6%). Most gen Z spend under 500.000 VNĐ (52.5%) and from 500.000-1.000.000 VNĐ (31.5%) on cosmetics monthly. There is only a slight difference between offline consumer channels (showrooms/stores) and online consumer channels (social media/e-commerce), with 50.4% and 51.6% respectively. Majority of respondents find green products through social media (82.3%), friends and colleagues (43.3%), online news/magazines (23.1%), and traditional news/magazines (7.8%). Therefore, online platforms are the most ideal place to approach gen Z.

#### 3.2. Measurement

The questionnaire consists of three major sections: factors that influence green cosmetics purchase

intention (AVO, HVO, EVO, PEB, PN, and FTP), green cosmetics purchase intention (GPI), and respondents' personal information. A five-point Likert scale was used in this study to measure respondent's level of agreement regarding the statements (1-totally disagree/ 5-totally agree). All 40 observed variables in this study were self-reported and adapted from established scales. Three items measuring AVO were adapted from Izagirre-Olaizola et al. (2015), Jaini et al. (2019); four items measuring HVO were adapted from Ghazali et al. (2017), Jaini et al. (2019), Joireman et al. (2001); the scale measuring five items in EVO were adapted from Joireman et al. (2001); three items measuring PEB was adapted from Han et al. (2010); eight items of PN were adapted from Onwezen et al. (2013), Gleim et al. (2013). The scale measuring five items in GPI was adapted from Schuitema et al. (2015), Chen et al. (2018).

After collecting data, researchers assessed the scale in this paper for reliability and validity by SPSS software version 25. Specifically, Cronbach's alpha coefficients were used to evaluate reliability. The exploratory factor analysis (EFA) was then implemented to find the convergence value between items in the scale. Because of adapting established scales, all scales have reliability measurement with Cronbach's alpha above 0.7, except AVO. A validity test by exploratory factor analysis (EFA) gave the result that all factor loadings are above 0.5. Hence, AVO was removed from the model because of reliability conditions. HVO, EVO, FTP, PEB, PN, and GPI will be further analyzed under Partial Least Squares Structural Equation Modeling (PLS-SEM) with the help of SmartPLS 3.7 software.

### IV. RESEARCH FINDINGS AND DISCUSSION

#### 4.1. Measurement model assessment

The measurement model was evaluated to assess the composite reliability (C.R.) and average variance extracted (AVE). The C.R. was calculated for each range, ranging from 0.88 (for egoistic value orientation) to 0.92 (for personal norm). These results demonstrated an acceptable level of reliability with C.R. exceeding 0.7 (Hair et al., 2014). Furthermore, all the AVE values in these scales were exceeded 0.52. An AVE value above 0.5 means that a latent variable is on average able to explain more than half of the variance of its indicators (Fornell and Larcker, 1981).

Shared variances are reported in the upper half of the matrix.

Table 1 shows the discriminant validity that compares AVE values. All square roots of the AVE (on the diagonal in bold) were greater than correlations between constructs (on the corresponding row and column), hence discriminant validity was achieved Fornell and Lacker’s criteria. Overall, the measurement model achieved an adequate and satisfactory reliability and validity.

**Table 1.** Discriminant validity

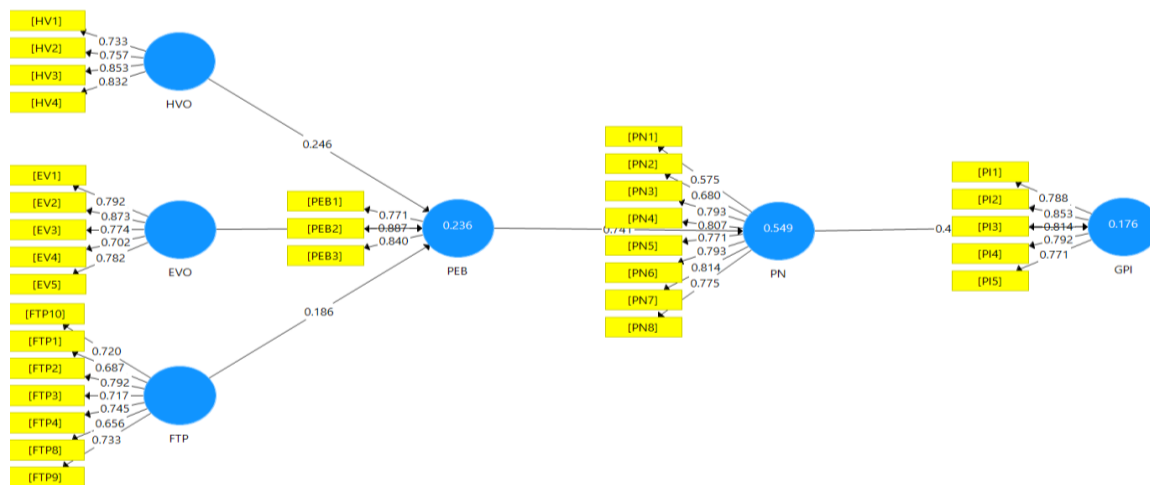
	PN	FTP	HVO	PEB	EVO	GPI
PN	<b>0.755</b>					
FTP	0.426	<b>0.723</b>				
HVO	0.493	0.371	<b>0.795</b>			
PEB	0.741	0.341	0.406	<b>0.834</b>		
EVO	0.438	0.390	0.495	0.381	<b>0.786</b>	
GPI	0.410	0.454	0.535	0.314	0.394	<b>0.806</b>

**Note :** The diagonals (in bold) represent the square root of AVE.

Correlations of the latent constructs are shown in the lower half of the matrix.

#### 4.2 Structural model assessment

By analyzing factors impacting Pro-environmental belief (PEB), egoistic value orientation (EVO) and hedonic value orientation (HVO), future orientation (FTP) explained around 23.6% of the variance in PEB. The R-square value of Personal norm (PN) above 0.55 illustrated a substantial model explained by EVO, HVO, FTP, and PEB. Model Green cosmetics purchase intention (GPI) indicates EVO, HVO, FTP, PEB, and PN explained about 17.6% of the variance in GPI (P-value = 0,000 < 0.01).



**Figure 2.** Result of research structural model

By endogenous construct assessment, Cohen (1988) suggested effect size ( $f^2$ ) to evaluate the importance impact of independent latent variables (IV) on the dependent latent variable (DV). Effective size ( $f^2$ ) is 0.02, 0.15, and 0.35 represent small, medium, and large effects, respectively. Result shows that all the relationships except PEB->PN have small effect sizes ( $0.02 \leq f^2 < 0.15$ ). The effect size of PEB to PN is  $1.22 > 0.35$ , thus, its relationship has a large effect size. However, it should be noted that low effect size in this study doesn't mean those relationships are not practically important. Small effect size is extremely common in psychological research (Milfont, Wilson, and Diniz, 2012). In a meta-analytical review of hundreds of social psychological studies, Richard et al. (2003) indicated that average effect size in social science is 0.021.

By out-of-sample prediction assessment, predictive efficiency ( $q^2$ ) was used under Cohen (1988) requirement. Predictive efficiency ( $q^2$ ) is 0.02, 0.15, and 0.35 represent small, medium, and large efficiency. As an assessment result,  $q^2_{FTP \rightarrow PEB} = 0.19 < 0.02$ , lower than criteria. However, this result was found to be strictly close to Cohen's requirement and the previous research of Hanh and Khoi (2018) accept the result of  $q^2$  above 0.17. Therefore, the relationship of FTP and PEB is continuously kept in this model. The predictive efficiency value of  $q^2_{HV \rightarrow PEB}$ ,  $q^2_{EV \rightarrow PEB}$ ,  $q^2_{FTP \rightarrow GPI}$ ,  $q^2_{PN \rightarrow GPI}$  are above 0.02. Noticeably, PEB has a high predictive power to explain PN with  $q^2_{PEB \rightarrow PN} = 0.443 > 0.35$ .

**Bootstrapping testing:**

A bootstrapping method (5,000 resamples with 655 respondents) was used to test the accuracy of the sample in explaining the population. The smaller the difference between the initial model estimate and the mean from the bootstrapping method, the more reliable the model estimates are concluded (Schumacker và Lomax, 2004).

**Table 2.** Results of Bootstrapping structural model assessment

	$\beta$ (standardized)	Standard deviation	t-value	P-value
HVO -> PEB	0.247	0.043	5.775	0.000
EVO -> PEB	0.190	0.053	3.611	0.000
PEB -> PN	0.741	0.03	24.687	0.000
PN -> GPI	0.264	0.039	6.793	0.000
FTP -> PEB	0.176	0.043	4.098	0.000
FTP -> GPI	0.342	0.04	8.582	0.000

The result from 5,000 resamples indicates that the original model estimate is significant with bootstrapping result because all path coefficients in table 2 are within the 95% confidence interval (t-value > 2.56 and P-value = 0,000). The results in the bootstrapping method do not differ from the initial model estimate. Therefore, the estimates in this model can be concluded to be reliable.

4.3 Hypotheses testing & Discussion

One out of seven hypotheses has been rejected because Cronbach's alpha coefficient is lower than 0.7. Results of hypotheses 2-7 estimating correlations presented all factors affecting the purchase intention at statistical significance (P-value) of 1% .

**Table 4.** Hypotheses testing outputs

Correlation	Standardized coefficient $\beta$	t-value	P-value	Hypotheses
AVO -> PEB	<b>H1 (Rejected-Cronbach alpha &lt; 0.7)</b>			
EVO -> PEB	0.190	3.3616	0.000	<b>H2 (Supported)</b>
HVO -> PEB	0.247	5.5854	0.000	<b>H3 (Supported)</b>
PEB -> PN	0.741	24.112	0.000	<b>H4 (Supported)</b>
PN -> GPI	0.264	6.803	0.000	<b>H5 (Supported)</b>
FTP -> PEB	0.176	4.104	0.000	<b>H6 (Supported)</b>
FTP -> GPI	0.342	8.420	0.000	<b>H7 (Supported)</b>

Hypotheses 2, 3 and 6 (H2, H3, H6) indicated that Hedonic value orientation (HVO), Egoistic value orientation (EVO) and Future orientation (FTP) all have positive impact on Pro-environmental beliefs (PEB). In which, the Hedonic value orientation has the strongest impact on the belief of environmental protection among Gen Z. These results are also consistent with previous research (Milfont, Wilson and Diniz, 2012; Jaini et al., 2019). In other words, Gen Z is especially interested in the real experiences when using green cosmetics apart from ethical values. In addition Gen Z Vietnamese consumers put a lot of attention on their own health and benefits when experiencing green cosmetics. Those with a high Future orientation are highly concerned about

environmental protection because of their deep awareness of the consequences that themselves have to suffer if the environment is overexploited. Additionally, Gen Z consumers had realized their own responsibility in protecting the ecosystem for themselves as well as next generations.

Hypothesis 4 (H4), Pro-environmental beliefs (PEB) have significant positive impact on Personal Norm (PN) with a correlation coefficient value is 0.741 and P-value is 0.000. This result is supported by VBN Theory of Stern (2000) and the study of Anderson (2012). Thus, Gen Z consumers tend to form beliefs about environmental protection behaviors higher,



the more they tend to develop intention to consume green cosmetics.

Hypothes 5 (H5) Personal norm (PN) has positive impact on Green cosmetic purchase intention with correlation coefficient value is 0.264 and P-value is 0.000. This accordant with findings from Values-Beliefs-Norms Theory of Stern (2000). This relationship has been positively proven in European and Asian countries such as Japan, Taiwan (Chen, 2015; Janini, 2019). Thus, it is concluded that the Personal norm is the basic and important factor to form the Green cosmetic purchase intention.

Hypothes 7 (H7) presented that Future orientation (FTP) has a remarkably positive impact on Green cosmetic purchase intention (GPI) in the research model with correlation coefficient value  $\beta=0.342$  and P-value is 0.000. More specifically, the higher the Future orientation people, the higher their intention to consume green cosmetics. Gen Z attaches great importance to the sustainability of the product provided, instead of quickly improving the beauty with several negative consequences in the future. They expect natural/organic or green cosmetic products to provide safety, natural beauty, authentic and long-lasting effect. This finding in the study is said to be novel and unique because Time Orientation has not been included for verification in the previous research topics related to the Green Cosmetics Industry. The above result is consistent with results of previous studies when examining the Future orientation in terms of using vehicles and experiencing green tourism (Milfont et al., 2006; Pham and Khanh, 2020).

## V. Implications and future research direction

### Implications

These results have contributions to theoretical implications. Initially, this study contributes to the existing knowledge in the green cosmetics industry integrating the Values-Beliefs-Norms Theory of Stern (2000). In other words, the study had illustrated that value orientations influence positively green purchase intentions even through pro-environmental beliefs (PEB) and personal norm (PN). Based on that, the results have found the Gen Z insights in terms of values that they are most interested in such as self-worth and self-experience when choosing green cosmetics. Secondly, this study contributes to the literature review by introducing two new variables including Hedonic value orientation and Future orientation to the existing theoretical linkages. As a result, these relationships are found to have the strongest direct and indirect impact on Green cosmetic purchase intention. Therefore, Hedonic value orientation is confirmed in this study as another important antecedent of PEB. Along with that, Future orientation is considered as a discovery factor as well as a pioneer for this study when previous studies had never been testing it in the green cosmetic industry. Hence, this study has attempted to fill the gap of existing literature.

The results of the present study also have practical implications. Not only should brands invest more on researching and innovating products with less chemical ingredients, but they should focus on creating a pleasant, relaxing and effective experience to consumers while using. In marketing activities, brands can build a communication message emphasizing “self-identity”, “self-loving”, and “future contribution” and others towards personal values. The campaign with their tagline can target gen Z’s

pain points to increase their green cosmetics purchase intention. Furthermore, Gen Z considers products they use reflect their personal appearances. Product differentiation strategy under personalize consumer experience with green cosmetics. Firms may create various product identity fit with different consumer personalities. Packaging and labelling of cosmetics should highlight the “green personality” of the product like healthy lifestyle and future community contribution. For Gen Z, online platforms are the most effective channel to target them. Social media and e-commerce are channels to approach Gen Z to provide information and orientate their behavior. By this way, Gen Z can gather green behavior and green products actively and passively. Finally, customer experience should be expanded before and after purchase. A CRM-Customer Relationship Management system should be applied to bring the most outstanding experience to customers. Marketing strategy should have a reward policy to customers who repurchase green cosmetics. From that, a company can encourage people to pursue similar behavior, which generates “green lifestyle” in the community.

#### VI. Limitations and Future Research Direction

This current research confronts several limitations that need to be acknowledged for future endeavors. Firstly, the study uses cross-sectional data which means the data only collected data of many research subjects at the same time. Therefore, future research should perform longitudinal data collection to evaluate the change in perception of behavior of generation Z over time. Since then, researchers can evaluate the differences in the influence of each factor to green cosmetic purchase intention over time. Secondly, the study was limited to motivating factors insteads of constraint factors. Therefore, in order to

study the factors that inhibit the green cosmetic purchasing behavior, future research has included Past orientation, Present orientation, and Perceived prices.

#### VII. Acknowledgement

Thanks editors, friends and Mr Dinh Tran Ngoc Huy to assist this publication.

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**Cite this article as :**

Van Tuan Pham, Hoang Tien Dat Du, Thi Hong Nhung Do, Thi Thu Thuy Phan, Kieu Chinh Tran, "The Impact of Value and Time Orientations on Green Cosmetics Purchase Intention : A Study of Gen Z in Vietnam", Gyanshauryam, International Scientific Refereed Research Journal (GISRRJ), ISSN : 2582-0095, Volume 4 Issue 2, pp. 37-49, March-April 2021.

doi : <https://doi.org/10.32628/GISRRJ21326>

URL : <http://gisrrj.com/GISRRJ21326>