



温州肯恩大学  
WENZHOU-KEAN UNIVERSITY

**The investigation of consumers' behavior intention in China for green skincare products**

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LAO Keye

1025667

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# **The Investigation of Consumers' Behavior Intention in China for Green Skincare Products**

*Keye Lao*

*Wenzhou Kean University*

**ABSTRACT:** This study examines what factors impact customer's purchase intention in China to green skincare products and tries to provide some managerial recommendations to existing companies. Applying the theory of planned behavior (TPB) model, this study uses a questionnaire to collect data from 121 respondents and Hayes Process and structural equation modeling to test the moderating effect. The result indicates that attitude, subjective norm, and perceived behavior control have a significant direct effect to purchase intention. Also, the country of origin (COO) and price sensitivity moderate the purchase intention and its antecedences, when COO and price sensitivity become stronger, the direct effect can strength. The findings can benefit the green skincare company about the understanding of customer purchase behaviors.

**Keywords:** *customer purchase behavior; green skincare products; theory of planned behavior; country of origin; price sensitivity.*

## I. INTRODUCTION

There is extensive research stated that the attention of appearance impact people's consumer behavior or choice of make-up (Debevec et al. 1986; Bloch and Richins 1992; Reingen and Kernan 1993; Miller and Cox 1982). According to the research from Pudaruth et al (2015), women believe that eco-friendly cosmetics and skincare products can benefit their appearance, reduce health risks, which is the reason for the growing demand for those products. Chin et al. (2018) also investigated that customers' purchase behavior in green skincare products was impacted by usage experience, green information, brand image, sales representative, and social influences.

There is a problem that China lacks the paper about the green skincare market in business. Most Chinese papers focus on chemistry or biology about how to make a green skincare product. China has the biggest potential green skincare market in the world (Lu 2019). According to the research from Zhou et al (2018), Chinese customers are interested in organic products, and the demand for an organic product will keep a high increase in speed. However, Chinese customers didn't expand this interest to the skincare industry. The purchase intention of a green skincare product is lower than traditional cosmetics because of the high price and fewer choices (Chen and Jin 2019). So, how to make customers transfer their interests to actual purchase behavior in green skincare products is an urgent problem need to be solved.

Therefore, the main research objective is to answer two questions. One is that what are the factors that impact the Chinese customers' purchase intention to eco-friendly skincare products. Another objective is to figure out what managerial recommendations can be provided to increase female Chinese customers' purchase intention to eco-friendly skincare products.

It is important to know the answer to the research question in the Chinese mainland. China has a gross domestic product (GDP) of \$13,608,151.86 and the largest population in the world (World Bank 2018). Lu (2019) stated China has the biggest potential cosmetics market. According to the news from Chen and Jin (2019), the Chinese skincare and cosmetic product industry have 358.7 billion RMB sales revenue in 2018. In recent years, the market share of green skincare products increased. Chen and Jin (2019) predict that the sales of organic skincare products will reach 110 billion yuan (\$15.98 billion) in 2020. According to of survey by Lu (2019), the demand for organic cosmetics was increasing in China. Comparing with the previous study from Chin (2018) in Indonesia, it is necessary for China to do a research about the green skincare market.

This study based on the theory of planned behavior (TPB) to figure out the relationship between experimented variables under the moderating effect from the country of origin (COO) and price sensitivity (PS). A questionnaire is used to collect data and SPSS is used to analyze. The Hayes Process and structural equation modeling to test the moderation effect. The findings show that attitude, subjective norm, and perceived behavior control have a significant relationship with purchase intention, while the country of origin and price sensitivity can strength these effects by stronger themselves. The result has one different from the previous study at the moderation effect of price sensitivity in the association between attitude and customer purchase intention.

This study contributes to the literature in some ways. This study full the blank of green skincare market and customer behavior in the Chinese mainland. Changing the situation that most research of green skincare products in Chinese in about chemical and biological. It means

a lot for a Chinese skincare company. It is important that consider the country of origin as a moderation effect that links attitude, subjective norm and perceived behavior control to purchase intention. Furthermore, it specified in green skincare products from whole green product market by considering the price sensitivity as the variables. Finally, these findings encourage the company to build a good reputation to increase customer attitude to green skincare products, thus, facilitating their purchase behaviors. Also, an honest service strategy like show the product information to the customer and emphasized the difference for green products and non-green products may help to increase customers' willingness to pay the extra money and benefit the purchase intention behaviors.

The remainder part of this paper is organized as follows. The next section will introduce each variable and develop hypotheses. Then, section three is about the methodology and participants for this study. In section 4, we show the result of the main analysis and discuss the result. In section 5, we make a conclusion and consider the limitation and guide for future researches.

## **II. BACKGROUND AND HYPOTHESIS DEVELOPMENT**

### **Green Cosmetics and Green Skincare**

The green skincare product is one specific part of the green products in the cosmetic industry. For the item Green products, Ottman (1998 p. 89) indicated that "green products are typically durable, non-toxic, made from recycled materials, or minimally packaged." The term green is defined as "eco-friendly," "environmentally friendly," or "sustainable" (Hsu et al. 2017). Dangelico and Pontrandolfo (2010) stated that the green product has a different life cycle phase and environmentally friendly characteristics. Furthermore, Tomasin et al. (2013, p. 74) suggested that "green products are designed to prevent, limit, reduce, and/or correct harmful environmental impacts on water, air, and soil." Reinhardt (1998 p. 46) explained that green product can benefit the environment with smaller environmental costs than similar products Dangelico and Pontrandolfo (2010) indicated that the item green products show that those things can cause a lower environmental impact and provide higher environmental benefits compared to conventional products. Thus, the development of green products helps a lot in creating successful environmental strategies, and make companies and economies become environmentally sustainable (Pujari et al. 2003).

Additionally, Green skincare products are that "care for the skin using naturally derived ingredients (such as herbs, roots, essential oils, and flowers) that are combined with naturally occurring carrier agents, preservatives, surfactants, humectants, and emulsifiers" (Hsu et al. 2017). Based on the Chin's (2018) idea, green skincare product is a type of green cosmetic. As people believe that natural ingredients are better and healthier, their worry about synthetic chemicals in beauty products drive their purchase intention in organic products (Kim and Seock 2009). This study tries to investigate the special characteristic of green skincare products.

### **Theory of Planned Behavior (TPB)**

The theory of planned behavior (TPB) model is an extension of the theory of reasoned action (TRA). The main difference between TPB and TRA is that TPB adds a dimension called perceived behavioral control (PBC) as the determinant of behavioral intention (Ajzen 1991). TRA predicts the intention to perform a behavior based on the normative belief and attitude of

an individual (Chin 2018). In this study, the TPB model will be used because based on an opinion from Han et al. (2010), the TPB model is better than the TRA model in describing the purchase intention. There are many previous studies that use the TPB model to predict customer behavior intention. For example, Chen and Tung (2014) used the TPB model in predicting consumers' intentions to visit green hotels. They extend the usage area of the TPB model, considering both the environmental concept and mental or moral obligation for the customer, to figure out the customer visit intention to green hotels.

As defined by Ajzen (1991 p. 188), attitude means "the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question" and subjective norm means "the perceived social pressure to perform or not to perform the behavior" and the perceived behavioral control means "the perceived ease or difficulty of performing the behavior." The attitude towards green skincare products can be thought of as an environmental attitude, which is a typical consumer to predict the behavior of purchasing (Ling 2013). Akroush (2019) stated consumers' attitudes were highly related to purchasing intentions of energy-efficient products. Hsu (2017) also survey the attitude in his research and conclude attitude is related to purchase intention. For the subjective norm, it means other people's ideas may impact your decision. Mangafić (2017) used subjective norm as the independent variable to the purchase intention. Moreover, Mangafić (2017) concluded attitudes and subjective norms significantly influence consumer organic food choices. As for the usage of the TPB model, Han et al. (2010) stated perceived behavioral control can affect customer visit intention of a hotel. Based on the explanation above, there are some hypotheses have been developed:

**Hypothesis 1 (H1):** *Attitude (AT) positively affects purchase intention.*

**Hypothesis 2 (H2):** *Subjective norms (SN) positively affects purchase intention.*

**Hypothesis 3 (H3):** *Perceived behavioral control (PBC) positively affects purchase intention.*

### **Moderating Variables: Country of Origin**

Nagashima (1970) defined the country of origin (COO) as related to the image, stereotype, and reputation that manufacturers and consumers attach to products of a specific country according to these variables as national traits, political circumstances, and economic, history, and traditions. Consumers' perceptions of stereotype images about countries are referred to as the COO effect (Lotz and Hu, 2001). Bilkey and Nes (1982) stated that customers' evaluation of one product is impacted by different origins. The product's country image impacts customer perception and purchase intention as proposed by Bloemer et al. (2009). Souiden, Pons, & Mayrand (2011) suggested that COO is connected with Consumers' aspirations. Genç & Gül Bayraktaroğlu (2017) indicated COO has an important influence on consumers' attitudes and behaviors. Also, COO has an essential effect on product evaluations. Thus, based on the stated above, the following hypotheses have been developed:

**Hypothesis 4 (H4)** With lower COO,

(a) *the positive interaction between attitude and purchase intention will become stronger*

(b) *the positive interaction between subjective norm and purchase intention will become stronger;*

(c) *the positive interaction between perceived behavioral control and purchase intention will become stronger.*

### **Moderating Variables: Price Sensitivity**

Price is always an important factor to impact purchase behavior (Ling 2013). Based on the significant theoretical paradigm of equity theory, price sensitivity considers the proportion of the consumer's outcome/input to that of the supplier's outcome/input, and thus offers an effective method of interpreting price sensitivity (Oliver and DeSarbo 1988). It is obvious that in general, green products are more expensive than normal products and this rule also works in green skincare products. One reason is that the cost of material or technique to produce a green product is much higher. There is a phenomenon that customer is more willing to pay extra money for products which have authority or certification, especially for green products (Barnard and Mitra 2010). Customers may compare the perceived benefit from green skincare products to the higher price of those products. However, the cost or price of the green skincare products is complex, it not only represents the money but also shows the better, healthier and organic material and other precious benefits. If the customer believes the major benefits that green skincare products bring to them are higher than the cost, the customer is willing to buy it even if the price is higher than other substitutes (Kotler and Zaltman 1971).

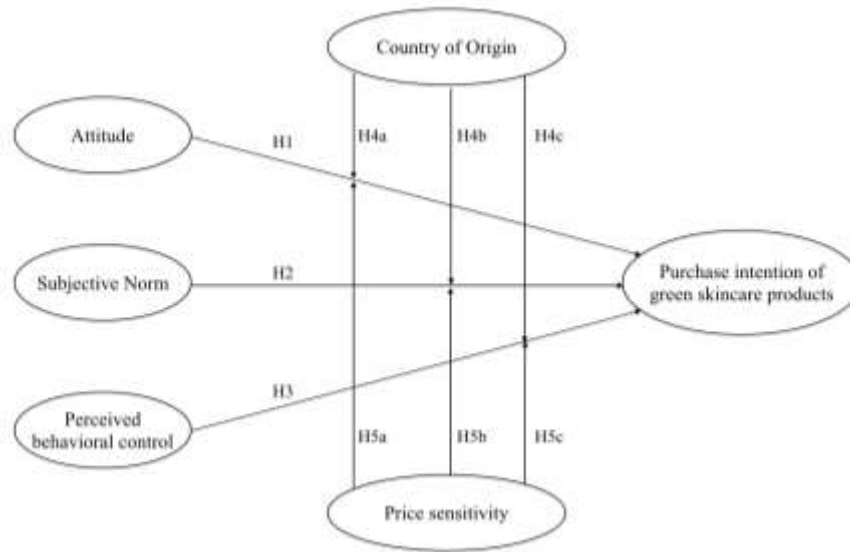
There is a significant relationship exists between customers' price perceptions and their purchase intentions (Munnukka 2008). Danes & Lindsey-Mullikin (2012) stated price sensitivity is related to perceived fairness. When the customers evaluate the price, change is reasonable based on a company ratio of outcome to input, the feeling like "fair" "right" will occur. This attitude highly impacts customer purchases. Also, Santonen (2007) proposed that word-of-mouth is related to price sensitivity in the stock market. Additionally, M. Sayuti & Amin (2019) suggested perceived behavioral control is affected by price fairness significantly in Muslim bank customers' intention to choose Islamic home financing products. In the research from Ling (2013), the willing of the customer to pay is kindly thought of as price sensitivity. Also, willing of the customer to pay as a moderator that significantly affects the link between environmental attitude and purchase intention.

**Hypothesis 5 (H5)** With lower price sensitivity,

- (a) the positive interaction between attitude and purchase intention will become stronger;*
- (b) the positive interaction between subjective norm and purchase intention will become stronger;*
- (c) the positive interaction between perceived behavioral control and purchase intention will become stronger.*

Thus, based on the researches from Hsu et al. in 2017, the model used in this paper is shown in Figure 1.

**FIGURE 1:  
Hypothesis Model**



### III. RESEARCH METHODOLOGY

#### Participants

The sampling population is university students in China aged 18-24 years old. There are two reasons to use university students as main participants. One is that those young students are future customers and they are easily influenced by outside factors. The other reason is that people who have a higher educational background are expected to accept the concept of sustainability (Hsu et al. 2017). Vermeir and Verbeke (2008) predicted if the respondents have awareness of sustainability, their response to something such as attitude, subjective norm, perceived behavioral control, country of origin, price sensitivity, and behavior for sustainable products would be imaginary, and the research findings would be highly hypothetical.

This study used an online-based questionnaire. A total of 203 respondents are collected. After deleting the incomplete response, a total of 121 useful respondents are counted into the sample. The demographic result is shown in Table 1. The majority of the respondents are female (66.5%) and aged more than 22 years old (48.77%). Besides, the largest number of respondents had an income of more than 3000 RMB per month (37.93%), followed by 1000-2000 RMB (22.66%).

**TABLE 1  
Demographic result**

<u>Profile</u>	<u>Frequency</u>	<u>Percentage</u>
<i>Gender</i>		
male	68	33.5%
female	135	66.5%
<i>Age</i>		
Lower or equal than 18	20	9.85%
19	17	8.37%

20	27	13.3%
21	40	19.7%
22 and over	99	48.77%
<i>Income</i>		
Lower than 1000	38	18.72%
1000-2000	46	22.66%
2001-3000	42	20.69%
More than 3000	77	37.93%

### Measures of The Construct

The questionnaire items regarding the research constructs. AT-attitude; SN-subjective norms; PBC- perceived behavioral control; COO- country of origin; PS- price sensitivity; PI- Purchase intention. There are following five constructs: AT, SN, PBC, COO, PS, PI. Each construct has at least 2 questions. The attitude was evaluated using scale items adapted from Chin et al. (2018), namely, "For me, using the green skincare is wise" and "For me, using the green skincare is favorable/enjoyable". Subjective norm uses the question adapted from Trafimow (2000), Perceived behavioral control use the question adapted from Han et al. (2010), COO use the question adapted from Glass et al. (1981), Price sensitivity uses the question adapted from Laroche et al. (2001). The questionnaire is shown in the Appendix. The questionnaire uses a five-point Likert scale ranging from 1 as "strongly disagree" to 5 as "strongly agree".

## IV. DATA ANALYSIS AND RESULTS

### Reliability and Validity Analysis

In this study, Cronbach's alpha will be used to test reliability. Cronbach's alpha is a numerical coefficient of reliability (Cronbach 1951). If this number is greater than 0.70 (0.77-0.89) in each construct, the survey instrument has a high reliability. Results show all variables have high reliability range from 0.704 to 0.776 as shown in Table 2. So, no items need to be deleted as they are all in the acceptable range.

**TABLE 2**

**Test of Reliability**

<u>Variables</u>	<u>No. of items</u>	<u>Cronbach's alpha</u>
Attitude	3	0.746
Subjective Norms	3	0.716
Perceived Behavioral Control	3	0.704
Country of Origin	4	0.776
Price Sensitivity	3	0.754
Purchase Intention	4	0.702

To test the validity, this study use variance inflation factors (VIF) to detect multicollinearity. A VIF measures the extent to which multicollinearity has increased the variance of an estimated coefficient. The general rule is that if VIF values smaller than 10, it



is acceptable. Besides, it is thumb is that  $VIF > 4$  corresponds to the tolerance value of 0.25 ( $1/0.25=4$ ). For the product of VIF and tolerance around 1, it indicates the study in good shape. Table 3 represented that in this study, multicollinearity does not exist. VIF range from 1.271 with a tolerance of 0.618 to VIF 1.800 with a tolerance value of 0.769.

**TABLE 3**  
**Test of validity**

<u>Variables</u>	<u>No. of questions</u>	<u>Tolerance</u>		<u>VIF</u>	
		<u>Lowest</u>	<u>Highest</u>	<u>Lowest</u>	<u>Highest</u>
Attitude (AT)	3	.556	.769	1.301	1.800
Subjective Norms (SN)	3	.618	.787	1.271	1.618
Perceived Behavioral Control (PBC)	3	.643	.784	1.275	1.556

### Relationships test between the variable

The correlation test is to determine the relationship among the independent, moderating and dependent variables. As shown in Table 4, all independent variables, attitude, subjective norm and Perceived Behavioral Control with a value range of ( $r=0.760$ ,  $p<0.01$ ) ( $r=0.640$ ,  $p<0.01$ ) and ( $r=0.720$ ,  $p<0.01$ ), significant affect the purchase intention. Country of origin as moderator has a significant correlation with purchase intention ( $r=0.640$ ,  $p<0.01$ ) and all independent variables, attitude ( $r=0.562$ ,  $p<0.01$ ), subjective norm ( $r=0.504$ ,  $p<0.01$ ) and Perceived Behavioral Control ( $r=0.608$ ,  $p<0.01$ ). Moreover, price sensitivity as moderator has a significant correlation with purchase intention ( $r=0.725$ ,  $p<0.01$ ) and all independent variables, attitude ( $r=0.723$ ,  $p<0.01$ ), subjective norm ( $r=0.565$ ,  $p<0.01$ ) and Perceived Behavioral Control ( $r=0.655$ ,  $p<0.01$ ).

**TABLE 4**  
**Correlation test**

	<u>AT</u>	<u>SN</u>	<u>PBC</u>	<u>COO</u>	<u>PS</u>	<u>PI</u>
Attitude (AT)	1	.576**	.673**	.562**	.723**	.760**
	-	.000	.000	.000	.000	.000
Subjective Norms (SN)	.576**	1	.531**	.504**	.565**	.640**
	.000	-	.000	.000	.000	.000
Perceived Behavioral Control (PBC)	.673**	.531**	1	.608**	.655**	.720**
	.000	.000	-	.000	.000	.000
Country of Origin (COO)	.562**	.504**	.608**	1	.565**	.640**
	.000	.000	.000	-	.000	.000
Price Sensitivity (PS)	.723**	.565**	.655**	.565**	1	.725**
	.000	.000	.000	.000	-	.000
Purchase Intention (PI)	.760**	.640**	.720**	.640**	.725**	1
	.000	.000	.000	.000	.000	-

\*\* . Correlation is significant at the 0.01 level (2-tailed).

### Moderation analysis

The subsequent structural equation states the structure of the full model.

$$P=\beta_1A+\beta_2SN+\beta_3PBC+\beta_4COO+\beta_5A\times COO+\beta_6SN\times COO + \beta_7PBC \times COO + \varepsilon \quad (1)$$

$$P=\beta_1A+\beta_2SN+\beta_3PBC+ \beta_4PS +\beta_5A\times PS+\beta_6SN\times PS+\beta_7PBC\times PS + \varepsilon \quad (2)$$

P: Purchase intention; A: Attitude; SN: Subjective norm; PBC: Perceived behavioral control; COO: Country of origin; PS: Price sensitivity.

The equations (1) and (2) are shown in the Figure 1 hypothesis model. The Attitude, Subjective Norms and Perceived behavioral control are predictors of purchase intention. Moreover, country of origin and price sensitivity respectively impact attitude, subjective norms and perceived behavioral control to modify those three relationships to purchase intention. Thus, Country of origin is included in equation (1) and Price sensitivity is included in equation (2). In these two equations, the significance of the coefficients of  $\beta_1$ ,  $\beta_2$ ,  $\beta_3$ , and  $\beta_4$  represents the direct effects of attitude, subjective norm, and perceived behavioral control, COO and price sensitivity on purchase intention. the significance of the coefficients of  $\beta_4$ ,  $\beta_5$ , and  $\beta_6$  represents the moderating effect of COO and price sensitivity.

As developed by Hayes (2013), the Hayes's Process Macro was used as a statistical moderation analysis in SPSS to estimates the path coefficients using multiple regression for the continuous outcome (Preacher and Hayes 2008) It can provide insight to the direct and indirect effect of independent variable on dependent variable through the existence of moderator. In this study, it means the direct effect of attitude, subjective norm, and perceived behavioral control on purchase intention to green skincare production through moderator as country of origin and price sensitivity.

For the result of moderation analysis, simple moderation was examined using "Model 1" in Process (Hayes 2013). The result was shown in Table 5. Country of origin and price sensitivity were entered into the Process Macro as moderator. The details required in the Process Macro was 5000 basis-corrected bootstrap samples and 95% confidents intervals (Preacher and Hayes 2008). To test the Hypothesis 4 and 5, that customer purchase intention for the green skincare products is a function of various independents of attitude, subjective norm, and perceived behavioral control whether the country of origin and price sensitivity moderates the relationship of those variables- a hierarchical multiple regression analysis was conducted.

As shown in Table 5, the moderation effect between attitude, subjective norm, and perceived behavioral control and country of origin on purchase intention were significantly negative (SE=0.0370,  $p<0.1$ ; SE =0.0378,  $p<0.01$ ; SE =0.0423,  $p<0.01$ ), indicating that the relationship between attitude, subjective norm, and perceived behavioral control and purchase intention is stronger when country of origin is low. The direct effect between country of origin and purchase intention is significant (SE=0.0594,  $p<0.01$ ). this result support that country of origin is the moderator of this TPB model.

As shown in Table 5, the moderation effect between subjective norm, perceived behavioral control and price sensitivity on purchase intention were significantly positive (SE=0.0375,  $p<0.1$ ; SE =0.0356,  $p<0.01$ ; SE =0.0373,  $p<0.01$ ), indicating that the relationship between, subjective norm, and perceived behavioral control and purchase intention is stronger when country of origin is low. The direct effect between price sensitivity and purchase intention is significant (SE=0.0665,  $p<0.01$ ). This result supports that the country of origin is the moderator of this TPB model. However, the interaction between attitude and purchase intention

moderated by price sensitivity was not significant. It shows that the interaction between antecedents of price sensitivity accounted for an insignificant amount of variance in purchase intention, meaning that price sensitivity does not strengthen the direct effect of attitude on purchase intention of eco-friendly skincare products.

**TABLE 5**  
**Moderated regression result**

<u>Variables</u>	<u>Overall model</u>	<u>Coefficient</u>	<u>Interaction between IV x Mov</u>				
			<u>SE</u>	<u>T</u>	<u>p</u>	<u>LLCI</u>	<u>ULCI</u>
<i>Country of Origin (COO)</i>							
Attitude (AT)	$R^2=.65$ $F=73.65$ , $p<0.01$	-.0672	.0370	-1.8165	.0718	-.1405	.0061
Subjective Norms (SN)	$R^2=.58$ $F=54.80$ , $p<0.01$	-.1264	.0378	-3.3475	.0011	-.2012	-.0516
Perceived Behavioral Control (PBC)	$R^2=.61$ $F=60.72$ , $p<0.01$	-.1177	.0423	-2.7801	.0063	-.2015	-.0338
Purchase intention (PI)		.2783	.0594	4.6826	.0000	.1606	.3960
<i>Price Sensibility (PS)</i>							
Attitude (AT)	$R^2=.65$ $F=71.11$ , $p<0.01$	-.0391	.0375	-1.0439	.2987	-.1133	.0351
Subjective Norms (SN)	$R^2=.65$ $F=72.52$ , $p<0.01$	-.1410	.0356	-3.9599	.0001	-.2115	-.0705
Perceived Behavioral Control (PBC)	$R^2=.64$ $F=69.20$ , $p<0.01$	-.0629	.0373	-1.6847	.0947	-.1368	.0110
Purchase intention (PI)		.3070	.0665	4.6182	.0000	.1753	.4386

## V. DISCUSSION

The result of this study was guided by the previous paper and researches thus get a more reliable result that the TPB model work under the moderator of country of origin and price sensitivity. Today, they are valid to measure the effect factors for customer purchase intention. However, it must be improved in the future and I encourage people to try to improve it (Table 6). The result in Table 4 shows all variables are positively significant related, which means the Hypothesis 1,2 and 3 are supported to correct. Moreover, the result of moderation analysis shows three things. First, the effect of attitude on purchase intention is significant and this relationship can be a strength when COO is stronger, which means hypothesis 4(a) is supported to correct. Second, the effect of subjective norm on purchase intention is significant and this relationship can be a strength when COO and price sensitivity is stronger, which means hypothesis 4(b) and 5(b) are supported to correct. Third, the effect of perceived behavior control on purchase intention is significant and this relationship can be a strength when COO and price sensitivity is stronger, which means hypothesis 4(c) and 5(c) are supported to correct. However, the result of Table 5 also shows that the moderation effect of price sensitivity to link on attitude and purchase intention is insignificant, which means the hypothesis 5(a) is not supported to correct.

**TABLE 6**  
**Hypothesis Expected Result**

<u>Hypothesis</u>	<u>Result</u>
H1: Attitude (AT) positively affects purchase intention.	Significant
H2: Subjective norms (SN) positively affects purchase intention.	Significant

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H3: Perceived behavioral control (PBC) positively affects purchase intention.	Significant
H4: With lower COO,	
(a) the positive interaction between attitude and purchase intention will become stronger	Significant
(b) the positive interaction between subjective norm and purchase intention will become stronger	Significant
(c) the positive interaction between perceived behavioral control and purchase intention will become stronger.	Significant
H5: With lower price sensitivity,	
(a) the positive interaction between attitude and purchase intention will become stronger	Insignificant
(b) the positive interaction between subjective norm and purchase intention will become stronger	Significant
(c) the positive interaction between perceived behavioral control and purchase intention will become stronger.	Significant

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There is an unexpected result occur that the linkage between attitude and purchase intention moderated by price sensitivity is not significant. To figure out the reason for this situation, I made an in-depth interview with 10 participants and ask their view about price, attitude and purchase intention of green skincare products. Most of their answers have an important point that before deciding to buy a green skincare product, they already know the price of green skincare products is higher than that of normal cosmetic products. So, at that time, price is not the main effect factor that impacts their purchase, health and safety are.

Comparing with the previous research, the result is similar. Hsu (2017) stated that COO and price sensitivity have positive moderation to the purchase intention and its antecedences. Ling (2013) also stated that the willingness of the customer to pay is the moderator factor for the relationship between attitude and purchase intention. Ling also found the important direct effect between environmental attitude and purchase intention, which can be supported by this study.

For this study, there still have some limitations or extraneous variables may affect the accuracy of the data. The shortage of collection time might push participants to do the questionnaire too fast to understand the question very well. Moreover, less understanding of the green skincare products may impact the data. Although, the questionnaire including the introduction and picture of the green skincare products and brands, the stereotypes of the chemical cosmetic still control participants' ideas.

This study can benefit the theoretical contribution for people to understand the customer purchase intention for eco-friendly cosmetics. First, this study considers COO and price sensitivity as moderator factors heuristically, helps us understand the linkage between customer purchase intention and its antecedences. The findings that the direct effect of consumers' attitude, subjective norm, and perceived behavioral control to purchase intention of green skincare products and moderation effect by COO and price sensitivity make them stronger or weaker. Roth and Romeo (1992) stated that building a strong and healthy relationship with

favorable partners would improve the reputation of the brands, and in turn, benefits the purchase intention by its antecedences.

Moreover, in order to decrease the price sensitivity of customers, the company can provide clear and honest service in present product information, like special material used in the products that make it different from non-green cosmetics. Those behaviors may increase the customer's satisfaction. Based on the research by Low et al. (2013), satisfaction negatively related to price sensitivity. Especially, in China, the Company needs to pay attention to the recommendation from Internet celebrities, who has a huge influence in China now.

## VI. CONCLUSION

The importance of this paper is that it full the blank of research for green skincare products in the Chinese mainland. The main participants are university students who will become the main customers in the next few years. This study provides an important conclusion and inspires skincare companies to increase customer purchase behavior by changing their strategy base on the impact factors.

This study investigated that the basic TPB model about the interaction of attitude to green skincare products, subjective norm and perceived behavior control on purchase intention is significantly positive. The results show that attitude, subjective norm, and perceived behavioral control have a positive relationship with the customer purchase intention of eco-friendly skincare products, while the association between these variables and purchase intention are moderated by COO and price sensitivity. Except for the linkage between attitude and purchase intention moderated by price sensitivity. When COO and price sensitivity are weak, attitude, subjective norm, and perceived behavioral control the customer purchase intention. It means that an individual who has low COO with a positive attitude toward green skincare products, high subjective norm, or high perceived behavioral control are likely to purchase green skincare products. An individual who has low price sensitivity with a high subjective norm or high perceived behavioral control are likely to purchase green skincare products.

These findings answer the initial questions of the factors affect customer purchase intention. For the second research question, the present study also provides some great managerial recommendations to the green skincare companies. First, the findings of attitude, subjective norm and perceived behavior control have a significant positive effect on customer purchase intention to green skincare products. So, company need to provide better quality and functional products and improve their brand image through the Internet and social media sites to build a great reputation. Furthermore, the company can also hire some people to advise the advantage of eco-friendly skincare products and the serious effect of environmental damage of chemical skincare products to evoke customer's positive attitude toward eco-friendly skincare products. This strategy makes more customers have the idea of eco-friendly skincare and may help their future choice. In turn, successfully facilitate their purchase intention toward green skincare products. Additionally, a reasonable price can benefit customer purchase intention. The promotion or coupon activity may help to increase customer purchase intention.

This study has some limitations. First, the questionnaire or the whole research uses the products that have been sold in the market as for example. It means the research only focuses on trusted goods. Future studies can investigate other green products, to expand the result to various types of green skincare products. The main participants in this study focus on university

students, the future study can try to extend the participants to all potential customers. Moreover, the study figures out the interaction between purchase intention towards green skincare products and its antecedences under the moderation effect by COO and price sensitivity. It might be work that expands the research result to the whole green products instead of the only cosmetic industry in the future.

## APPENDIX

<b>Questionnaire</b>			
<u>Construct</u>	<u>Measurement Item</u>	<u>Source</u>	
AT	AT1	For me, using green skincare products occurs when the manufacturer appropriately implements their green business.	Chin et al. (2018)
	AT2	For me, using the green skincare is wise.	
	AT3	For me, using the green skincare is favorable/enjoyable.	
SN	SN1	most others who are important to me think I should use green skincare products	Trafimow (2000)
	SN2	most people whose opinions I care about think I should use green skincare products.	
PBC	PBC1	selecting a green skincare product is completely up to me	Han et al. (2010)
	PBC2	I am confident that if I want to buy a skincare product	
	PBC4	I have enough time to select a green skincare product	
COO	COO1	I think that green skincare products made in developed countries are more reliable than those made in developing countries	Glass et al. (1981)
	COO2	I think the quality of green skincare products made in developed countries is better than those made in developing countries	
	COO3	I think that green skincare products made in developed countries have a better reputation than those made in developing countries	
	COO4	I think that green skincare products made in developed countries look better than those made in developing countries	
PS	PS1	It is acceptable to pay 10% more for green skincare products than for non- green skincare products	Laroche et al. (2001)
	PS2	I am willing to pay 10% more for green skincare products than for non-green skincare products	
	PS3	I am willing to spend an extra 300 RMB per month in order to buy green skincare products	
PI	PI1	I am likely to buy green skincare products	Ajzen and Fishbein (1980) and Trafimow (1994),
	PI2	I will buy green skincare products as soon as I run out of the skincare products, I am currently using	
	PI3	I will recommend the products to my friends,” and “I will consider purchasing green skincare products.	
	PI4	I will consider purchasing green skincare products	

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