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An Empirical Study of the Impact of Perceived and Experienced Factors on Purchase Intention for Foreign Natural Cosmetics

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Abstract - There is a growing attention to the “natural” products in personal care and other areas of fashion consumption. Considering the present inflationary economic environment, the study of American consumers’ attitude toward foreign natural cosmetics and important factors determining the purchasing intent of foreign natural cosmetics imported from Asia (Taiwan in this study) with high quality but low price is timely. Based on literature on Purchase Intention and the Theory of Planned Behavior, we proposed a model and a set of hypotheses to uncover the relationship between purchase intent and the determining factors. Our hypotheses are confirmed following a nationwide survey with 1628 respondents and the model testing. The academic and practical implications and the further research avenues are discussed.

Keywords - Purchase intention, Natural cosmetics, Global cosmetics, Planned Behavior

Introduction

The beauty and personal care products account for a large percentage of the consumer spending around the world. At the same time, this category includes a substantial share of the natural products, and this market is expected to grow fast in the coming years.

In 2019, one third of all the cosmetics sold worldwide were deemed natural. Further, the global market value for natural beauty between the years 2018 and 2027 is expected to grow from 34.5 billion dollars to roughly 54.5 billion dollars which attests to the ever-greater importance of the natural and organic beauty market. Also, a continuously growing share of consumers tend to purchase natural and/or organic cosmetics (Statista 2022).

Similarly, Grand View Research predicts that the global natural skin care products market alone will increase from USD 7.3 billion in 2021 at the annual growth rate of 6.6% to the year 2030. One of the primary factors driving the market is a growing awareness of the adverse effects of chemicals on the skin causing irritation and dullness. The increasing awareness of the benefits of organic ingredient-based items has prompted customers to seek out eco-friendly, natural skin care products (Grand View Research 2022).

In the US—the single largest cosmetics market in the world—in 2016 fifty seven percent of women believed it is important for them to buy all-natural skin care products. For makeup products the corresponding figure was forty nine percent (Statista 2016). The percentages tend to be higher for the female relative to male consumers and for the younger compared to older consumers (Kunst 2019). In terms of the actual buying, 40 percent of the consumers surveyed in the US reported that they prefer to purchase makeup products that are natural or organic.

Seventeen percent of consumers buy exclusively or mainly organic personal care and cosmetics products (Kunst 2019).

The trend is echoed by some major cosmetics companies. For example, in its annual report 2020 L'Oréal emphasizes its future focus on affordable brands with scientific and natural formulas many of which are plant based (L'Oréal 2020).

It follows that the use of natural cosmetics is a very important issue for marketers and consumers alike. Yet, compared to the researchers' interest in the food products characterized as natural/organic/green—the terms often used interchangeably—until recently far less has been published regarding natural cosmetics.

It is perhaps for that reason that our knowledge of the motivations to buy natural beauty and personal care products is far from complete. While it is often posited (Statista 2022) that chemical-free products are gaining popularity especially among young people and millennials it is still not clear what specific reasons and to what extent shape the behaviors of the consumers in general and per individual demographic segments.

The challenges the researchers are facing are compounded by the ambiguity of the terms used to characterize the “natural” attributes of the cosmetics products. They are deemed natural with respect to two important dimensions: the ingredients and the processing mode. However, the absence of specific administrative regulations and the lack of the industry-wide standards in the US and many other countries¹ account for a lot of confusion. Natural has been also dubbed “clean beauty”. Yet again, the lack of a clear definition of the term accounts for the inconsistency of the manufacturers' claims (Elkins 2020).

Clean can be interpreted as not containing any proven or suspected toxic ingredients but this should not be equated with the “natural” designation as some (e.g. plant-based cosmetic components like citrus-based extracts) “natural” compounds can prove harmful. Hence, even if “clean” and “natural” might be synonymous with “safe” this need not always be the case. Also, synthetic does not always mean harmful and on occasion proves beneficial (e.g. Hyaluronic acid, one of the most effective skin moisturizers).

In sum, it can be argued that natural cosmetics contain no synthetic chemicals and are exclusively obtained from natural sources like herbs, roots, essential oils, or flowers. In addition, they are combined with naturally occurring carrier agents, preservatives, surfactants, humectants, and emulsifiers.

However, it is not clear that this perception of the “natural” is widely established among the general public. A relevant nuance within the broad category of cosmetics is that the skin care products are primarily used for the health benefit whereas makeup and hair care products are being applied more for vanity and looks and thus qualify as the more emotion-driven products. Regarding the latter one might assume that they are acceptable as long as they do not cause harmful side effects—such a standard would prove less stringent than the one the consumers have in mind with respect to the skin care segment.

Finally, one should bear in mind that people are intent on buying natural/organic cosmetics not only because of their benefits to the individual consumer but also because of the concern for

¹ In Europe as of 2010 the so-called COSMOS-standard non-profit association (COSMetic Organic and Natural Standard) certificate can be issued to attest that the product meets the minimum common requirements for organic and natural cosmetics. The approved products can be labeled accordingly and carry a special logo. A detailed manual guides the applicants and provides rules for calculation of the natural and organic ingredients. Their certification bodies are also based in Asia and Australia. The database of the 29,000 products certified to date is published on their website <http://cosmos-standard-rm.org/data/indexcp.php>

the natural environment. This is where the notion of “green” comes into play when the altruistic attitudes towards society as a whole manifest themselves. The two motivations do not necessarily have to work in tandem and lead to the purchase of the same products.

Literature Review

There is a relative scarcity of studies on the attitudes towards and the intentions to use natural cosmetics. The survey-based articles pertain to a number of different individual countries what certainly enriches our understanding of the cosmetic consumption antecedents on the international scale. However, the differences in the findings to be discussed below need not be attributed exclusively to the methodology chosen but also may reflect the country/culture specific factors.

The perception of and the attitude towards natural products is a broader issue expanding beyond the category of cosmetics. In view of the paucity of academic publications pertaining to the use of beauty and skin care products some researchers infer that the antecedents of consumption are similar to those pertaining to natural foods. This approach needs to be verified with some caution. As Amberg and Fogarassy (2019) showed when interpreting the survey of the Hungarian consumers, the characteristics of the consumption of organic foods and natural cosmetics differ. Buying natural cosmetics does not necessarily follow the same causes as purchasing bio-feed food so that people using the natural cosmetics need not prefer natural foods and vice versa. To what extent people associate health benefits mainly with nutrition as opposed to the consumption of cosmetic products and an attractive appearance remains to be determined.

This was also emphasized by Liobikienė and Bernatoniene (2017b) who argue that factors drive the purchase of the different green product types differently (e.g., organic food, cosmetics, durable goods, luxury). They also posit that within green cosmetics one should differentiate between personal care and color cosmetic as to the main purchase motifs. With respect to the former health consciousness would be a main determinant whereas for the latter the brand and quality are.

Typically, the studies on the intent to buy natural cosmetics are based on the Theory of Planned Behavior (Ajzen 1991) which quotes the attitudes toward the behavior, subjective norms, and perceived behavioral control as the determining factors. In addition, the TPB points to the perceptions of behavioral control and the previous behavior as the relevant factors. Sharma et al. (2021) conducted a systematic review of the academic articles on the consumers' purchase intentions of the organic cosmetics and identified eight key factors accounting--in various combinations in different studies--for the willingness to buy such products. These are: subjective norm, attitude towards product and towards behavior, environmental concern, perceived behavioral control—more relevant in the context of repeat buying, product knowledge, health consciousness, consumer innovativeness (i.e. novelty seeking), hedonism (provide consumers a sensation of joy, fulfilment and making them feel positive about themselves).

The last factor is very important to consider as the emotional aspect and spontaneity in decision making is not specifically included in the TPB. Yet as Vieira et al. (2018) conclude in their meta-analysis of the literature on the shopping patterns, the overwhelming majority of the marketing researchers agree that the hedonistic elements strongly influence the attitude towards the product(s) and the consumer behavior.

In applying the TPB, Hsu, Chang and Yansritakul (2017) in their study of Taiwanese consumers found that the attitude, subjective norm, and perceived behavioral control have a significant impact on purchase intention of green skincare products, and that the country of origin

and the individual price sensitivity can enhance the positive impact on the purchase intention. Photcharoen et al. (2020) observed that with respect to Thai consumers the attitude, subjective norms, perceived behavior control and health concerns positively affect purchase intention of the coconut cosmetic products with the attitude proving the greatest impact.²

Hypothesis Development

In agreement with the above findings, we believe that consumers' attitude towards the products has a direct impact. In our study, the positive attitude towards skincare products is deemed to increase intentions to buy such products. More specifically, we would examine the impact of perceived importance of product functions on the purchase intention for a foreign product (made in Taiwan). Therefore, we propose the following hypothesis:

H1: PIPF (Perceived Importance of Product Functions) has a positive impact on PINFCP (Purchase Intention for a Natural Foreign Cosmetic Product).

Kim and Seock (2009) in their study of young American women found out that health and environmental consciousness significantly influenced the importance placed on the natural component of the beauty product. Consumers with a higher level of both health and environmental consciousness revealed more positive ratings of natural cosmetics than those with the lower scores. This also affected the willingness to pay. Those with high scores on both variables were significantly willing to pay more for natural beauty products and purchased such products more frequently than the respondents with the lower scores. Also, the greater health and environmental consciousness accounted for the respondents' specific level of knowledge of the natural beauty products compared to the conventional ones.

Sadiq et al. (2021) attempted to investigate the adoption of eco-friendly cosmetic products from a different angle than the previous studies. They focused on the factors inhibiting the purchase of eco-friendly cosmetic products from the resistance to innovation perspective. They extended the theory by exploring the moderating roles of environmental and health concerns. Their findings reveal that all the barriers are significant inhibitors towards adoption of eco-friendly cosmetic products and the forces of tradition and image come across as the strongest deterrents. Further, they point to the negative impact of the value barrier on consumers' intentions to buy. In turn, health concern reduces the resistance to purchase the "green" cosmetics stemming from the tradition and risk barriers. Therefore, we propose the following hypothesis:

H2: PNI (Product Healthy Natural Ingredients) has a positive impact on PINFCP (Purchase Intention for a Natural Foreign Cosmetic Product).

Kim and Chung (2011) in their study of the US consumers noticed that past experiences predict the purchase intention of organic personal care products. This was echoed by Matic and Puh (2016) in their study in Croatia where they demonstrated that consumers' purchase tendency towards new natural cosmetics brands exerts influence on the purchase intentions. Also, their analysis revealed a strong positive correlation between purchase intentions regarding the natural cosmetics and the predisposition to share recommendations pertaining to natural cosmetics. However, in their study consumers' tendency towards health consciousness has no influence on consumers' intentions towards purchasing natural cosmetics. In that respect, they speculated that it was due to the lack of trust in the health benefits of natural cosmetics. Therefore, we propose:

² However, in their study the health knowledge did not influence purchase intentions.

H3: PE (Product Experience) has a positive impact on PINFCP (Purchase Intention for a Natural Foreign Cosmetic Product).

Yano et al. (2019) surveyed the opinions of the Japanese consumers on considering buying the plant derived cosmetics. The respondents viewed plant-derived cosmetics as gentle to the skin and safe to use. However, these products appeared to have a slow effect and, especially the younger consumers, rated them as expensive. Also, Ghazali et al. (2017) concluded that the perceived value and monetary savings represent positive factors affecting the intentions to buy natural cosmetics. Liobikiene et al. (2017a) examined the green cosmetics consumers in Lithuania and Austria and concluded that if the price is perceived high it constitutes a deterrent to purchase. This leads us to hypothesize:

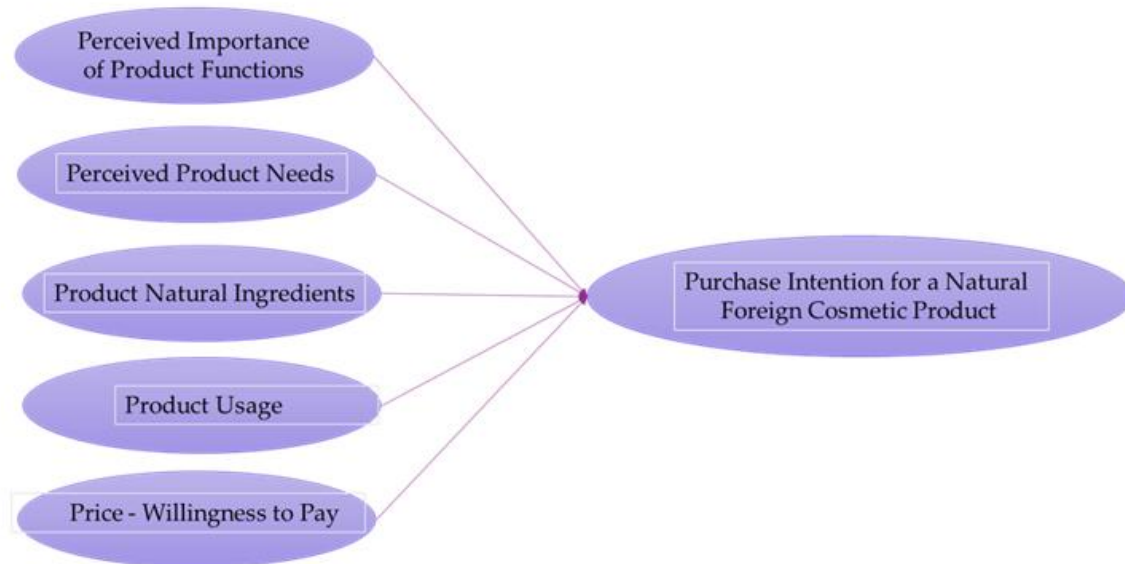
H4: PWP (Price - Willingness to Pay) has a positive impact on PINFCP (Purchase Intention for a Natural Foreign Cosmetic Product).

The intention to purchase represents what consumers believe they will buy to satisfy their needs and wants (Ericksen 1997; Blackwell et al. 2001; Kotler 2020). As the core of marketing principles, consumers' needs and wants are the drives for their intent to purchase. Specifically, in what pertains to our focus, Kim & Chung, (2011) noted that people who are conscious about their body and skin and wish to have a young, beautiful appearance with minimum chemical substances prefer organic personal care products. Therefore, we hypothesize:

H5: PPN (Product Perceived Needs) has a positive impact on PINFCP (Purchase Intention for a Natural Foreign Cosmetic Product).

The above hypotheses can be summarized in the following model:

Figure 1: Theoretical Framework



Methods and Results

To test the hypotheses proposed above, we mainly used and/or refined existing measures in the literature with validations from pilot studies. The study employed surveys as the medium to collect data. A survey is best suited for studies that have people as the unit of analysis (Bhattacharjee, 2012). We collected the survey data from M-Turk platform with a sample size of 1,628 respondents (49.6% female, Median age 25-34, median household income \$30,000-\$50,000). Table 1 lists the Cronbach's Alpha values of the key variables of our study. The model is:

$$\text{PINFCP} = b_0 + b_1 \cdot \text{PIPF} + b_2 \cdot \text{PPN} + b_3 \cdot \text{PU} + b_4 \cdot \text{PNI} + b_5 \cdot \text{PWP} \quad (\text{Eq. 1})$$

Where the dependent variable is PINFCP (Purchase Intention for a Natural Foreign Cosmetic Product), independent variables include PIPF (Perceived Importance of Product Functions), PPN (Perceived Product Needs), PU (Product Usage), PNI (Product Natural Ingredients), PWP (Price - Willingness to Pay).

Table 1: Cronbach's Alpha Values of the Key variables

Variables	Cronbach's Alpha (Reliability)
PINFCP (Purchase Intention for a Natural Foreign Cosmetic Product)	0.705 (4 items)
PIPF (Perceived Importance of Product Functions)	0.841 (6 items)
PPN (Perceived Product Needs)	0.777 (6 items)
PU (Product Usage)	0.769 (5 items)
PNI (Product Natural Ingredients):	Single Measure
PWP (Price - Willingness to Pay)	Single Measure

Table 2 summarizes the results. As we see from Table 2, all the coefficients are positive and significant. Therefore, H1 to H5 are all supported.

Table 2: Results

Variables	Standardized Coefficients	Coefficients Std. Error	t	Significance
Perceived Importance of Product Functions	.172	.026	5.748	.000
Perceived Product Needs	.175	.030	5.911	.000
Product Usage	.225	.027	7.664	.000
Product Natural Ingredients	.049	.017	2.003	.045
Price - Willingness to Pay	.094	.016	4.072	.000

Discussion

The results shown above have confirmed all our hypotheses, indicating that PIPF (Perceived Importance of Product Functions), PPN (Perceived Product Needs), PU (Product Usage), PNI (Product Natural Ingredients), and PWP (Price - Willingness to Pay) all have a positive impact on PINFCP (Purchase Intention for a Natural Foreign Cosmetic Product). In other words, how important the consumers perceive the product functions, their needs for the product, product usage they have experienced, how important is the product natural ingredients, and how much they are willing to pay for the product are all critical in their purchase decision.

This research has contributed to academic literature in terms of proposing and testing a comprehensive model to determine the relationship between consumer purchase intention on foreign skincare products and the important factors. Among the important factors, we have examined the fundamental needs, product performance, product experience, attitude towards natural ingredients, and willingness to pay. As a result, our model covers a wide range of factors and is closer to the real issues the business is facing.

For managerial implications, this study has its practical contributions. It provides a guideline for the foreign skincare businesses in terms of what efforts they should put to increase consumers' purchase intention and which areas they should emphasize in their marketing strategies. More specifically, they need to know:

1. What product functions are considered more important and how they affect consumer purchase intention.
2. What specific product needs should be emphasized and how those needs affect consumer purchase intention.
3. What product experiences are critical and how they affect consumer purchase intention.
4. The-importance of the product natural ingredients and how it affects consumer purchase intention, and
5. The price range that consumers are willing to purchase the product.

Finally, any research may have some limitations. In this study, 1). we only included the skincare product in our survey. For the future research other cosmetic products could be used as well; 2). Only US consumers were used as respondents, in the future study, consumers from other nations might be used as well; and 3). Because the model is rather simple (without complicated structure – such as a variable specified as both an independent variable and a dependent variable in the model), we did not use structure equation modeling (SEM) approach. In fact, we only have one endogenous dependent variable. Therefore, we use the Regression approach rather SEM approach. We might try to use the SEM approach when the model is getting complicated in the future.

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APPENDIX - Variable Measures (All the measures are in 5-point scale) and Reliabilities:

PINFCP (Purchase Intention for a Natural Foreign Cosmetic Product): Reliability = 0.705

How likely are you to purchase a skincare product made in Asia such as Taiwan? - If the product meets your requirements

How likely are you to purchase a skincare product made in Asia such as Taiwan? - If your friends and relatives are using it

How likely are you to purchase a skincare product made in Asia such as Taiwan? - If it has celebrity/influencer endorsement

Please indicate your opinion on the following statements: - If the product is made in a foreign country, I do not mind having some foreign language characters

PIPF (Perceived Importance of Product Functions): Reliability = 0.841

Please indicate how important of the following factors when selecting skincare products for you or your loved ones (such as family members): - Brightening

Please indicate how important of the following factors when selecting skincare products for you or your loved ones (such as family members): - Exfoliating

Please indicate how important of the following factors when selecting skincare products for you or your loved ones (such as family members): - Renewal

Please indicate how important of the following factors when selecting skincare products for you or your loved ones (such as family members): - Anti-wrinkle

Please indicate how important of the following factors when selecting skincare products for you or your loved ones (such as family members): - Anti-acnes

Please indicate how important of the following factors when selecting skincare products for you or your loved ones (such as family members): - Anti-aging

PPN (Perceived Product Needs): Reliability = 0.777

Please indicate your opinion on the following statement: You would like to improve your skin on – Lines.

Please indicate your opinion on the following statement: You would like to improve your skin on – Wrinkles.

Please indicate your opinion on the following statement: You would like to improve your skin on - Rough Texture.

Please indicate your opinion on the following statement: You would like to improve your skin on - Dry & Tight

Please indicate your opinion on the following statement: You would like to improve your skin on - Age Spots.

Please indicate your opinion on the following statement: You would like to improve about your skin on – Oiliness.

PU (Product Usage): Reliability = 0.769

You or your family members use the following skincare products regularly: - Facial cleanser.

You or your family members use the following skincare products regularly: - Skin toner.

You or your family members use the following skincare products regularly: - Serum.

You or your family members use the following skincare products regularly: - Eye products.

You or your family members use the following skincare products regularly: - Day/Night moisturizer.

PNI (Product Natural Ingredients):

Please indicate how important of the following factors when selecting skincare products for you or your loved ones (such as family members): - Natural ingredients

PWP (Price - Willingness to Pay):

What is the price range for the skincare product you are interested in? (1 = Less than \$25, 2 = \$25 - \$50, 3 = \$51 - \$75, 4 = \$76 - \$100, and 5 = More than \$100.)