Factors affecting the choice of buying Korean cosmetics

Tuan Anh Le\textsuperscript{a,b}, Nhu Quynh Thi Mai\textsuperscript{a,b}, Nhi Van Vo\textsuperscript{c}, Nguyen Thi Huyen Tram\textsuperscript{d*} and Nhan Le Nguyen\textsuperscript{a,b}

\textsuperscript{a}PhD Student, Faculty of Accounting, Duy Tan University, Da Nang, 550000, Vietnam
\textsuperscript{b}Institute of Research and Development, Duy Tan University, Da Nang, 550000, Vietnam
\textsuperscript{c}Faculty of Accounting, University of Economics Ho Chi Minh City, Vietnam
\textsuperscript{d}HCMC University of Technology and Education, Ho Chi Minh city, Vietnam

ABSTRACT

The purpose of this study is to evaluate the factors that influence students’ choice of buying Korean skincare products in Da Nang city. Through the use of appropriate research methods, the authors have found that there are 5 factors affecting the choice of buying skincare cosmetics in descending order: Price; Advertising-promotion; Product; Brand products and ultimately psychology. Through this result, Korean cosmetics manufacturers and businesses will have a way to reach students who are residing in Da Nang, where there are a number of universities to increase profits.

© 2020 by the authors; licensee Growing Science, Canada

Keywords: Cosmetics Korean Female students Da Nang

1. Introduction

Today's economy is growing, people's income levels are improved and raised, and the need to take care of themselves is also more important (Nematollahi, 2019; Sanny et al., 2020; Phong et al., 2020). Since then, the interest of both genders on the appearance is increasing, so that cosmetics gradually become a familiar consumer product of everyone, especially young people. In Vietnam, cosmetic brands appear in many different forms to help consumers have more choices (Parboteeah et al., 2009; Kawa et al., 2013; Prakash & Sharma, 2016). Moreover, the Vietnamese market is considered a potential market in the cosmetics industry, especially for young people. In 2018, according to data from Mintel, a global market research firm based in London, Vietnam's cosmetics market is worth about 2.3 billion USD and is expected to increase to 3 billion USD by the year 2020 due to the growing number of middle-class people. Realizing the great potential for consumption and high profit in Vietnam market, many cosmetic manufacturers have chosen Vietnam to invest and trade in products especially Korean cosmetic manufacturers. Along with the strong spread of the Korean Wave, Korea is inherently the cradle of many beauty products that have landed in the Vietnamese market relentlessly with a variety of cosmetic brands and types. Currently, the presence of many leading Korean skin care cosmetics with leading names in Vietnam market such as Laneige, Innisfree, Ohui, Atomy, Murad, etc. is the reason for consumers who have their choice for their own face care cosmetic line (Trong & Ngoc, 2008). Korean skin-care cosmetic companies have always tried to build their own brand by paying attention to consumer behavior, product quality and have built appropriate marketing strategies to bring the highest efficiency for our products (Quan et al., 2020).
Currently, foreign brands account for 90% of Vietnam's cosmetic market share, with Korea headed by the leading supplier in Asia. Korean music, fashion and movie content and dramas are extremely popular throughout Asia. The successful export of culture makes the outstanding development of their cosmetics field understandable, especially when the Vietnam-Korea Free Trade Agreement 2015 has cut tariffs between the two countries. Besides, there is a continuous increase in cosmetic surgery services, beauty treatments, therapies and anti-aging preparations. According to data provided by the Ho Chi Minh City Cosmetics Association, South Korea accounts for the largest proportion of foreign cosmetic sales in Vietnam with 30% market share. The EU ranked second with 23%, followed by Japan (17%), Thailand (13%) and the US (10%), the remaining countries contributed 7%.

In Da Nang city, beauty is not only focused on office workers or those who have worked, but beauty jobs are also popular for students, especially female students. For female students of about 60,000, this is a quite potential market. With the need to beautify themselves, be confident in front of the crowd or be more confident with their peers when they go to school, female students have chosen to use skin care cosmetic products for themselves. Especially, nowadays, Korean-branded skin care products are gaining popularity in Korean cosmetic stores on the market of Da Nang City, which are always trusted by women. Korean cosmetic products are highly appreciated for their brand name, quality and price. With the current trend of using Korean cosmetic products of female students, the purpose of the article is to evaluate and identify the factors that influence the decision to buy skin care products. From the female students, through this research, businesses and cosmetics shops selling Korean skincare products set out policies and strategies to attract more and more consumers.

2. Literature Review

Kumar et al. (2014) conducted research on the factors that influence consumer buying behavior when buying cosmetic products and the results indicate that Psychological factors had the strongest influence, followed by the influence of those factors that are individual, social and finally cultural factors. In addition, Boonmee (2015) conducted a study to examine and find out what factors influence the decision to buy Korean cosmetics and the reasons why Korean cosmetics are so popular in Thailand and become the leading rank in the cosmetic market. The results displayed in descriptive statistics to present the percentage results that are used to analyze data for consumers in the Bangkok area and Cross tabulations were used to find out the relationship of the respondent with the specific characteristics of the study.

As a result, there are consumer behaviors, brands and marketing that strongly influence the purchasing decisions of Thai women when buying Korean cosmetics. As for the effect of origin in Korea, the image and music culture, especially the K-Pop movement, did not affect Thai women’s decision to buy cosmetics since customers focused on trade, brand and product, pricing, channel, marketing and marketing mix more than the source of the product. The results of the study show that subjective norms, beliefs, attitudes, sources of information and advertising, physical attributes, psychological and cognitive attributes influence the buying intentions of Thai female customers. However, the researcher found that customers had a positive attitude toward Korean cosmetics since the Korean country has a higher level of trust in fashion and the K pop trend is more popular in Thailand.

Kajapriya and Surya (2015) showed the factors affecting female consumers when buying cosmetic products and the satisfaction level of female consumers on the cosmetic products they use, namely Quality, Brand, Skin care, Impact from friends / family, Advertising. The result of this study is that all women preferred to use cosmetic products regardless of their age and the factor that most influenced cosmetic consumers was “product quality factor”. Latha (2017) performed a survey on the process of researching and analyzing the factors and reported that over 63.95% of the influencing factors were: (1) price both, (2) attractive packaging, (3) promotion, advertising, (4) ingredients and (5) storage. The results of the study indicated that the “price” factor maintained the most influence on consumers' decision to buy cosmetics in Chennai.

In Vietnam, there have been many works related to cosmetic purchasing decisions, including Nguyen Ngoc Dan Thuy (2014) who showed the factors affecting consumer behavior and purchasing decisions of cosmetics. Consumers in Ho Chi Minh City for Dermalogia skin care cosmetics include 5 elements including Price, Safety, Nature, Brand, and People. Le Thi Hoang Van (2010) performed a research on the market of cosmetic use in Vietnam in general and in Da Nang City in particular. In the topic, there are 8 factors affecting cosmetic consumption behavior of consumers in Da Nang City, namely: (1) Quality, (2) Brand, (3) Novelty, ( 4) Entertainment, entertainment, (5) Price, (6) Disagreement, carelessness, (7) Habits, (8) Confusion due to too many choices. This research has shown that when consumers interact with different markets, there are factors that influence different consumer behaviors. The results of this study are: The factor “Price” has the most influence on cosmetic consumption behavior of consumers in Da Nang City, while the factor “Confused due to too many things” did not really affect the research model, or it can be said that it has very little impact on the model.

Nguyen Thi My Dung et al. (2015) studied the level of Korean cosmetic use of students at the Department of Korean Studies at Ho Chi Minh City University of Social Sciences and Humanities and identified which factors are really affecting cosmetic use, control the use of cosmetics, and choose the products that suit the needs of each Korean student at the University of Social Sciences and Humanities. The results of this study indicate that: gender, welding, skin health, needs, and spending levels were
the factors that affect cosmetic usage the most (Veloutsou et al., 2004; Mustafa & Al-Abdallah, 2020). In addition, this research also shows that from the perspective of business manufacturers, it can be affirmed that the student's cosmetic market is still very potential for exploitation and investment. To be able to conquer this group of students, manufacturers and retail businesses need to meet the needs of students well.

Through the process of researching published domestic and foreign research works that are relatively related to the topic, from the inherited perspective and continuing to develop the above research projects, the group will continue to study the factors influencing female students' decision to buy Korean skin care products in Da Nang city. In order to properly assess the decision to buy Korean skin care products, the team will conduct a review of the factors that influence the decision to buy Korean skin care products.

3. Research Methods

3.1 Research models

After summing up the results of the experts' answers on the factors on the preliminary scale, the results of the qualitative expert survey gave a high percentage of agreement (over 95%) to 5 out of 7 factor groups except the sales location and student income factors (80% agreed). The experts did not add any new groups of factors. We also collect information from female students and experts in Da Nang City about the factors affecting the decision to buy Korean skin care products, with a model study of the general situation Research model related to factors influencing Korean skin-care products purchase decisions of female students. We expect an analytical framework with 7 common factors influencing decisions. Fig. 1 shows the proposed study of this paper.

![Fig. 1. Model of evaluating the factors affecting Korean students' decision to buy Korean facials products in Da Nang city](image)

Table 1 presents the structure of the questions associated with the proposed study of this paper.

### Table 1

| Factor               | Explain the factor                                                                 | Inheritance Research                                                                 |
|----------------------|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| **Product characteristics** | Types of Korean skin care products are rich in variety and beautiful design | Kajapiya & Surya (2015); Kotler P et al. (2005); Nguyen Ngoc Dan Thuy (2014); Le Thi Hoang Van (2010); Latha (2017); Nguyen Thi My Dung et al. (2015) |
|                      | Types of Korean facial care products extracted from natural ingredients, safe for users |                                                                                     |
|                      | Types of Korean facial care products are of good quality                           |                                                                                     |
|                      | Types of Korean facial care products to satisfy the needs of users                 |                                                                                     |
| **Price**            | The current price of Korean facial products is not too expensive.                  | Kotler P et al. (2005); Nguyen Ngoc Dan Thuy (2014); Le Thi Hoang Van (2010); Nguyen Thi My Dung et al. (2015); Latha (2017) |
|                      | The selling price of all types of Korean skin care products has not been increased in a long time |                                                                                     |
|                      | The selling price of all types of Korean facial products is consistent with the quality of the product |                                                                                     |
|                      | The selling price of all kinds of Korean facial products is clear for customers to refer. |                                                                                     |
| **Place of sale**    | Sales location near the living area should be easy to buy products                 | Kotler P et al. (2005)                                                             |
|                      | Stores beautifully presented, easy to find products                                |                                                                                     |
|                      | Cosmetic stores are located close to each other, so it is easy to choose to buy products |                                                                                     |
|                      | Customers feel comfortable and comfortable when shopping in stores.                |                                                                                     |
Table 1
Explain the variables of the model (Continued)

| Factor           | Explain the factor                                                                 | Inheritance Research                                                                 |
|------------------|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Advertising      | Stores often have promotions, discounts when buying                               | Boonmee (2015); Kajapriya & Surya (2015); Kotler et al. (2005); Latha (2017)         |
| - Promotion      | Stores often have sweepstakes when they buy                                        |                                                                                      |
| Trademark        | Brand of Korean face care products is reputable in the market                      | Kajapriya & Surya (2015); Kotler et al. (2005); Le Thi Hoang Van (2010); Nguyen Ngoc Dan Thuy (2014) |
|                  | Types of Korean facials are the first thing customers think about when buying facials |                                                                                      |
|                  | Customers are interested in Korean skin care products                              |                                                                                      |
|                  | Customers are assured when using photos of Korean facial care cosmetics            |                                                                                      |
| Psychology       | Tend to buy Korean skin care products because salespeople persuade customers to be good at buying products. | Kumar et al. (2014); Boonmee (2015); Kotler et al. (2005)                             |
| of shoppers      | Tend to buy Korean skin care products due to the influence of movies and K pop music. |                                                                                      |
|                  | Tend to buy Korean skin care products due to the influence of relatives and friends |                                                                                      |
|                  | Tend to buy Korean skin care products after seeing feedback from other users on the website |                                                                                      |
| Income           | Spend income from family allowances or work part-time jobs to buy Korean facials   | Nguyen Thi My Dung et al. (2015)                                                   |
|                  | Have a stable income to use Korean facials                                          |                                                                                      |
|                  | Korean skin care products are always in the monthly spending demand                |                                                                                      |

Source: author synthesized

3.2 Hypotheses

Based on the research goals, surveys and research models of the proposed factors that influence the Korean skin care product purchase decision of female university students in the city of Da Nang and according to the background theory presented above, the research hypotheses are determined as follows:

- Hypothesis H1: The product has the same directional influence on the female student's decision to buy Korean skin care products.
- Hypothesis H2: Prices have a positive effect with Korean students' decision to buy Korean skin care products.
- Hypothesis H3: The selling location influences the Korean students' decision to buy facial products from Korea.
- Hypothesis H4: Advertising - Promotion influences Korean student's skin care product decision of female students.
- Hypothesis H5: Brand influence influences Korean students' decision to buy facial skin care products.
- Hypothesis H6: Psychology influences Korean students' decision to buy Korean skin care products.
- Hypothesis H7: Income influences Korean students' decision to buy facial skin care products.

4. Results

Based on the influencing factors explored during the research period, the survey questionnaire was deployed to the surveyed subjects identified directly to the female students of the Universit Da Nang city. After handing out 400 questionnaires, 350 paper questionnaires were collected. In the questionnaires collected there are 64 invalid tables (missing important information). As a result, our team removed these 65 questionnaires and the remaining number of questionnaires were used to process and analyzed data was 285 questionnaires. Out of 285 surveyed students, 26 students attended the first year (accounting for 9.1%); 49 students attended the second year (accounting for 17.2%); 97 students attended year 3 (accounting for 34.0%) and 113 students studied in year 4 (accounting for 39.6%).

In terms of income, out of the 285 surveyed students, there are 139 students with incomes below 3 million (accounting for 48.1%), 110 students with an income of 3-5 million (accounting for 38.6%), 35 students have an income of over 5 -10 million (accounting for 12.3%), and 3 students have an income of over 10 million (accounting for 1.1%). In terms of the frequency of buying cosmetics, out of the 285 students surveyed, 99 students purchased cosmetics 1 time / month (accounting for 34.7%), 113 students bought cosmetics 2-3 times / month (accounting for 40.4%), 68 students got cosmetics 4-5 times / month (accounting for 23.9%), and 3 students purchased cosmetics more than 5 times / month (accounting for 1.1%).

In terms of the time to use, out of 285 surveyed students, 101 students had time to use Korean facial care products for less than 3 months (accounting for 35.4%), 73 students had time to use care products. Korean facial skin for more than 3 - 6 months (accounting for 25.6%), 107 students had time to use Korean facial care products for 6 - 12 months (accounting for 37.5%), and 4 students had time to use Korean facial care products for more than 12 months (accounting for 1.4%). Moreover, students have time to use Korean skin care products over 6 - 12 months, accounting for the highest percentage. Table 2 presents the results of Cronbach’s Alpha for the questions of the survey. As we can observe, most data maintain desirable values.
Table 2
Results of reliability analysis and factor analysis

| No | Group variables          | Number of observation variables | Cronbach’s Alpha |
|----|--------------------------|---------------------------------|-----------------|
| 1  | SP          | Product characteristics | 4 | 0.878 |
| 2  | DC          | Price                          | 4 | 0.852 |
| 3  | DD          | Place of sale                  | 4 | 0.752 |
| 4  | QC          | Advertising - Promotion        | 4 | 0.911 |
| 5  | TH          | Trademark                      | 4 | 0.904 |
| 6  | TL          | Psychology of shoppers         | 4 | 0.887 |
| 7  | TN          | Income                         | 3 | 0.636 |
| 8  | QD          | Decided to buy                 | 5 | 0.935 |

Source: Analysis results from SPSS 16.0 software

Analysis of discovery factors

KMO coefficient = 0.790, satisfying the condition: 0.5 < KMO < 1, discovering factor analysis is suitable for real data (See Table 3).

Correlate testing of observed variables in a representative measure

Bartlett’s test has Sig = 0.00 < 0.05, meaning that the representative factor and observed variables are linearly correlated (See Table 3).

Table 3
Verification of appropriateness of methods and data collected (KMO and Bartlett’s Test)

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | Bartlett's Test of Sphericity |
|-----------------------------------------------|------------------------------|
|                                               | Approx. Chi-Square | Df | Sig. |
|                                               | 0.790             | 4326.358 | 351 | .000 |

Moreover, Table 4 presents the results of examining the degree of interpretation of the observed variables for the factors influencing the student's decision to buy a skin care product for a female student in Da Nang City.

Table 4
Examine the degree of interpretation of the observed variables for the factor influencing the student's decision to buy a skin care product for a female student in Da Nang City

| Component | Total | Initial Eigenvalues Total | % of Variance | Cumulative % | Extraction Sums of Squared Loadings Total | % of Variance | Cumulative % | Rotation Sums of Squared Loadings Total | % of Variance | Cumulative % |
|-----------|-------|---------------------------|---------------|-------------|------------------------------------------|---------------|-------------|------------------------------------------|---------------|-------------|
| 1         | 5.381 | 19.928                    | 19.928        |             | 5.381                                    | 19.928        |             | 3.207                                    | 11.879        |             |
| 2         | 3.311 | 12.262                    | 32.190        |             | 3.311                                    | 12.262        |             | 3.144                                    | 11.643        |             |
| 3         | 2.936 | 10.873                    | 43.063        |             | 2.936                                    | 10.873        |             | 2.720                                    | 10.072        |             |
| 4         | 2.580 | 9.556                     | 52.619        |             | 2.580                                    | 9.556         |             | 2.409                                    | 8.923         |             |
| 5         | 2.111 | 7.819                     | 60.438        |             | 2.111                                    | 7.819         |             | 2.209                                    | 10.072        |             |
| 6         | 1.770 | 6.554                     | 66.992        |             | 1.770                                    | 6.554         |             | 1.818                                    | 6.732         |             |
| 7         | 1.251 | 4.634                     | 71.626        |             | 1.251                                    | 4.634         |             | 1.818                                    | 6.732         |             |
| 8         | .807  | 2.990                     | 74.616        |             |                                         |               |             |                                          |               |             |
| 9         | .762  | 2.823                     | 77.439        |             |                                         |               |             |                                          |               |             |
| 10        | .618  | 2.288                     | 79.727        |             |                                         |               |             |                                          |               |             |
| 11        | .554  | 2.053                     | 81.780        |             |                                         |               |             |                                          |               |             |
| 12        | .539  | 1.997                     | 83.777        |             |                                         |               |             |                                          |               |             |
| 13        | .513  | 1.902                     | 85.679        |             |                                         |               |             |                                          |               |             |
| 14        | .479  | 1.773                     | 87.452        |             |                                         |               |             |                                          |               |             |
| 15        | .439  | 1.624                     | 89.076        |             |                                         |               |             |                                          |               |             |
| 16        | .398  | 1.475                     | 90.551        |             |                                         |               |             |                                          |               |             |
| 17        | .367  | 1.359                     | 91.910        |             |                                         |               |             |                                          |               |             |
| 18        | .330  | 1.223                     | 93.133        |             |                                         |               |             |                                          |               |             |
| 19        | .322  | 1.194                     | 94.327        |             |                                         |               |             |                                          |               |             |
| 20        | .283  | 1.048                     | 95.375        |             |                                         |               |             |                                          |               |             |
| 21        | .251  | .929                      | 96.304        |             |                                         |               |             |                                          |               |             |
| 22        | .228  | .844                      | 97.148        |             |                                         |               |             |                                          |               |             |
| 23        | .209  | .774                      | 97.922        |             |                                         |               |             |                                          |               |             |
| 24        | .192  | .711                      | 98.633        |             |                                         |               |             |                                          |               |             |
| 25        | .138  | .511                      | 99.144        |             |                                         |               |             |                                          |               |             |
| 26        | .133  | .493                      | 99.638        |             |                                         |               |             |                                          |               |             |
| 27        | .098  | .362                      | 100.000       |             |                                         |               |             |                                          |               |             |

Extraction Method: Principal Component Analysis.
The Cumulative column indicates that the extracted variance value is 71,626%, which means that the observed variables explain 71,626% of the change in factors. In addition, Scree plot has indicated that there were 6 factors with Eigen values greater than 1. Table 5 presented the results of EFA model using the method of full rotation (Varimax) of factors.

### Table 5

**Rotated Component Matrix**

| Component | 1    | 2    | 3    | 4    | 5    | 6    | 7    |
|-----------|------|------|------|------|------|------|------|
| QC4       | .906 |      |      |      |      |      |      |
| QC3       | .884 |      |      |      |      |      |      |
| QC2       | .850 |      |      |      |      |      |      |
| QC1       | .847 |      |      |      |      |      |      |
| TH1       |      | .910 |      |      |      |      |      |
| TH2       |      | .866 |      |      |      |      |      |
| TH4       |      | .858 |      |      |      |      |      |
| TH3       |      | .852 |      |      |      |      |      |
| TL1       |      |      | .916 |      |      |      |      |
| TL4       |      |      | .855 |      |      |      |      |
| TL2       |      |      | .847 |      |      |      |      |
| TL3       |      |      | .810 |      |      |      |      |
| SP4       |      |      |      | .850 |      |      |      |
| SP2       |      |      |      | .837 |      |      |      |
| SP1       |      |      |      | .836 |      |      |      |
| SP3       |      |      |      | .835 |      |      |      |
| GC4       |      |      |      |      | .820 |      |      |
| GC3       |      |      |      |      | .766 |      |      |
| GC1       |      |      |      |      | .760 |      |      |
| GC2       |      |      |      |      | .751 |      |      |
| DD4       |      |      |      |      |      | .812 |      |
| DD1       |      |      |      |      |      | .802 |      |
| DD2       |      |      |      |      |      | .709 |      |
| DD3       |      |      |      |      |      | .642 |      |
| TN3       |      |      |      |      |      |      | .809 |
| TN1       |      |      |      |      |      |      | .735 |
| TN2       |      |      |      |      |      |      | .712 |

Extraction Method: Principal Component Analysis.

- Rotation converged in 6 iterations.

The factors influencing the buying decision are expressed through linear regression equations:

\[
QD = \beta_0 + \beta_1 \times SP + \beta_2 \times GC + \beta_3 \times DD + \beta_4 \times QC + \beta_5 \times TH + \beta_6 \times TL + \beta_7 \times TN + \epsilon \tag{1}
\]

where \(\beta_0\) to \(\beta_7\) represent the regression coefficients, respectively of each factor. Table 6 presents the results of Pearson correlation.

### Table 6

**The results of Pearson correlation test**

|       | QD    | SP    | GC    | DD    | QC    | TH    | TL    | TN    |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| **Pearson Correlation** |       | .368** | .626** | .245** | .499** | .309** | .249** | -.049 |
| Sig. (2-tailed) | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .405 |
| N     | 285  | 285  | 285  | 285  | 285  | 285  | 285  | 285  |
|       |       | .000 | .000 | .000 | .000 | .000 | .000 | .000 |
|       |       | .000 | .000 | .024 | .024 | .133 | .927 | .028 |
|       |       | .000 | .000 | .024 | .024 | .133 | .927 | .028 |
|       |       | .000 | .000 | .024 | .024 | .133 | .927 | .028 |
|       |       | .000 | .000 | .024 | .024 | .133 | .927 | .028 |
|       |       | .000 | .000 | .024 | .024 | .133 | .927 | .028 |
|       |       | .000 | .000 | .024 | .024 | .133 | .927 | .028 |
|       |       | .000 | .000 | .024 | .024 | .133 | .927 | .028 |

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

*Correlation is significant at the 0.05 level (2-tailed).
Through Table 6, we can see that the Sig value correlates Pearson with independent variables SP, GC, DD, QC, TH, TL with the dependent variable less than 0.05. Thus, there is a linear relationship between these independent variables and the QD variable. The strongest correlation exits between GC and QD where the coefficient \( r = 0.626 \), and the correlation between DD and QD is the weakest correlation where the coefficient \( r = 0.245 \). The pairs of independent variables are relatively weak correlation with each other, so there is a high probability that no multi-collinear phenomenon will occur. Particularly, Sig value correlates Pearson independent variable with QD dependent variable is 0.405 greater than 0.05, so there is no linear relationship between the independent variable TN and QD. Thus, we removed the TN factor from the original model.

Table 7
Testing partial correlation of regression coefficient (1st time)

| Model | Unstandardized Coefficients | Standardized Coefficients | t | Sig. | Collinearity Statistics |
|-------|-----------------------------|---------------------------|---|------|-------------------------|
|       | B | Std. Error | Beta |       |             | Tolerance | VIF |
| (Constant) | -.649 | .292 | -2.222 | .027 |             |             |     |
| TH     | .156 | .038 | .172 | 4.097 | .000 | .916 | 1.091 |
| QC     | .297 | .040 | .322 | 7.396 | .000 | .847 | 1.181 |
| TL     | .142 | .039 | .150 | 3.651 | .000 | .949 | 1.054 |
| SP     | .171 | .037 | .199 | 4.631 | .000 | .872 | 1.146 |
| GC     | .492 | .069 | .355 | 7.087 | .000 | .643 | 1.555 |

\[ a. \text{Dependent Variable: QD} \]

The significance level column (Sig.) shows: All variables, except for DD, have Sig. <= 0.05. Thus, SP, GC, TH, TL, QC correlate significantly with the decision to buy Korean skin care products. Factor Sig. = 0.557 > 0.05, there is no linear correlation with the dependent variable in the model, so we will proceed with type of variation. Factors that directly influence the Korean student's decision to buy Korean skin care products in Da Nang City are shown by the new linear regression equation as follows:

\[ QD = \beta_0 + \beta_1 \times SP + \beta_2 \times GC + \beta_3 \times QC + \beta_4 \times TH + \beta_5 \times TL + \beta_6 \times TN + \varepsilon \]

(2)

Table 8 presents the results of the regression estimation for the proposed regression model. As we can observe from the results of Table 8, all variables are meaningful when the level of significance is five percent. Therefore, all independent variables have maintained positive effects on the dependent variable as follows,

\[ QD = 0.199 \times SP + 0.362 \times GC + 0.323 \times QC + 0.172 \times TH + 0.152 \times TL \]

Table 8
Testing partial correlation of regression coefficient (2nd time)

| Model | Unstandardized Coefficients | Standardized Coefficients | t | Sig. | Collinearity Statistics |
|-------|-----------------------------|---------------------------|---|------|-------------------------|
|       | B | Std. Error | Beta |       |             | Tolerance | VIF |
| (Constant) | -.620 | .287 | -2.157 | .032 |             |             |     |
| TH     | .156 | .038 | .172 | 4.102 | .000 | .916 | 1.091 |
| QC     | .297 | .040 | .323 | 7.409 | .000 | .847 | 1.181 |
| TL     | .144 | .039 | .152 | 3.718 | .000 | .956 | 1.046 |
| SP     | .171 | .037 | .199 | 4.631 | .000 | .873 | 1.146 |
| GC     | .503 | .067 | .362 | 7.087 | .000 | .690 | 1.450 |

\[ a. \text{Dependent Variable: QD} \]

Moreover, R-Square value is equal to 0.544 which means the independent variables describe approximately 54 percent of the dependent variable. Moreover, Durbin-Watson is equal to 1.907 which means there is no autocorrelation among residuals. More results are given in Table 9.

Table 9
Verify the model's interpretation level

| Model | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|-------|----------|-------------------|---------------------------|--------------|
| (Constant) | .552 | .544 | 42397 | 1.907 |

\[ a. \text{Predictors: (Constant), GC, TL, TH, SP, QC} \]

b. \text{Dependent Variable: QD} \]

Moreover, Table 10 presents the results of ANOVA test. As we can observe from the results, F-value is equal to 68.760 which means there is a linear relationship between independent variables and dependent variable.
Table 10
Test the relevance of the model (Variance - ANOVA)

| Model     | Sum of Squares | Df | Mean Square | F    | Sig. |
|-----------|----------------|----|-------------|------|------|
| Regression| 61.797         | 5  | 12.359      | 68.760 | .000b |
| Residual  | 50.149         | 279| .180        |      |      |
| Total     | 111.946        | 284|             |      |      |

a. Dependent Variable: QĐ
b. Predictors: (Constant), GC, TL, TH, SP, QC

Finally, Fig. 2 shows the residuals follow normal distribution. Moreover, Table 11 presents the summary of the results of the effects of different variables on dependent variables.

Table 11
Importance of factors influencing Korean students' decision to buy Korean skin care products in Da Nang city

| Number | Independent variables | Value | Proportion% | Influence level |
|--------|-----------------------|-------|-------------|-----------------|
| 1      | Product               | .199  | 16.47%      | 3               |
| 2      | Price                 | .362  | 29.97%      | 1               |
| 3      | Advertising - Promotion| .323  | 26.74%      | 2               |
| 4      | Brand                 | .172  | 14.24%      | 4               |
| 5      | Psychology            | .152  | 12.58%      | 5               |
| Total  |                       | 1.208 | 100%        |                 |

5. Discussion

As we can observe from the results Table 11, the contribution of “Prices”, “Advertising - Promotion”, “Products”, “Product brand” and “Psychology” in descending order of importance are 29.97%, 26.74%, 16.47%, 14.24% and 12.58%, respectively. With a theoretical model of factors affecting the Korean skin care product purchase decision of female students, there are 7 factors: product, price, place of sale, advertising - Promotion, product brand, psychology, income and dependent variable is the decision to buy Korean skin care products by female students at Da Nang city. The formal study was conducted through quantitative research using the technology of surveying female students through quantitative research questionnaires.

6. Conclusion

From the above conclusions, from the perspective of business manufacturers, it can be affirmed that the student's cosmetic consumer market is still and has great potential for exploitation and investment. To be able to conquer this group of students, manufacturers and retail businesses need to meet the needs of students well.

Price: In addition to improving product quality, manufacturers need to take appropriate measures to adjust prices to suit the market and consumers' ability to spend. Besides, consumers should consider carefully when buying cosmetics to choose smart, lucid, suitable for themselves. Since customers are students, cosmetics traders should target products that are not too expensive or too low.

Advertising – Promotion: Companies can build marketing and advertising strategies that impact on individual factors of consumers, thereby stimulating demand and promoting customer buying behavior. They need to offer promotions to attract customers and the promotion must be attractive enough.
Product: The group of female customers is a group of potential customers. Manufacturers and businesses need to coordinate, develop strong lines of cosmetics specialized for Women to exploit profits from this customer group more. In addition, it is necessary to expand the products for men to attract male students because this is still a potential market that has not yet been conceived much. It is necessary to have sufficient information about the product such as specifications, product features and origin of goods. The products must be accompanied by insurance policies for buyers. In addition, to be able to conquer the target group of students or young people, Vietnamese cosmetics manufacturers and companies need to be creative and innovative in all products launched in the market, combining features between Eastern beauty secrets and sensitivity to modern Western values. They need to apply formulas that have been clinically tested to create products that are suitable for skin care and beauty as well as regular stool.

Brand: This is a group of consumers who pay special attention to the brand of the product, so traders should provide the name brand cosmetics on the market. When presenting products, the information on the packaging must be clear and careful since this group of customers is qualified and knowledgeable about cosmetics so they are quite careful in searching for information and brands for the product. Products.

Psychology: Take advantage of the strengths of music, movies, etc. in stores to have reasonable marketing strategies to attract consumers towards makeup trends, as well as to introduce American brands.

Products: There is a need to invite famous actors to be represent new cosmetic products through different medias. Customer care is a must because this is a group of customers with high product loyalty if they find a satisfactory product by setting up consulting channels conducted by reputable experts in the field.

Income: Since the surveyed subjects are female students at Danang city, the income of students is largely dependent on their families or they have small income from their own part-time jobs so the income factor does not really influence the decision to buy Korean skin care products.

Places of sale: E-commerce market in Vietnam is growing. Online purchases are also more common. Students also do not need to go directly to the store to buy products, but can buy online through the internet, which is easy to buy and saves time. The location of the sale does not appear to have any effect on the decision to buy Korean skin care products of female students in Da Nang city.

Acknowledgments

We would like to thank the lecturers at the universities in Danang and Ho Chi Minh City for helping us to complete this research and provide suggestions for future research directions.

References

Boonmee, J. (2015). Study of Thai women purchase decision of Korea cosmetic in Bangkok area. Master thesis, Bangkok University.

Kajapriya, R., & Surya, R. (2015). An analysis on insight of women consumer's towards cosmetic products. *International Journal of Management Research and Reviews, 5*(4), 246.

Kawa, L. W., Rahmadiani, S. F., & Kumar, S. (2013). Factors affecting consumer decision-making: a survey of young-adults on imported cosmetics in Jabodetabek, Indonesia. *SIJ Transactions on Industrial, Financial & Business Management, 1*(5), 175-180.

Kotler, P., Wong, V., Saunders, J., & Armstrong, G. (2005). Principles of Marketing, fourth European edition. Harlow: Pearson Education Limited.

Kumar, A. H., John, S. F., & Senith, S. (2014). A study on factors influencing consumer buying behavior in cosmetic products. *International Journal of Scientific and Research Publications, 4*(9), 1-6.

Latha, D. S. (2017). The role of perceived occupational stress on organizational effectiveness. *IJAR, 3*(1), 783-789.

Le Thi Hoang Van (2010). *Researching factors affecting cosmetic consumption behavior*, Master thesis, Da Nang University of Economics.

Mustafa, S., & Al-Abdallah, G. (2020). The evaluation of traditional communication channels and its impact on purchase decision. *Management Science Letters, 10*(7), 1521-1532.

Nematollahi, I. (2019). Empirical investigation of trust antecedents and consequences in decentralized supply chain: The case of cosmetics market in Iran. *Decision Science Letters, 8*(4), 483-504.

Nguyen Ngoc Dan Thuy (2014). *Factors affecting the decision to buy Dermalogia skincare products created by consumers in Ho Chi Minh City*, Master thesis, HCMC Open University.

Nguyen Thi My Dung et al. (2015). *Factors affecting the level of Korean cosmetic usage of Korean students of Korean students studying at the University of Social Sciences and Humanities*, University of Social Sciences and Humanities, Ho Chi Minh City National University.
Parboteeah, D. V., Valacich, J. S., & Wells, J. D. (2009). The influence of website characteristics on a consumer's urge to buy impulsively. *Information systems research, 20*(1), 60-78.

Phong, L., Nga, T., Hanh, N & Minh, N. (2020). Relationship between brand association and customer loyalty: The case of online retail industry. *Management Science Letters, 10*(7), 1543-1552.

Prakash, A., & Sharma, A. (2016). Dimensions of point of purchase factors in impulsive buying of women's skincare cosmetics in India. *Journal of Business and Retail Management Research, 10*(2).

Quan, N., Chi, N., Nhung, D., Ngan, N & Phong, L. (2020). The influence of website brand equity, e-brand experience on e-loyalty: The mediating role of e-satisfaction. *Management Science Letters, 10*(1), 63-76.

Sanny, L., Arina, A., Maulidya, R., & Pertwi, R. (2020). Purchase intention on Indonesia male’s skin care by social media marketing effect towards brand image and brand trust. *Management Science Letters, 10*(10), 2139-2146.

Trong, H., & Ngoc, C. N. M. (2008). Analyze research data with SPSS. Hong Duc Publishing House, 32, 96-103.

Veloutsou, C., Gioulistanis, E., & Moutinho, L. (2004). Own labels choice criteria and perceived characteristics in Greece and Scotland: factors influencing the willingness to buy. *Journal of Product & Brand Management.*

https://doi.org/10.1108/10610420410546943

© 2020 by the authors; licensee Growing Science, Canada. This is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC-BY) license (http://creativecommons.org/licenses/by/4.0/).