The intention of consumers to use cosmetics in Taipei City: An application of Smart-PLS

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ABSTRACT : *In recent years, the public's have paid more and more attention to the quality of life. The age layer of cosmetics has shown signs of expansion, so that consumption patterns have also changed, that in public or at work makeup is an international due etiquette; therefore, cosmetics have changed from luxury goods to daily necessities, the demand for cosmetics is increasing and the consumption value of cosmetics is also continuing to grow. This study aims mainly to understand the behavior intention of consumers in Taipei City to use cosmetics. Taking the cosmetic consumers in Taipei as the research population. The population was sampled by Random-Sampling method. The path analysis of the structure model (Inner Model) and measurement mode (Outer model) were carried out by Bayesian estimation, and Sobel test was used. The results show that the cosmetic consumers in Taipei City: (1) Attitude has a positive and significant effect on Behavior intention; (2) Subjective norms have a positive and significant effect on Behavior intention; and (3) Perceptual behavior control has a positive and significant effect on Behavior intention. In addition, the results of this study also show that Attitude, Subjective norms and Perceptual behavior control are "complete" intermediate factors. Finally, these findings can be provided to consumers of cosmetics in Taipei City, and can be provided to the cosmetics industry for their business decisions.*
KEYWORDS -*Attitude, Subjective norms, Perceptual behavior control, Behavior intention*

I.   INTRODUCTION

1.1 Research background and motivation

Cosmetics is not a commodity in today's society, up to the ancient dynasties to all continents have the traces of cosmetics, and now cosmetics are indispensable daily necessities, and now the cosmetic role is not limited to beautify the skin, it even has maintenance functions, and in many commodity choices. How do consumers choose to buy cosmetics?

Cosmetics industry for the beautiful industry, in recent years due to the improvement of national living standards, cosmetics have become the necessities of life, cosmetics industry and popular trends are closely related, the market continues to have new products launched【1】. Moreover, makeup care products industry for the image and brand of the industry, but also a combination of beautiful traditional industries.

In today's visualized society, more and more people will use makeup products to show their advantages, but also bring unlimited business opportunities【2】.

With the improvement of national living standards, cosmetics from the past luxury to the necessities of life, but beauty is human nature.

People's awareness of beauty gradually improved, resulting in the cosmetic market gradually booming, the United States can make people more confident and energetic, and the makeup industry is closely related to the trend, the market continues to have new products launched. To understand the motivation of consumers to be loyal to the brand? How do manufacturers go to the brand's visibility to build customer loyalty? Also to understand the needs of male consumers and cosmetics and motivation to use. Beauty is no longer the preserve of women, and now the awareness of the male customer base is gradually rising, cosmetics have become indispensable necessities for a male and female【3】【4】.

1.2 Purposes of this study

The phenomenon of image-oriented in today's society is becoming more and more obvious; most people will use cosmetics to make their appearance look more beautiful, so in today's cosmetics brand and cosmetics function and types are more and more diverse. At present, Taiwan has also more and more enterprises to join the cosmetics market. Today's makeup care products market brand is very much. What are the factors that affect consumer purchasing? Based on the above motives, this study would like to understand the intention of consumers in Taipei to use cosmetic behavior.

Taking the consumers of Taipei City as the research population and it was sampled by random sampling method, and the structure model (Inner Model) and measurement mode (Outer model) of this study were understood by using the Partial Least Square of Linear Structural Equation Model (PLS-SEM).

The fitting effect of the appropriate fit; therefore, the main research purposes of this study are as follows to understand the consumers' intention in Taipei City to use cosmetic behavior:

(1) Whether Attitudes have a positive and significant impact on their behavior intention;

(2) Whether subjective norms have a positive and significant effect on their behavior intention; and

(3) Whether Perceptual behavior control has a positive and significant effect on their behavior intention.

II.   LITERATURE REVIEW

Fishbein & Ajzen【5】 published "Theory of Reasoned Action, TRA". It mainly from the perspective of social psychology, that people are rational way to determine their behavior patterns. Therefore, Ajzen【6】 proposed Theory of Planned Behavior, holds that people have the ability to control their behavior completely, and the behavior is mainly influenced by Attitude of behavior, Subjective norms and Perceived behavior control. The Literature review of main constructs of this study, including Attitude, Subjective norms, Perceptual behavior control, and behavioral intention, are discussed separately as follows:

2.1 Definition of Attitude

2.1.1 Conceptual definition of Attitude

The conceptual definition of Attitude in this study refers to "the psychological positive or negative tendency and evaluation of an individual to a particular body." And the main construct of the Attitude contains two sub-constructs, such as personal interests and social interests. The former (personal interests) can enhance the interests of the individual itself, such as: financial gains or assets to increase and increase self-confidence, improve the quality of life, and the latter (social interests) refers to the interests of others, such as to promote industrial development, to enhance the image of the country, etc. The conceptual definition of the above is summarized from the following literature and is briefly described below.

Ajzen & Fishbein【7】 deemed Attitude as hypothetical conformation, which is a different kind of reaction to the phenomenon of certain people, things and things in one's psychological level, and the behavior of different attitudes produces different behaviors.

Eagly & Chaiken【8】 considered Attitude to be an evaluation or assessment of the extent of the impact of an act and an individual's interest or disadvantage in behavioral issues, based on behavioral beliefs and evaluation results.

Armitage & Christian【9】 pointed out that Attitude is identified as the resource of all behaviors, so the relationship Attitude between Behavior, and it is the research highlight of Attitude.

Fu【10】 proposed that the three main types of Attitudes are: (1) Cognitive component: The individual's perception of the subject of the Attitude, that is, knowledge, facts and beliefs about the subject, etc.; (2) Affective component: The feelings or emotions of the individual towards the subject, especially, in its evaluation; and (3) Behavioral component: The reaction or tendency of the individual to act in response to the subject.

Wang【11】 pointed out that Attitude is the individual's evaluation and behavioral tendency in the environment in which he is located, including all social events or ideas about people or things.

2.1.2 The Operational definition of Personal interests and Social interests

Chen【12】 pointed out that personal interests can enhance the interests of the individual itself. The interests can be tangible benefits, such as financial gains or asset increases, or intangible benefits, such as increased self-confidence and improved quality of life, and social interests as parts that can enhance the interests of others, such as promoting industrial development, enhancing the image of the country, and so on.

2.2 Definition of Subjective norms

2.2.1 Conceptual definition of Subjective norms

The conceptual definition of Subjective norms in this study refers to "the social pressure felt by an individual when he or she is engaged in a particular act. From the important other person or group around him, and the main construct of Subjective norm contains two sub-constructs, such as the main group (e.g. family) and sub-groups (e.g. relatives, colleagues, friends, etc.). While the former refers to the object that the individual is in constant contact with, and the latter (sub-group) is a data source that, by reference to the information provided to the individual by the group, enables the individual to have reference criteria in the production of the Act ". The conceptual definition referred to above is summarized from the following literature, which is outlined below.

Ajzen【6】 pointed out that Subjective norms are determined by other individuals or groups, and the higher the Subjective norms, the higher the Social pressure or the higher the willingness to comply with the individual's

willingness to act; conversely, the lower the subjective norm. It indicates that the lower the social pressure or the lower the willingness to comply, the lower the intention of the behavior.

Li & Liu【13】 proposed that most of the influence of important other people's behavior comes from family members, spouses, friends, colleagues etc., because the thought attitude of important others will sway the factors that determine themselves, and subjective norms can be regarded as the result of the behavior of normative beliefs.

Huang【14】 deemed that Subjective norms are determined by the belief of a particular important reference object. By the will of the individual to comply with each important reference object; that is, by the interaction between normative belief and submissive will; among them, normative belief refers to the subjective view that an individual believes that an important reference object should conduct a certain behavior. The willingness to obey refers to the will of individuals to comply with these reference objects.

Li【15】 proposed that Subjective norms are the cognition of the social pressure that an individual feels when he takes a particular act. Subjective norms are the pressure of salient individuals or groups to believe that a particular act should not be practiced, that is, the degree of social stress that an individual perceives in the face of an act that he or she wants or does not want to manifest.

2.2.2 Operational definition of Main group and Sub-group

Xu【16】 considered that the main group refers to the object that the individual often contacts, and the sub-group is a kind of data source, which makes the individual have the reference criterion when producing the behavior by referring to the information provided to the individual by the reference group.

Hu【17】 pointed out that the study measures subjective norms by individuals or groups with the ability to influence consumers, the "degree of identity" and "compliance" of the Act, and distinguishes the "main group" (family) from the "sub-group" (relatives, colleagues, friends, etc.) with the degree of intimacy, continuity and emotional presentation of the relationship.

The "operational definition" of the main group and sub-groups in this study refers to the definition of Hu【17】 .

2.3 Definition of Perceived behavior control

2.3.1 Conceptual definition of Perceived behavior control

The conceptual definition of perceptual behavior control in this study refers to "the belief that an individual participates in a particular act when he or she is involved in a particular thing. Moreover, that the main facet of perceptual behavior control contains two sub-constructs, such as self-ability and convenience. The former (self-ability) refers to the individual's self-perception of his ability to complete the process of this behavior. Such as the knowledge, experience, ability to complete decision-making. The latter (facilitation) refers to the level of opportunity and resources that individuals believe they need, such as: energy accessibility, etc". The conceptual definition referred to above is summarized in the following literature, which is outlined below.

Ajzen【6】 believed that perceived behavior control is an individual who believes that it has more resources and opportunities. It is less used for expected barriers or obstacles, and is more used to control individual behavior. In addition, many factors will affect the degree of control of the individual will that mainly can be divided into internal and external factors. The internal factors are the impact of personal will control, some can already be changed by training and experience, such as technology and ability, while others such as emotional or compulsive behavior is more difficult to change. Moreover, external factors usually only lead to temporary changes in behavior intent. If time and opportunity, in the absence of time and appropriate opportunities, individuals are likely to change their behavioral intent, many acts will be difficult to occur.

Xia【18】 pointed out that Perceptual behavior control is a reflection of an individual's experience and expected obstacles. When an individual thinks that the more opportunities and resources he has and the fewer obstacles they expect, the more the perceived behavior of the behavior is controlled. However, there are two ways to influence, one is to have a motive meaning for behavioral intent, and the other is to be able to predict behavior directly.

Jiao【19】 considered that perceptual behavior control is the existence or lack of a particular resource and opportunity when an individual is engaged in a particular act.

2.3.2 Operational definition of Self-competence and Convenience conditions

Ajzen（【6】,【20】）pointed to the belief in the theoretical response to Planned Behavior, and that the resources and opportunities required by individuals for the execution of Acts require, primarily, the cooperation of facilitating conditions, such as the availability of resources in the implementation of specific acts, the facilitation of access. Whether there is plenty of time and money.

Ajzen【6】 pointed out that the control belief includes the sum of the product functions of the Perceived self-efficacy and the facilitating condition of the ability required to perform the Act【20】 .

Perceived self-efficacy, like the intrinsic limiting factor, is the result of the interaction of other self-discipline mechanism, individual ability and experience performance, and the higher the ability of individual perception to complete an act, the more the perceived behavior of the behavior is controlled 【21】【22】. Convenience is an external limiting factor, which is the accessibility of the resources required to perform the act. Divided into resource facilities (money, time, etc.), and technical facilities (refers to the technical capacity required to take an act), if the individual senses the more resources required to complete the Act. The higher the perceived behavior of the behavior control 【22】【23】【24】.

Bandura 【40】 believed that the level of Self-efficacy not only affects the individual's thinking type, but also has a direct or indirect effect on the choice of behavior, the amount and persistence of effort, the fluctuation of emotion and the performance of achievement. He thought that everyone has his or her own self-system, which is the cognitive mechanism. In addition, the sense of self-efficacy is an important core concept in cognitive mechanism. "Self-efficacy" represents an individual's self-perception of what he or she can accomplish, and the higher the self-efficacy, the higher the perceived Behavior control 【17】.

Xu 【16】 considered that self-competence refers to an individual's self-perception of his ability to complete the process of the act, such as the knowledge, experience, ability, etc., that can be completed. Convenience condition refers to the degree to which an individual believes that the opportunities and resources required are convenient, such as the convenience of energy acquisition.
The "operational definition" of Self-competence and Convenience condition in this study refers to the definition of Xu 【16】.

2.4 Conceptual definition of Behavioral intention
The conceptual definition of behavioral intention in this study refers to "the best index to the occurrence of predictive behavior, which can explore the subjective probability that an individual expects to engage in certain behaviors. Moreover, the formation of which is influenced by three factors such as attitude, subjective norm, behavior control perception, and the stronger the intention of the individual to engage in a particular thing or object. The main construct of Behavioral intent consists of: (1) Positive behavioral Intent: loyalty, payment more; (2) Negative behavioral intent: switch, internal response, and external response and other positive and negative constructs." Moreover, the conceptual definition of the above is summarized from the following literature, which is briefly described below.

Parasuraman, Zeithaml & Berry 【25】 believed that behavioral intent is a useful management pointer that allows an enterprise to know whether a customer will continue to receive subsequent services from the enterprise.

Xia 【18】 stated that Behavior Intention is the subjective probability of an individual to take a particular act, which reflects an individual's willingness to act in respect of a particular act.

Ajzen 【26】 advocated that human behavior is based on three beliefs: (1) Behavioral beliefs: an estimate of the probability of the outcome of the output of a particular act and an individual evaluation of the results of those outputs; (2) Normative beliefs: The normative expectations of others, who want others to act according to their expectations), and the submissive motives for those expectations; and (3) Controls Beliefs: A subjective evaluation of the factors that cause positive or negative effects on a particular behavior and the impact on those factors.

Zhang 【27】 deemed that Behavior intention refers to a future behavior tendency of consumers after the experience and cognition of consumption in the past, the more subjective mentality is evaluated as a whole, and the enterprise or activity is adopted.

Wang 【28】 pointed out that the intention to act is the possibility of the individual's willingness to take a particular act, which is determined by his attitude, subjective norms and perceived behavior control, so as to explain and predict the performance of the actual behavior of the individual.

2.5 Correlation between Attitude and Behavior intention
The literature on the relevance of Attitudes and Behavior intentions is summarized below.
Xu 【16】 pointed out that attitude and behavior intention are positive relationships, and that the more positive an individual's attitude towards behavior, the higher his or her intention to behave.
Lian 【29】 showed that attitude, subjective norms and perceptual behavior control will positively affect the willingness to buy.
Xu 【30】 proposed that Attitude and Subjective norms positively affect the willingness to buy, and subjective norms regulate the relationship between perceptual behavior control and purchasing willingness.
Wang 【31】 pointed out that the safety attitude of the participants in the water activities had a positive effect on the behavior intention.

Combining the above literature, the following hypotheses are obtained in this study:

H_{1a}: Personal interests have a positive and significant impact on attitudes.

H_{1b}: Social interests have a positive and significant impact on attitudes.

Hypothesis 1(H_1): Attitude has a positive and significant effect on Behavioral intention.

From the above mentioned, although the research object of each literature is different from that of this study. The hypothesis one (H_1), that is, the Attitude of consumers in Taipei City to use cosmetics has a positive significance for their behavior intention, but it is necessary to use interview questionnaire data and use statistical methods to test whether the hypothesis is valid.

2.6 Correlation between Subjective norms and Behavior intention

The literature on the relevance of Subjective norms to Behavioral intention is summarized below:

Hu【17】 found that the purchase behavior of consumers ' proprietary medicines was positively influenced by the willingness to buy, and the willingness to buy was positively influenced by subjective norms, attitudes and perceived behavior control.

Lin【32】 pointed out that subjective norms have a positive effect on the intention of network purchase. Chen【33】 showed that the subjective norms, attitudes and conscious behavior control of the respondents taking probiotics had a positive effect on the intention of taking probiotic behavior.

Wang【31】 pointed out that the subjective norms of the participants in the waters activity had a positive effect on the behavior intention.

Combining the above literature, the following hypotheses are obtained in this study:

H_{2a}: The main group has a positive and significant effect on subjective norms.

H_{2b}: Sub-groups have a positive and significant impact on subjective norms.

Hypothesis 2(H_2): Subjective norms have a positive and significant impact on Behavioral intention.

From the above mentioned, although the research object of each literature is different from that of this study. The above hypothesis II (H_2), that is, Subjective norms of the use of cosmetics by consumers in Taipei City have a positive and significant intention on their behavior, but it is necessary to use the interview questionnaire data and use statistical methods to test whether the hypothesis is established.

2.7 Correlation between Perceived behavior control and Behavioral intention

Ajzen & Fishbein【7】 pointed out that perceptual behavior control also indicates that an individual's perception to reach or not is difficult to achieve when taking an act, and that the higher the behavior intention when the perceived behavior is controlled, conversely, the lower the behavioral intent if the perceived behavior is less controlled.

Huang【34】 showed that behavioral attitudes, subjective norms and perceptual behavior control changes were positively correlated with the individual's behavioral intent, with the highest influence on perceptual behavior control.

Chu【35】 showed that consumer perception behavior control and subjective norms of organic food will have a significant direct impact on the purchase intention, in which the subjective norm can also be used as an intermediary through attitude, further strengthen the formation of purchase intention.

Zhang【36】 found that brand image, network word-of-mouth, perceived behavior control and the use of apparel website behavior intention has a significant positive correlation.

Combining the above literature, the following hypotheses are obtained in this study:

H_{3a}: Self-ability has a positive and significant effect on perceptual behavior control.

H_{3b}: Convenient conditions have a positive and significant effect on perceptual behavior control.

Hypothesis3 (H_3): Perceptual behavior control has a positive and significant effect on Behavioral intention.

From the above mentioned, although the research object of each literature is different from that of this study. The above hypothesis 3 (H_3), that is, the perception behavior control of consumers using cosmetics in Taipei City has a positive significant effect on Behavior intention, but it is necessary to use interview questionnaire data and use statistical methods to test whether the hypothesis is valid or not.

2.8 Research Framework

Based on the above research purposes, hypotheses and literature review, this research framework is based on the theoretical framework model of Ajzen【6】 to modify the "three-cause one-result" model, as shown in Figure 1.
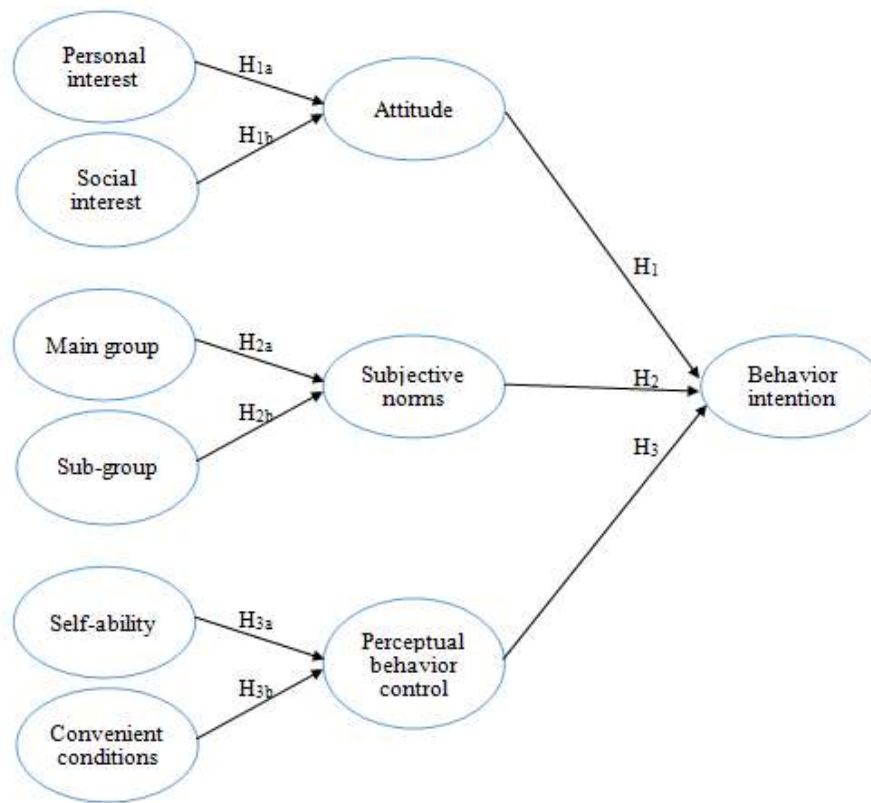
Figure 1 Research Framework

III. RESEARCH METHODS

3.1 Research objects and questionnaire design

In this study, the consumers of cosmetics in Taipei City were the object of questionnaire distribution, Random-sampling method was used to measure the content validity of the questionnaire, and the Reliability was carried out respectively. After the questionnaire were designed; first, the expert questionnaire, and then the implementation of the Pilot test, will not be suitable questionnaire items to amend or eliminate, and finally carry out Post-test, 300 questionnaire, effectively recovery questionnaire of 43, that is, effective recovery rate is 14.3%.

In this study, the main conceptual constructs of the questionnaire number structure table, as shown in Table 1.

Table1 Questionnaire Number Structure Table

Main constructs	number	Questionnaire sources
Attitude	3	Zheng【37】Hu【17】
Subjective norms	4	Xu【16】Li【38】
Perceived behavior intention	3	Li【38】
Behavior intention	4	Hu【17】

3.2 Partial Least Square of Linear Structure Model (PLS-SEM)

Two large families of SEM, one called Covariance-based SEM (CBSEM) and the other called Variance-based SEM or Partial Least Square SEM (PLS-SEM). The two kinds of differences are sorted as shown in Table2. This study has the following advantages because it takes into account the Partial Least Square of Linear Structure Model (PLS-SEM): (1) Model Complexity; (2) exploratory Research; (3) Non-Normal Data; (4) Focus on Prediction; (5) theory; (6) Convergence ensured; (7) Categorical Variables; and (8) Theory Testing etc.【39】.

Table2

	PLS-SEM
Goal	Endogenous variables have the max. ability to be explained
Data source	raw data (format: .csv or .txt)
Software	Smart PLS, PLS-Graph, Visual PLS etc.

Source: 【39】 & this study

3.3 Questionnaire data and measurement system
Dividing the questionnaire into four Inner/Latent variables, such as Attitude, Subjective norms, Perceptual behavior control and Behavior intention, each potential variable is divided into the following Outer/observable variables. Each observable variable has several number of questions to survey. The data from the survey is then processed and the original questionnaire data file is established.

In addition, Bayesian estimation is used to analyze the path effect of Structural patterns, and to do Sobel test to understand the Attitude, Subjective norms and Perceived behavior value etc. whether the three Latent variables have an "intermediate effect" or not.

3.4 Common method Variation (CMV test)
Following the use of Latent marker variable with PLS and a Marker variable for controlled to examine the results of common methods bias, the questionnaire does not have the problem of joint methodological variation, and this study will " The Marker variable - the post-control model", as shown in Figure 2.
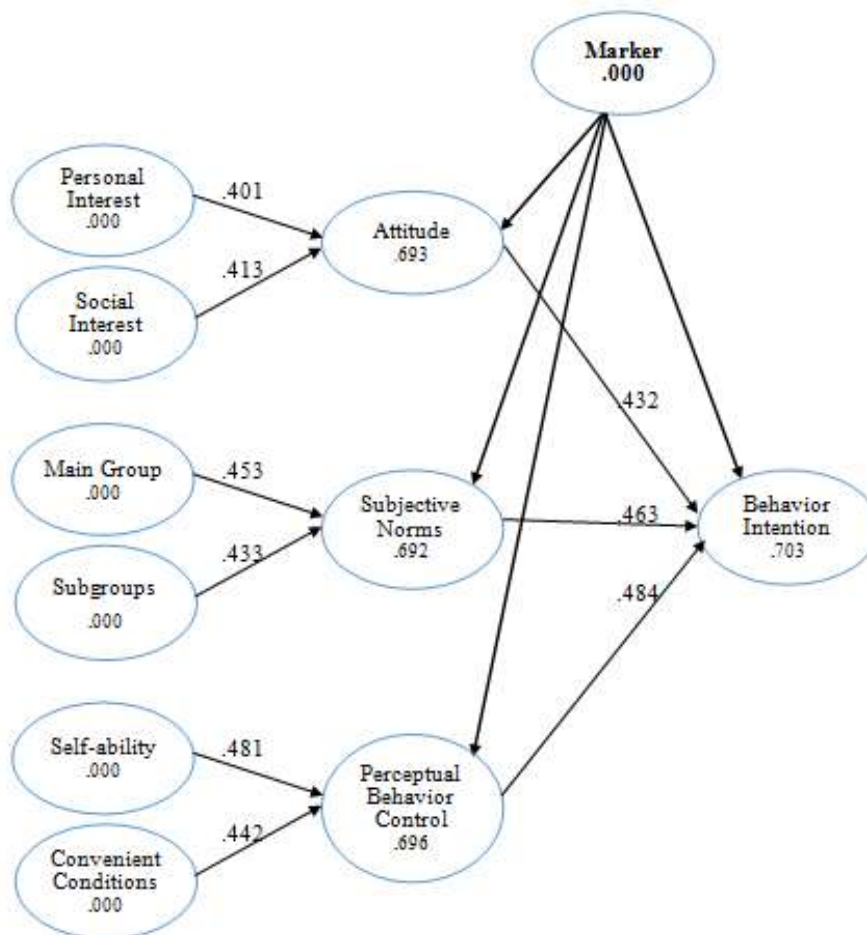

Figure2 Latent marker variable with PLS

IV. RESEARCH ANALYSIS AND RESULTS
4.1 Overall model estimation
The standardized regression path coefficient and the endogenous variable R Square for the overall model estimation of this study are shown in Figure3.
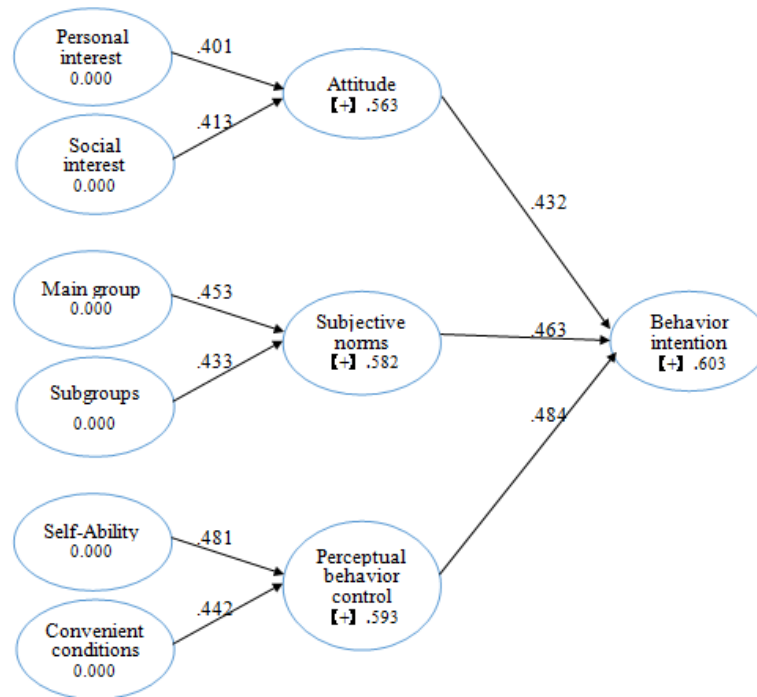
Figure 3 Standardized results for overall model estimation

4.1.1 Significant test

The overall model of this study uses the significant examining results of Smart-PLS, as shown in Figure 4 below, in the Inner Model, the numbers are t values, t>1.96 means "significant", and the numbers in the Outer Model represent non-standardized.

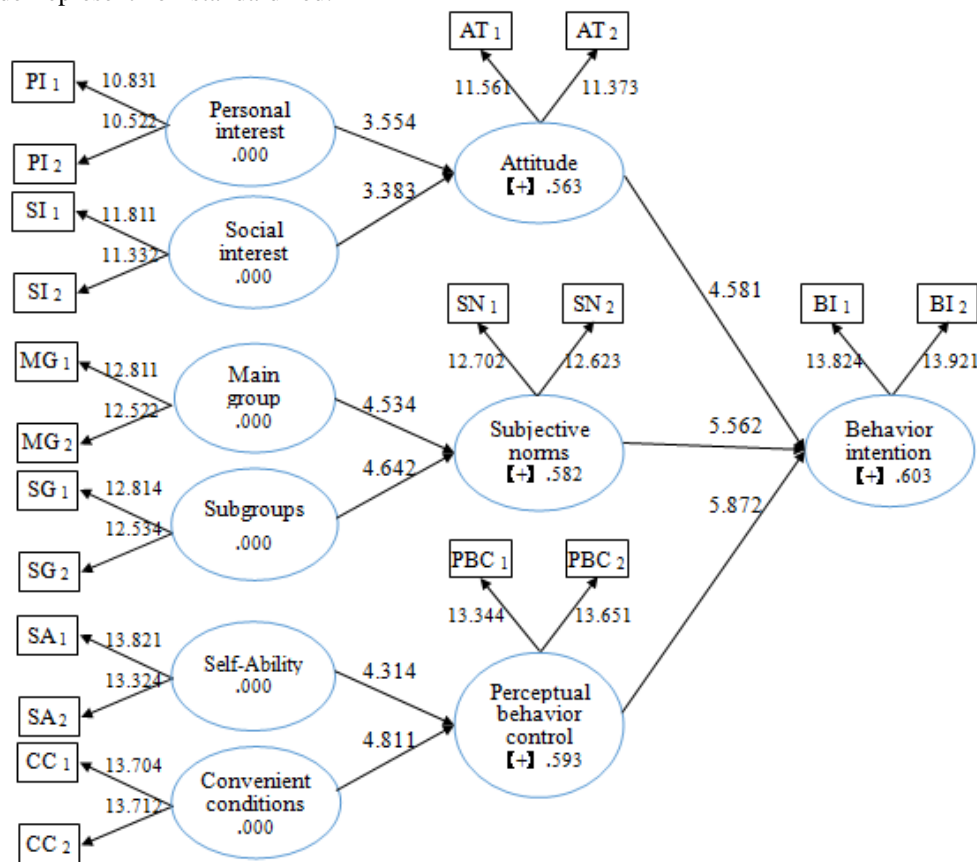Figure 4 Results of significant test for overall model (unstandardized)

4.2 Analysis and test of path effect of Inner Model

Aiming at the path coefficient between the various "implicit variables" (or "non-observable variables") of Structural patterns. This study uses Bayesian estimation to analyze the path effect of Structural patterns, and to use Sobel test to understand whether the intermediate effect of this model is significant, with Attitude, Subjective planning and Perceptual behavior control as intermediate factors; shown in Tables 3 and 4.

(1) PI to AT: the t Statistics (O/STERR) for 3.554> 3.29, so the indirect effect is significant.
(2) SI to AT: the t Statistics (O/STERR) is 3.383> 3.29, so the indirect effect is significant.
(3) AT to BI: the t Statistics (O/STERR) is 4.581> 3.29, so the indirect effect is significant.
(4) MG to SN: the t Statistics (O/STERR) is 4.534> 3.29, so the indirect effect is significant.
(5) SG to SN: the t Statistics (O/STERR) is 4.642> 3.29, so the indirect effect is significant.
(6) SN to BI: the t Statistics (O/STERR) is 5.562> 3.29, so the indirect effect is significant.
(7) SA to PBC: the t Statistics (O/STERR) is 4.314> 3.29, so the indirect effect is significant.
(8) CC to PBC: the t Statistics (O/STERR) is 4.811> 3.29, so the indirect effect is significant.
(9) PBC to BI: the t Statistics (O/STERR) is 5.872> 3.29, so the indirect effect is significant.

In addition, this study Variance Account for (VAF) =TIE/TE=98% is greater than 80.00% (See Table 4), this means Attitude, Subjective norms and Perceptual behavior control as "Complete intermediate factor".

Table 3 Sobel Test: Bootstrapping→ Path Coefficients (Mean, STDEV, *t*-Values)

	Original Sample (O)	Standard Deviation (STDEV)	*t*-Statistics (O/STERR)	p-value
(1) PI→AT	.401	.112	3.554	***
(2) SI→AT	.413	.121	3.383	***
(3) AT→BI	.432	.095	4.581	***
(4) MG→SN	.453	.102	4.534	***
(5) SG→SN	.433	.092	4.642	***
(6) SN→BI	.463	.082	5.562	***
(7) SA→PBC	.481	.111	4.314	***
(8) CC→PBC	.442	.091	4.811	***
(9) PBC→BI	.484	.083	5.872	***

Remark:

(1) PI→AT (Indirect Effect); SI→AT (Indirect Effect); AT→BI (Indirect Effect); MG→SN (Indirect Effect); SG→SN(Indirect Effect); SN→BI (Indirect Effect); SA→PBC (Indirect Effect); CC→PBC (Indirect Effect); PBC→BI(Indirect Effect) ; RQ→OP (Indirect Effect)

Table 4 Variance Account For (VAF)

	PI	SI	MG	SG	SA	CC	AT	SN	PBC	BI	VAF
Indirect Effect(IE)	.0000	.0000	.0000	.0000	.0000	.0000	.2623	.3612	.3624	.0000	.980 (98%)

Remarks:

(1) Total Effect (TE)= Direct Effect+ Indirect Effect

(2) When VAF>80% represents a complete intermediate effect 【39】 , and this study model VAF=0.98, this means Attitude, Subjective planning and Perceptual behavior control have a "complete" intermediary effect.

In addition, through Table 3 and Figures 3 & 4, the following findings could be obtained in this study.

(1) H$_{1a}$: The personal interests of cosmetics consumers in Taipei City have a positive and significant impact on their Attitude (regression path coefficient =0.401), so H$_{1a}$ is supported.

(2) H$_{1b}$: The social interests of cosmetic consumers in Taipei City have a positive and significant impact on their Attitude (regression path coefficient =0.413), so H$_{1b}$ is supported.

(3) H$_{1}$: The attitude of cosmetic consumers in Taipei City has a positive and significant effect on their Behavior intention (regression path coefficient =0.432; t value =4.581), so H$_{1}$ is supported.

(4) H_{2a}: The main group of cosmetics consumers in Taipei City has a positive and significant effect on their Subjective norms (regression path coefficient =0.453), so H_{2a} is supported.

(5) H_{2b}: The sub-group of cosmetics consumers in Taipei City has a positive significant Influence on their Subjective norms (regression path coefficient =0.433), so H_{2b} is supported.

(6) H_2: The subjective norms of cosmetic consumers in Taipei City have a positive and significant effect on their Behavior intention (regression path coefficient =0.463; t value =5.562), so H_2 is supported.

(7) H_{3a}: The self-ability of cosmetic consumers in Taipei City has a positive and significant effect on their Perceptual behavior control (regression path coefficient =0.481), so H_{3a} is supported.

(8) H_{3b}: The convenience conditions of cosmetic consumers in Taipei City have a positive and significant effect on their Perceptual behavior control (regression path coefficient =0.442), so H_{3b} is supported.

(9) H_3: The perceived behavior control of cosmetic consumers in Taipei City has a positive and significant effect on their Behavior intention (regression path coefficient =0.484; t value =5.872), so H_3 is supported.

V. CONCLUSIONAND RECOMMENDATIONS

From the above analysis and results of the conclusion, and propose the contribution of this study, and finally put forward the limitations of the research process and the recommendations of follow-up study.

5.1 Conclusions

From the above mentioned, this study takes the study of cosmetics consumers in Taipei City as the population, using PLS-SEM to explore the relationship between the Attitude, Subjective norms, Perceived behavior control and Behavioral intention of cosmetic consumers in Taipei City, and the conclusion of this study is as follows:

(1) Attitudes about personal interests

The results show that H_{1a} was established, that is, "Personal interests of cosmetic consumers in Taipei City have a positive and significant impact on their Attitude."

(2) Attitudes towards the interests of the community

The results show that H_{1b} was established, that is, "Social interests of cosmetic consumers in Taipei City have a positive and significant impact on their Attitude."

(3) The Attitude to Behavior intention

Combined (1) and (2), the results show that H_1 was established, that is, "Attitude of cosmetic consumers in Taipei City has a positive and significant impact on Behavior intention."

(4) Subjective norms relating to the main group

The results show that H_{2a} was established, that is, "The main group of cosmetics consumers in Taipei City has a positive and significant impact on Subjective norms."

(5)About sub-group on subjective norms

The results show that H_{2b} was established, that is, "Sub-group of cosmetic consumers in Taipei City have a positive and significant impact on their Subjective norms."

(6) Subjective norms on Behavior intention

Combined (4) and (5), the results show that H_2 was established, that is, "Subjective norms of cosmetic consumers in Taipei City have a positive and significant impact on their Behavior intention."

(7)Perceptual behavior Control in relation to Self-ability

The results show that H_{3a} was established, that is, "the self-ability of cosmetic consumers in Taipei City has a positive and significant effect on their Perceptual behavior control".

(8) Perceptual behavior control in relation to

The results show that H_{3b} was established, that is, "Convenient conditions of cosmetic consumers in Taipei City has a positive and significant impact on their Perceived behavior control."

(9) The behavior intention of the perceived behavior control

Combined (7) and (8), the results show that H_3 was established, that is, "Perceived behavior control of cosmetic consumers in Taipei City has a positive and significant effect on their Behavior intention".

In a word, it is clear from the above conclusion that the main constructs of this research model is related to each other, and the main constructs such as Attitude, Subjective norms and Perceptual behavior control have "complete" intermediate effect.

5.2 Research Contributions

The results of this study can not only provide reference for consumers of cosmetics in Taipei City, but also serve as a reference for cosmetic management in their business decisions.

5.3 Research Limitations

In this study, under the limited resources, as far as possible in a rigorous manner to complete the various stages of research work. But there are still the following research limitations: Because this study using Random Sampling Method to sample the population, the effective sample recovery rate is low, but it is likely that the effective sample is not enough to represent the population group, and it is possible to produce errors that occur.

5.4 Recommendations for future research directions

Because of the relationship between Attitude, Subjective norm, Perceptual behavior control and Behavior intention, it is suitable for all industries. Not only for the consumers of cosmetics in Taipei City, has this study only aimed at the consumers of cosmetics in Taipei City. The follow-up researchers can try to analyze and compare different industries in order to search the breadth of data, or innovation breakthrough.

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