The Effect of Push, Pull, and Mooring Factors on Customers' Switching Intention to Green Cosmetics

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Abstract: Nowadays, consumption patterns concern consumers since they have negative impacts on environmental sustainability. Marketers have conducted some efforts to create eco-friendly products. This condition has caused research into green marketing to grow significantly. Various studies have been conducted to examine consumers' behavior intentions toward green products. However, the theory applied to explain the phenomenon still has the potential to be developed. Thus, in this study, the researchers examine the consumers' switching intention from conventional cosmetics to green cosmetics, by applying the migration theory and the push-pull-mooring framework. The push factors are explained by the dissatisfaction variable and the low-quality variable. The alternative attractiveness variable explains the pull factor. Meanwhile, the mooring factors are explained by low variety-seeking and the unfavorable subjective norm variables. PLS-SEM is used to analyze 198 consumers of conventional cosmetics. The results indicate that the pull factor is the main factor that supports the consumers' switching intention to green cosmetics, and the second is the push factor. Furthermore, the mooring factors are proven to moderate the effect of the pull factor on consumers' switching intention. On the other hand, the mooring factors are not shown to moderate the influence of the push factors on the consumers' switching intention.

Keywords: dissatisfaction, low quality, low variety seeking, unfavorable subjective norm, alternative attractiveness
JEL Classification: M0, M3

Introduction

Some environmental problems such as pollution, global warming, and climate change, concern consumers because they can disturb the environmental sustainability and wealth. Besides, those problems have impacts on economic, social, and legal issues, along with the environment pillar as one of the concepts in the Sustainable Development Goals (SDGs) [Central Statistics Agency (BPS), 2018]. Consumers are also considered to play certain roles in climate change, since consumption patterns negatively impact the environment (Chairy, 2012). Nowadays, many companies have focused on the eco-friendly product market due to increased communities' concerns toward the environment (Kumar et al., 2017). Producing environmental products is a substantial strategy for competing with others (Karya, 2014). One of the Indonesian industries that continuously produce eco-friendly products is the cosmetics industry, because of the trend toward organic and natural cosmetics (Australian Trade and Investment Commission, 2018).

The consumers' awareness of hygiene and the influence of popular culture are some factors that increase cosmetics' production in Indonesia (European-Indonesia Business Network, 2019). The money spent by households between March 2017 and March 2020 on purchasing facial care products and other cosmetics was Rp192,282.00 per household, while the frequency of purchase was 7.55 times per year (Nielsen, 2020). In addition, the cosmetics sector has experienced annual growth, from 10 percent to 15 percent. The increase is due to the communities' incomes increasing significantly and aggressive marketing (Australian Trade and Investment Commission, 2018). Moreover, based on predictive analyses, Indonesia is predicted to be in the top five cosmetic markets in the coming 10 to 15 years (the International Trade Administration: The U.S Commercial Service and Industry & Analysis, 2016). Therefore, cosmetics have been included as the focus of industrial development plans until 2019 (Australian Trade and Investment Commission, 2018).

Based on the preliminary study, Indonesian consumers tend to follow global trends. The use of natural cosmetics made from organic and herbal formulas has increased significantly, especially for premium products (the International Trade Administration: the U.S Commercial Service and Industry & Analysis, 2016). Furthermore, there are increasing demands for beauty services, such as salons or spas, to use natural and organic products (Australian Trade and Investment Commission, 2018). The main factor that makes Indonesian consumers switch to green cosmetics is the consumers' awareness of health and safety, by choosing chemical-free treatments (European-Indonesia Business Network, 2019).

Based on the previous explanation, there is a significant increase in the consumption of green cosmetic products. Therefore, the cosmetic companies should identify the factors

that cause customers' switching intention from conventional cosmetics to green cosmetics. Moreover, it can help the suppliers in understanding the Indonesian consumers' behavior. Thus, this research aims to examine the factors that cause consumers' switching intention from conventional cosmetics to green cosmetics. In explaining the phenomenon, this research applies the migration theory and uses the push-pull-mooring framework. Each factor is explained using explanatory variables. The push factors are explained by dissatisfaction and low-quality variables; while the alternative attractiveness describes the pull factor, the mooring factors are explained by low variety-seeking and unfavorable subjective norm variables.

This research tries to fill the theoretical and empirical gap. For the theoretical gap, based on Groening et al. (2018) it is known that the application of other theories can be used to explain the green marketing phenomenon. The rational choice theory, the consumer choice theory, and the acquisition-transaction utility theory are known to be the dominant theories used in green purchase intention research (Groening et al., 2018). Another thing explains that there are directions for future research to test consumers switching to green products (Groening et al., 2018). Based on this problem, the migration theory from the field of demography, with the help of the push-pull-mooring framework was chosen to explain consumers' intention to switch to green branded products (green branded cosmetics). This theory was chosen because it can be a good correspondence for research on consumer switching intentions in marketing science (Hou et al., 2011). On the other hand, Nimako (2012) states that there are opportunities to use the migration theory in other research contexts. Previous research that applied this theory has still been limited to electronic marketing, information technology, and the service sector (Lai et al., 2012; Nimako, 2012; Jung et al., 2017).

The empirical gap filled by this study is the existence of measurement modeling errors in the previous research. The push-pull-mooring framework uses first and second order constructs in the measurement model. In the previous research, the problem is that many researchers use the reflective second order construct when it should be formative (Nimako and Ntim, 2013). Measurement modeling errors made by the previous research can cause a type 1 error. Some examples of research that made mistakes include studies by Bansal et al. (2005), Hou et al. (2011), and Lai et al. (2012). Therefore, to fill this gap, this study uses reflective measurement modeling for the first order constructs. Meanwhile, for the second order construct we use a formative measurement modeling approach, as suggested by Nimako and Ntim (2013) in order to avoid type 1 errors.

Literature Review

Migration Theory

Migration is defined as the movement from the place of origin permanently and non-permanently (Lee, 1966) or movement between two places in a certain period (Bansal et al., 2005). Each action of migration consists of the origin, objective, and obstacles. Likewise, it is essential to know four factors that influence immigration, such as the factors related to the area of origin; factors related to the target area; interference obstacles; and personal factors (Lee, 1966). Migration in geographical science is in line with this research, and relates to consumers' switching intention to marketing science. Meanwhile, in the migration process, there is a movement of people from one geographic area to another area or as a switch from the supplier of a product that involves a customer's movement from one product to another (Bansal et al., 2005). In the context of this study, the immigrant can be referred to as a consumer, while the behavior to move from one place to another is defined as the consumers' switching intention from conventional cosmetic brands to green cosmetic brands.

Push-Pull-Mooring Framework

The push-pull-mooring framework (PPM) is the primary paradigm used in the references into migration research (Wang et al., 2019). In the working framework, several main factors affect someone's switching intention. In the push-pull-mooring framework, consumers' switching intention is explained appropriately and helps marketers classify the factors that cause consumers' switching intention (Chang et al., 2014). Hou et al. (2011) also stated that this framework is a valuable and appropriate tool to classify someone's switching intention. Besides, we can explain why a consumer intends to switch in specific periods (Wang et al., 2019). Another benefit of applying this framework in marketing science is its ability to compile a long list of predictor variables in the categories of factors that are determined theoretically (Bansal et al., 2005).

Push Factor

Stimson and Minnery (1998) describe the push factors as factors that motivate a person to leave his/her place of origin. Besides, Wang et al. (2019) describe push factors, such as the stress triggers that push people from the current products. The dissatisfaction variable and low-quality variable explain the push factors in this study. Dissatisfaction is defined as inappropriateness between the product's performance and consumers' expectations (Chang et al., 2014). Meanwhile, quality is defined as the characteristic possessed by a product or category related to satisfying the consumers' needs (Kotler and Armstrong, 2017: 249). These two variables were chosen because they represent negative

factors that encourage consumers to switch from the original product (Bansal et al., 2005; Baek and Kim, 2018).

Pull Factor

The pull factor is defined as a positive thing that attracts the prospective immigrant to the destination (Moon, 1995). Zhang et al. (2014) consider the pull factor as being positive since it can attract the people's intention to switch. These attributes become the place's characteristics and have no correlation with the individual, like the push factors. The variable used to describe the pull factor is the alternative attractiveness variable. This variable was chosen because it can explain the positive factors of the destination (Lai et al., 2012). Moreover, the alternative attractiveness variable describes the pull factor in this study since it is known as the only variable in the switching literature that conforms to the conceptualization of the pull factors (Bansal et al., 2005). Alternative attractiveness can be defined as the customer's perception regarding the extent to which competitive alternatives are available in the market. These positive characteristics are possessed by the competitors (Jones et al., 2000).

Mooring Factor

The mooring factors are aimed to make potential migrants stay in their places of origin or facilitate potential immigrants to move elsewhere (Bansal et al., 2005). It was explained by Lee (1966) that mooring variables moderate the effect of the push and pull factors on migration decisions. The variables that represent this factor are the consumers' low variety-seeking intention and unfavorable subjective norm variables. The consumers' variety-seeking intention is defined as the tendency for consumers to look for variation in choosing services or goods (Kahn, 1995). According to Kahn (1995), variety seeking has become an important construct in marketing research regarding consumer choice. Therefore, this variable was chosen to explain the mooring factors. Meanwhile, Ajzen (1985: 14) defines subjective norms as social pressure perceived by someone about certain behavior. Desbarats (1983) suggests that subjective norms should be included in migration research. This is because subjective norms are able to represent factors that come from society.

Research into marketing that applies the migration theory with the push-pull-mooring framework was first conducted by Bansal et al. (2005) (Nimako and Ntim, 2013). Besides, several related studies that discuss consumers' switching intention have been developed. However, the previous research has limitations in electronic marketing, information technology, and the service sectors (Lai et al., 2012; Nimako, 2012; Jung et al., 2017, Li et al., 2017). The previous research that applied the migration theory and the

push-pull-mooring framework in marketing is presented in Table 1.

Table 1. Several previous researchers that applied migration
theory and push-pull-mooring framework

Researcher	Variable	Context	Research Method	Result
Bansal et al. (2005)	Quality, Satisfaction, Value, Belief, Commitment, High-Cost Perception, Attractiveness, Attitudes, Subjective Norms, Switching Costs, Prior Switching Behavior, Seeking Variation, Switching Intention, and Switching Behavior	Switching to workshop and salon services	The data were collected via a consumer survey using random sampling, of 680 households in a province of Canada. CB-SEM was used to analyze the data.	The mooring factors are the strongest motivation factor for consumer switching intention, followed by the pull factor.
Hou et al. (2011)	Enjoyment, Satisfaction, Participation, Attractiveness, Switching Costs, Social Relationships, Prior Switching Experience, Need for Variety, Alternative of the Attractiveness, and Switching Intention	Switching between online games	The data were collected via an empirical field survey using purposive sampling of 167 players from two large game portal websites in Taiwan. CB-SEM was used to analyze the data.	The mooring factors and the pull factor have a significant effect on the intention to switch, in contrast to the push factors.
Lai et al. (2012)	Inconvenience, High Switching Costs, Low Trust, Low Security and Privacy, Peer Influence, Alternative Attractiveness, Switching Intention, and Switching Behavior.	Switching to mobile shopping	The data were collected via a survey using convenience sampling, 174 responses were obtained in Taiwan. CB-SEM was used to analyze the data.	The push, pull, and mooring factors significantly influence the intention to switch. The pull factor has the most significant influence.
Hsieh et al. (2012)	Weak Connections, Writing Anxiety, Enjoyment, Relative Usability, Relative Ease of Use,	Switching behavior to online services	The data were collected via an online survey using convenience sampling, 319 responses were	Push and pull factors have a positive effect on switching intentions. Meanwhile, the

	Switching Costs, Past Experiences, Switching Intention, and Actual Behavior		obtained in Taiwan. PLS-SEM was used to analyze the data.	mooring factors have a negative effect. Besides, the mooring factors moderate the influence of the push factors on the switching intentions.
Jung et al. (2017)	Low Service Quality, Pricing Problem, Low Satisfaction, Low Trust, Attractive Alternatives, Opportunities for Alternatives, Cost Benefits, High Switching Costs, Looking for low variations, Low Previous Switching Experience, Unintentional Choices, and Switching Intention.	Aviation industry	The data were collected via survey using convenience sampling, 529 were obtained from passengers in Incheon airports. The research method used is SEM.	All the variables that reflect the push, pull, and mooring factors have a significant effect on the intention to switch directly.
Wu et al. (2017)	Perceived Risk, Low Switching Cost, Favorable Social Norm toward the substitute, Transfer Trust, Critical Mass, and Switching Intention.	Personal cloud storage services	The data were collected via an online survey using purposive sampling, 371 responses were obtained in Eastern China. The research method used is PLS-SEM.	All factors have a significant effect on the intention to switch. Besides, the mooring factors significantly moderate the influence of the push factors on switching intentions.

Note: CB-SEM = covariance based-structural equation modeling; PLS-SEM = partial least square-structural equation modelling; and SEM = structural equation modeling.

Hypothesis

According to Baek and Kim's (2018) research, there was a strong negative effect of satisfaction on smartphone consumers' switching intention. Thus, it can be concluded that the lower the level of consumer satisfaction with their smartphone brands, the higher their switching intention was. Besides, Bansal et al. (2005) use low-quality to explain the push factors, and low-quality has a positive impact on consumers' switching intention in the context of salons and workshops. Therefore, it can be concluded that dissatisfaction and

low-quality variables that explain the push factors positively affect consumers' switching intention. Hence, it can be concluded that the higher the number of drive factors a product has will increase the consumers' sense of switching. Thus, the following hypothesis is formulated.

> **H1**: The push factors have positive effects on consumers' switching intention to green cosmetics.

As stated by Lai et al. (2012), alternative attractiveness is categorized as the pull factor. Thus, alternative attractiveness has a positive effect on consumers' intentions to shop online. Hence, consumers' intention to carry out online shopping is strongly influenced by the attractiveness variable. Therefore, it can be concluded that the pull factor described by the alternative attractiveness has a positive effect on consumers' switching intention. Besides, the higher the pull factor, the higher the consumers' switching intention. Thus, the following hypothesis is formulated.

> **H2**: The pull factor has a positive effect on the consumers' switching intention to green cosmetics.

The mooring factors in this study were explained by low variety-seeking and the unfavorable subjective norm variables. Based on Nimako and Ntim (2015), the high variety-seeking variable moderates the positive effects of low satisfaction and low signal quality on consumers' switching intention. In other words, consumers who experience low satisfaction and a low quality of service will have a firm switching intention due to their intention to look for high-quality variants. Meanwhile, Bansal et al. (2005) used the subjective norm variables in the mooring factors. The result of the study showed that low variety seeking and unfavorable subjective norms had impacts on low satisfaction and the low-quality of the consumers' switching intention from salons to workshops. Thus, it can be concluded that the consumers of the salons with low satisfaction and low quality have an intention to switch since there are many unfavorable subjective factors. Hence, it can be assured that the mooring factors tend to weaken the effect of the push factors on the consumers' switching intention. Therefore, the following hypothesis is formulated.

> **H3**: The mooring factors negatively affect the push factors on the consumers' switching intention to green cosmetics.

The alternative attractiveness variable explains the pull factor in this study. Meanwhile, the mooring factors in this study are low variety-seeking and unfavorable subjective norms. Bansal et al. (2005) found that low variety and norms did not moderate the effects of alternative attractiveness on the consumers' switching intention to beauty

salons. These findings are due to consumers' "tied up" feeling toward the services. Therefore, even if the competitors offer an average alternative, customers will not intend to switch. Evaluation of interactions based on Bansal et al. (2005) revealed that the mooring factors have the highest significant value. Thus, it is difficult to find a significant moderation. However, in this study, the effects of the mooring factors on consumers' switching intention were not measured. Besides, the mooring factors in this study are the factors that prevent consumers from switching between places. Another study conducted by Jung et al. (2017) showed that the mooring factors negatively moderated the pull factor on the intention to switch flight service providers. Therefore, the following hypothesis is formulated.

H4: The mooring factors negatively affect the pull factor on the consumers' switching intention to green cosmetics.

Research Model
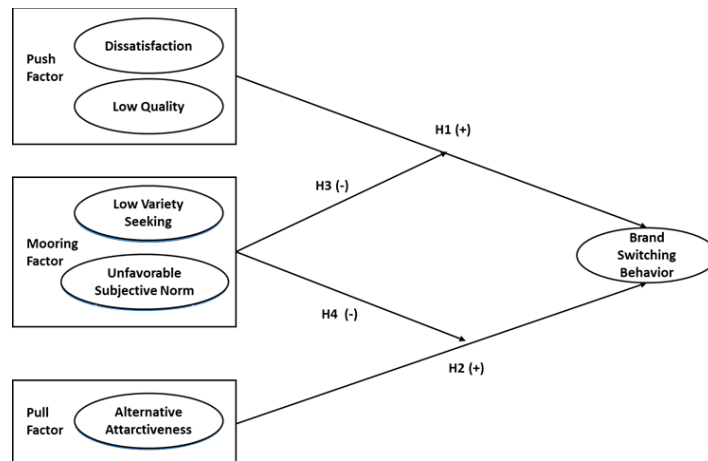
Source: Based on Moon (1995), Bansal et al. (2005), Hou et al. (2011), and Chang et al. (2017).

Figure 1. Research model

Method

The Measurement Model

The measurement model in this study used reflective and formative approaches. The first order constructs (dissatisfaction, low quality, low variety seeking, unfavorable subjective norms, and brand switching intentions) used a reflective approach. Meanwhile, the second order constructs (push, pull, and mooring factors) used a formative approach. The reflective and formative approaches were used in order to avoid the type 1 errors that were found in previous research (Nimako and Ntim, 2013). Type 1 errors are the possibility of incorrectly rejecting the null hypothesis, in other words saying there is a correlation when in fact there is not (Hair et al., 2014a).

Sample

The samples of this study were conventional cosmetic consumers, and they had to meet several criteria. There were three criteria for the respondents in this study. First, the respondents were consumers who used conventional cosmetic brands at least once in the last year. The cosmetics products were hair, face, body care products, body freshener, and make-up. Second, the respondents have never bought green cosmetics. Third, respondents have never used green cosmetics to examine the consumers' switching intention from conventional cosmetics to green cosmetics. Besides, the green cosmetic brands referred to in this study were The Body Shop, Innisfree, Lush Fresh Handmade Cosmetics, Sukin Australian Natural, Skin Dewi, L'Occitaneen Provence, Kiehl's, Sensatia Botanicals, Clarins, and Love Beauty and Planet that met the criteria of green cosmetics. The purposive sampling technique was applied in this study since nonrandom sampling is appropriate with the condition where the populations' elements cannot be identified (Cooper and Schindler, 2014: 358).

Data Collection

Primary data were obtained by using questionnaires. The questionnaires were distributed through social media, such as Twitter, Facebook, WhatsApp, and Instagram, to ease the data collection. The questionnaires were translated into Indonesian from English to make it easier for the respondents to answer the questions.

Measurement

The instrument used in this study was a questionnaire consisted of 27 statement items, as presented in Table 2. Each item used was adapted from previous research and was measured on a 5-point Likert scale (strongly disagree to strongly agree).

Table 2. Research instrument

Variable	Code	Item	Source
Dissatisfaction	D1	Conventional cosmetic brands do not work as well as I thought.	Lau and Lee (1999)
	D2	I am not satisfied with my decision to buy conventional cosmetic brands.	
	D3	I am not satisfied with conventional cosmetics brands.	
	D4	I am not satisfied with my decision to use conventional cosmetic brands.	
	D5	Using conventional cosmetic brands has been a bad experience.	

	D6	I am sure buying conventional cosmetic brands is not the right decision.	
Low-quality	LQ1	Conventional cosmetic brands are poor.	Oliver (2010)
	LQ2	Conventional cosmetic brands are among the worst.	
	LQ3	Conventional cosmetic brands are inferior.	
	LQ4	Conventional cosmetic brands value is poor.	
	LQ5	Conventional cosmetic brands' have low standards.	
	LQ6	Conventional cosmetic brands have low-quality.	
Low Variety-seeking	LV1	I am infrequently curious about new kinds of cosmetics, such as green cosmetic brands.	Wu et al., (2017)
	LV2	I rarely want to try other cosmetic brands, such as l green cosmetic brands.	
	LV3	I prefer to use conventional cosmetic brands that I usually use instead of trying a new thing I am not really sure about.	
	LV4	I am very careful about trying new or different cosmetics.	
Unfavorable Subjective Norm	SN1	My friend thought that I should not use green cosmetic brands.	Taylor and Todd (1995)
	SN2	I do not want to use green cosmetic brands if my friend thinks I should not use them.	
	SN3	My seniors thought that I should not use green cosmetic brands.	
	SN4	I do not want to use green cosmetic brands if my seniors feel I should not use them.	
	SN5	I do not want to use green cosmetic brands since my seniors do not require it.	
Alternative Attractiveness	AA1	Overall, green cosmetic brands will be more beneficial than conventional cosmetic brands.	Ping (1993)
	AA2	Overall, green cosmetic brands will be safer than conventional branded cosmetics.	
	AA3	Overall, the promotion using green cosmetic brands will benefit me more than conventional branded cosmetics.	
	AA4	Overall, green cosmetic brands fit me more than conventional branded cosmetics.	
Brand Switching Behavior	BS1	Maybe I will turn to green cosmetic brands.	Han et al. (2011)

	BS2	Maybe I will switch to green cosmetic brands.	
	BS3	I am sure I will turn to green cosmetic brands.	

Pre Test

The preliminary pre-test was conducted from July 22, 2020 to July 31, 2020. In the period, 230 respondents were involved. Based on the number of respondents, 52 respondents met the criteria. Based on the pre-test results, only the fourth item (LV4) on the low variety-seeking variable was excluded since it was considered invalid.

Result

The questionnaires were distributed from September 24, 2020 to October 28, 2020. The total number of questionnaires distributed was 382. However, there were only 198 items returned that met the criteria and could be used for research purposes. Based on the analysis of the data, the majority of the respondents were women (80.3 percent), their ages ranged from 20 to 25 years old (63.1 percent), 81.3 percent of them lived on Java, 52 percent of them had a bachelor's level education, and 22.7 percent of them had an income between Rp1.000.000 to Rp2.500.000 per month.

First-order Construct Validity Test

Based on Table 3, the factor loading of all the items was categorized as valid since the value was ≥0.4, and ranged from 0.679 to 0.903. Based on the AVE value, all the research constructs were considered valid since their values were ≥0.5, and ranged from 0.670 to 0.730. The next validity test carried out in this study was a discriminant validity test using the Fornell-Larcker criteria. The results of the discriminant validity test are presented in Table 4. In the table, it can be seen that all the constructs were valid since they had a square root value of AVE that was larger than the class values of other constructs (Hair et al., 2014b). The alternative attractiveness was not included in the validity and reliability testing of the first-order because it was the only construct that operationalized the pull factor. Therefore, alternative attractiveness was operationalized as the pull construct in the second-order as done by Bansal et al., (2005).

Table 3. First-order construct convergent validity test

Variable	Indicator	Convergent Validity Test		Variable	Indicator	Convergent Validity Test	
		AVE	Factor Loading			AVE	Factor Loading
Dissatisfaction	D1	0.670	0.754	Low Variety-seeking	LV1	0.684	0.884
	D2		0.847		LV2		0.899
	D3		0.864		LV3		0.679
	D4		0.897	Unfavorable Subjective Norm	SN1	0.716	0.715
	D5		0.720		SN2		0.894
	D6		0.816		SN3		0.837
Low-quality	LQ1	0.730	0.754		SN4		0.882
	LQ2		0.830		SN5		0.890
	LQ3		0.878				
	LQ4		0.870				
	LQ5		0.880				
	LQ5		0.903				

Note: D = dissatisfaction; LQ = low-quality; LV = low variety-seeking; and SN = unfavorable subjective norm.

Table 4. First-order construct discriminant validity test

Variable	Discriminant Validity Test			
	D	**LQ**	**LV**	**SN**
D	**0.819**	0.616	0.018	-0.116
LQ	0.616	**0.854**	-0.072	-0.061
LV	0.018	-0.072	**0.827**	0.182
SN	-0.116	-0.061	0.182	**0.846**

Note: D = dissatisfaction; LQ = low-quality; LV = low variety-seeking; and SN = unfavorable subjective norm.

First-order Construction Reliability Test

In this study, composite reliability was applied, and the result indicated that the value obtained (≥0.70) was considered as reliable (Kock, 2019), as presented in Table 5. In the table, it can be seen that all the research constructs were reliable.

Table 5. First-order construct composite reliability

Variable	Composite Reliability	Note
D	0.924	Reliable
LQ	0.942	Reliable
LV	0.865	Reliable
SN	0.926	Reliable

Note: D = dissatisfaction; LQ = low-quality; LV = low variety-seeking; and SN = unfavorable subjective norm.

Second-order Construct Validity Test

The convergent validity test for the second-order construct is presented in Table 6, and all the factor loading values were ≥0.4, meaning all the items could be categorized as valid. Besides, convergent validity based on the AVE value also revealed that the entire constructs were categorized as valid, which ranged from 0.591 to 0.837 as presented in Table 6. Aside from that, the discriminant validity test indicated that all the constructs had valid values (Hair et al., 2014b), as presented in Table 7. Moreover, in Table 8, the push, pull, and mooring factors were in the second-order constructs and had a good evaluation, as indicated by all the p values being <0.05 and VIF values being <3.3 (Kock, 2019; Hair et al., 2014b). Besides indicating a significant p value, the results showed no multicollinearity problems.

Table 6. Second-order construct convergent validity test

| Variable | Indicator | Convergent Validity | |
		AVE	Factor Loading
Push Factor	D	0.808	0.899
	LQ		0.899
Mooring Factor	LV	0.591	0.769
	SN		0.769
Pull Factor	AA1	0.756	0.884
	AA2		0.871
	AA3		0.860
	AA4		0.863
Switching Intention	SI1	0.837	0.919
	SI2		0.930
	SI3		0.895

Note: D = dissatisfaction; LQ = low-quality; LV = low variety-seeking; SN = unfavorable subjective norm; AA = alternative attractiveness; and SI = switching intention.

Table 7. Second-order construct discriminant validity

| Variable | Discriminant Validity Test | | | |
	PF	MF	PLF	SI
PF	**0.899**	-0.084	0.446	0.377
MF	-0.084	**0.769**	-0.208	-0.307
PLF	0.446	-0.208	**0.870**	0.709
SI	0.377	-0.307	0.709	**0.915**

Note: PF = push factor; MF = mooring factor; PLF = pull factor; and SI = switching intention.

Table 8. Second-order construct formative model

Variable	Indicator	Formative Model Test	
		p Value	VIF
Push Factor	D	<0.001	1.610
	LQ	<0.001	1.610
Mooring Factor	LV	<0.001	1.034
	SN	0.002	1.034
Pull Factor	AA1	<0.001	2.951
	AA2	<0.001	2.772
	AA3	<0.001	2.452
	AA4	<0.001	2.509

Note: D = dissatisfaction; LQ = low-quality; LV = low variety-seeking; SN = unfavorable subjective norm; AA = alternative attractiveness.

Second-order Reliability Test

The reliability test of the composites for the second-order construct is presented in Table 9. Based on the result, it can be identified that all the constructs in this study had a composite reliability of ≥0.70, and all variables were categorized as reliable (Kock, 2019).

Table 9. Second-order construct composite reliability

Variable	Composite Reliability	Note
PF	0.894	Reliable
MF	0.743	Reliable
PLF	0.925	Reliable
SI	0.939	Reliable

Note: PF = push factor; MF = mooring factor; PLF = pull factor; and SI = switching intention.

Structural Model Evaluation

Based on the structural model's evaluation results in Table 10, it can be concluded that the model was adequate to represent the phenomena since the model was robust and there were no multicollinearity problems.

Table 10. Structural model evaluation

Indicator	Score	Provision	Result
Average path coefficient (APC)	0.23***	*P* sig	Accepted
Average R-squared (ARS)	0.54***	*P* sig	Accepted

Average adjusted R-squared (AARS)	0.53***	*P* sig	Accepted
Average block VIF(AVIF)	1.157	Accepted if ≤5 and ideal if ≤3.3	Ideal
Average full collinearity VIF (AFVIF)	1.566	Accepted if ≤5 and ideal if ≤3.4	Ideal
Tenenhaus GoF (GoF)	0.671	Small ≥0.1, medium ≥0.25, and large ≥0.36	Strong Model
Sympson's paradox ratio (SPR)	1.000	Accepted if ≥0.7 and ideal if = 1	Ideal
R-squared contribution ratio (RSCR)	1.000	Accepted if ≥0.9 and ideal = 1	Ideal
Statistical suppression ratio (SSR)	1.000	Accepted if ≥0.7 and ideal if = 1	Ideal
Nonlinear bivariate causality direction ratio (NLBCDR)	0.875	Accepted if ≥0.7	Accepted

Note: All the criteria meet structural model evaluation standard by Kock (2019).

Hypothesis testing

Based on Table 11, the value of R^2, which is owned by the switching intention, was 0.532. The result indicated that the number of variants described by the switching intention in the structural model was moderate, as indicated by the value ≥0.50. Besides, since the Q^2 value was 0.537, the path model had a predictive relevance since the value was >0. Meanwhile, based on the effect size (f^2) that the model had, there was a difference between the push and pull factors. The push factors had a minor construct relevance to describe the R^2 switched intention construct, with a value of ≥0.02. In contrast to the push factors, the pull factor had a significant construct relevance to explain the R^2 switching intention construct since it had a value of f^2 ≥0.35 (Kock, 2019).
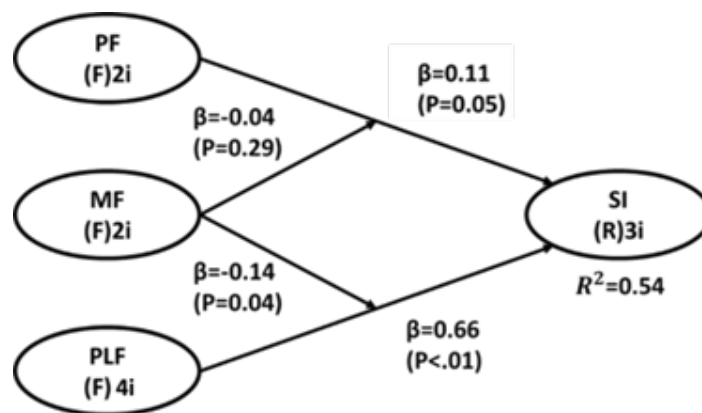
Note: PF = push factor; MF = mooring factor; PLF = pull factor; and SI = switching intention.

Figure 2. Path analysis model

Table 11. Structural analysis model result

Hypothesis relationship	Path Switching Intention		Remarks
	Beta (β)	p Value	
H1. Push Factors	0.114	0.05*	Supported
H2. Pull Factor	0.657	<0.01**	Supported
H3. Mooring Factors*Push Factors	-0.042	0.291	Not Supported
H4 Mooring Factors*Pull Factor	-0.138	0.04*	Supported
R² (Adjusted)	0.532		
Q²	0.537		
f²:			
Push Factors	0.047		
Pull Factor	0.467		

Note: n = 198; **p ≤0.01 *p ≤0.05.

The results presented in Table 11 indicate that the effect of the push factors on the consumers' switching intention was positive (+). Furthermore, to find out the significance of the push factors and the switching intention, it could be observed from the *p* value (Hair et al., 2014b). The *p* value was significant at 0.045. Statistically, it could be concluded that the push factors positively and significantly affected the consumers' switching intention to green cosmetic brands. In other words, **H1 is supported**. Based on Table 11, the value of the path coefficient symbolized by beta (β) showed a positive direction (+) with a value of 0.657. Meanwhile, for the significance test indicated by the *p* value, the pull factor significantly affected the consumers' switching intention (*p* <0.01). It was statistically revealed that the pull factor had a positive and significant effect on the consumers' switching intention to green cosmetics, so **H2 is supported**.

The results of the structural model analysis indicated that the path coefficient value was -0.042. In other words, the direction of the effect of the mooring factors on the consumers' motivation and intention to switch was negative (-). Furthermore, the test of significance indicated by the *p* value showed a value of 0.291. This value was insignificant since it exceeded 0.05 (Hair et al., 2014b). Statistically, it could be explained that the mooring factor did not modify the effect of the push factors on consumers' switching intention, so **H3 is not supported**. In this study, the mooring factors acted as a predictor moderator. This was because the mooring factors did not significantly affect the relationship between the push factors and the intention to switch. However, the mooring factors significantly affected the switching intention (*p* <0.01, β -0.28). The mooring factors in PPM were considered to moderate the influence between the push factors and the intention to switch (Bansal et al., 2005), but this was not the case in this research.

The direction of influence shown in Table 11 by looking at the value of beta (β), was negative (-), which was -0.138. Meanwhile, for the significance test indicated by the *p* value, it was found that a significant mooring factor moderated the effect of alternative attractiveness on consumers' switching intention. The *p* value was ≤0.05, which was 0.039. Therefore, it was statistically concluded that the mooring factors had a significant negative effect on the consumers' switching intention to green cosmetic brands, so **H4 is supported**. The mooring factors in this study acted as quasi-moderators, where the variable interacted with the independent variable and acted as the independent variable itself (Sharma, 2003). The mooring factors were shown to significantly moderate the effect between the pull factor and the intention to switch. In addition, the mooring factors had also proven to have a significant effect on consumers' switching intention ($p < 0.01$, β -0.16).

Discussion

Hypothesis 1: The push factors have positive effects on consumers' switching intention to green cosmetics.

The findings in this study reveal that the push factors have a positive and significant effect on the consumers' switching intention to green cosmetic brands, as indicated by beta (β), which is positive (+) and significant at the p value. The dissatisfaction variable and the low-quality variable explain the push factors in this study. This study indicates that the high intensity of dissatisfaction and low-quality in conventional cosmetics increase the consumers' switching intention to green cosmetics.

The results of this study were in line with the findings of Lai and Wang (2014) and Jung et al. (2017) in a different context. Lai and Wang (2014), who researched the context of health care services (cellular devices, my computers, and usable devices), found that consumers' dissatisfaction positively affects consumers' switching intention. The result indicates that the high intensity of the consumers' dissatisfaction with health care workers is also the same as the high intention of consumers' switching intention to other health care services. As well, Jung et al. (2017) also found that the low service quality possessed by airlines increased the consumers' switching intention to other flight service providers. Therefore, it can be concluded that high push factors will increase the negative effect on consumers' switching intention, or the higher the push factors are, the higher the consumers' switching intention is. The findings in this study indicate that conventional cosmetics made from ingredients that can pollute the environment such as preservatives (parabens and triclosan) and plastics (Juliano and Magrini, 2017) encourage consumers to switch to green cosmetics. Furthermore, the majority of the respondents were from the millennial generation. Millennials are known as the generation that has

high environmental awareness (Chaudhary and Bisai, 2018), a strong green preference (Smith, 2010), and a willingness to buy environmentally friendly products (Rogers, 2013). These push factors cause consumers to switch to green cosmetics.

Hypothesis 2: The pull factor has a positive effect on the consumers' switching intention to green cosmetics.

These findings indicate that the higher the pull factor of green cosmetics is, the higher the consumers' switching intention to green cosmetics is, and vice versa. The pull factor in this study is the most substantial reasons consumers intend to switch to green cosmetics. Green cosmetics are considered more secure since they are made from natural ingredients, the manufacturing process does not go through animal testing, and it uses recycled materials and biodegradable packaging (Kapoor et al., 2019). Besides, consuming green cosmetics can encourage environmental conservation, minimize pollution, responsibly use renewable resources, and preserve the fauna (Amberg and Fogarassy, 2019). These are become the attractions of the cosmetics which enhance the consumers' switching intention.

These findings are in line with Wu et al. (2017) in a different context. This study found that the attraction of green cosmetics positively affects the consumers' switching intention to green cosmetics. In other words, the greater the green cosmetics' attractions are, the higher the consumers' switching intention to the green brands is. In addition, the findings in this study are also in line with Chang et al. (2017). It was found that the more attractive an online store, the higher the consumers' switching intention to the shopping channel is. In this study, the greater intention to switch from conventional cosmetics to green cosmetics arises because the perception of green cosmetics is attractive due to their safety for the environment and the body.

Hypothesis 3: The mooring factors negatively affect the push factors on the consumers' switching intention to green cosmetics.
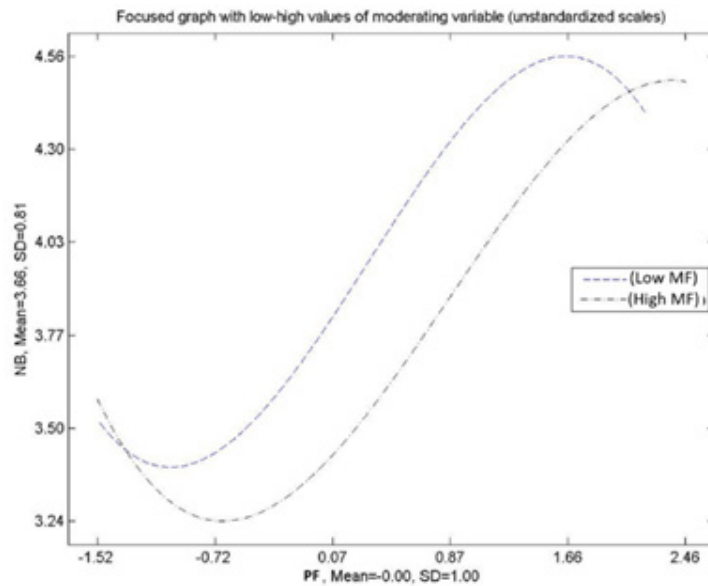
Mooring factors do not moderate the push factors on the consumers' switching intention to green cosmetics. In this study, the mooring factors were explained by the unfavorable subjective norms and low variety-seeking variables. Meanwhile, the push factors are explained by the dissatisfaction variable and low-quality variable. Thus, it can be concluded that the presence or absence of looking for low variety-seeking and subjective norm variables (mooring factors) will not change the effect of dissatisfaction and low-quality (push factors) on the consumers' switching intention to green cosmetics. The absence of a significant effect in testing the mooring factors on the push factors and the consumers' switching intention is also indicated in the form of the scatter plot, as

presented in Figure 3. It indicated that the scatter plot forms an S curve. The shape of the scatter plot indicates that when the value of the scatters plot is high or low, there is no difference in the shape of the curve. In Figure 3, there is no evidence of moderating the effect of the push factors toward consumers' switching intention since, at this point, high or low does not show changes in the effects between these relationships. When the mooring factors are high, the consumers' switching intention is increasing. Meanwhile, when the mooring factors are low, they will move up. Hence, with no mooring factors, the consumers will continue to have the intention to switch to green cosmetics.

The findings in this study are not in line with the research conducted by Nimako and Ntim (2015) and Bansal et al. (2005). In the previous research conducted by Nimako and Ntim (2015), the mooring factors moderate the push factors on the consumers' switching intention to telecommunication industries. The variable used to describe the mooring factors in the study was a general sense of humor which led to the consumers' variety-seeking variable. The study results indicate that the mooring factors moderate the push factors (high prices, low signal quality, low customer service, low perceptions of low, high dissatisfaction, low-quality perceptions, and low satisfaction) and their effects on consumers' switching intention.

In the study conducted by Bansal et al. (2005), the mooring factors moderate the effect of the push factors on consumers' switching intention to the services between salons and workshops. The subjective norm variables explain the mooring factors in the study. It was stated that subjective norms moderate the push factors (low-quality, low satisfaction, low value, low trust, low commitment, and high price perceptions) on consumers' switching intention. However, the findings of this study indicate similar results with Jung et al. (2017). In this study, it was found that the mooring factors (high switching costs, looking for low variance, previous switching experiences, and accidental choices) did not moderate the effects of the push factors (low-quality, low price issues, low satisfaction, and low confidence) on consumers' switching intention to flight service providers.

The study indicates that there is no moderating effect of the mooring factors. This can be interpreted that it is not the subjective norms and looking for variations that weaken the consumers' switching intention, but other variables that are not explained in the study. The variable could be environmental concern because the respondents are dominated by a generation with serious concerns. This argument is supported by Hsieh et al. (2012), who stated that the existence of other variables that were not included in the mooring factors may reduce the effect on the factors of push and the intention to switch.

Note: PF = push factor and MF = mooring factor.

Figure 3. Scatter plot of mooring factors' moderation on
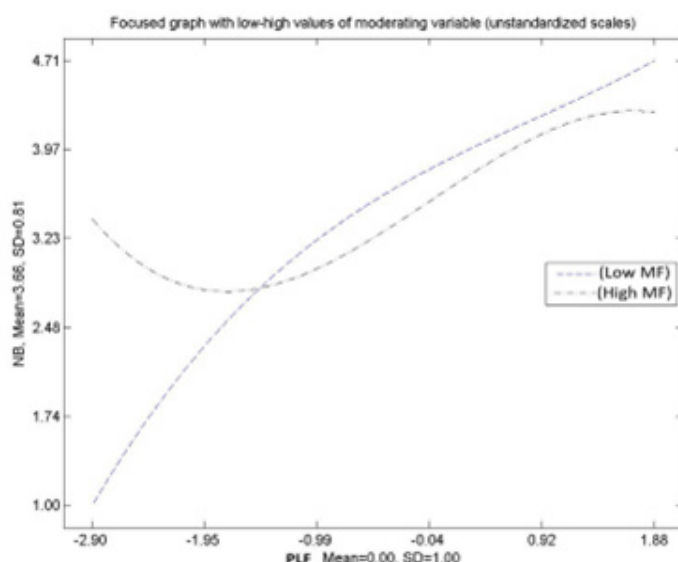push factors and switching intention

Hypothesis 4: The mooring factors negatively affect the pull factor on the consumers' switching intention to green cosmetics.

Mooring factors negatively affect the pull factor on the consumers' switching intention to green cosmetics. In other words, there is only a mooring that will reduce the effect of the pull factor on consumers' switching intention. The mooring factors in this study were explained by low variety-seeking and unfavorable subjective norm variables. Meanwhile, the pull factor is explained by the alternative attractiveness variable. Hence, this study indicates that although green cosmetics are considered an attractive alternative, low variety-seeking, and unfavorable subjective norm variables reduce the consumers' switching intention.

The results of this study are in line with Jung et al. (2017) in a different context. Mooring factors (high switching costs, looking for low variance, prior switching experiences, and accidental choices) were found to moderate the pull factors (attractions, opportunities, and benefits) on the consumers' switching intention for flight service providers. Besides, the findings of this study are also in line with the concept the migration theory, in which mooring factors play roles as contextual and situational constraints. Meanwhile, the additional barriers are individual, social, and cultural (Lee, 1966). Thus, the mooring factors can keep potential migrants from staying in their place of origin or facilitating potential immigrants to move elsewhere (Bansal et al., 2005). As a result, the

consumers stuck with conventional cosmetics even though they consider green cosmetics as alternatives.

As shown in Figure 4, the scatter plots indicate the different effects of high or low-value factors. When the mooring factors have a low value, the effect of the pull factor on consumers' switching intention increases to a high value. Meanwhile, when the pull factor is high, its effect on consumers' switching intention decreases. Thus, the mooring factors explained by low variety-seeking and unfavorable subjective norm variables have a negative and significant effect of stress triggers on consumers' switching intention. Variance is one of the essential constructs in marketing research related to consumers' choices (Kahn, 1995). Consumers are considered to have needs for different brand products, so they look for variations in their consumption choices and switching (Cheng et al., 2014). Besides, Desbarats (1983) stated that subjective norms should be included in migration research since subjective norms represent the mooring factors from a social context.

Note: MF = mooring factor and PLF = pull factor.

Figure 4. Scatter plot moderation of mooring factors on
pull factor and switching intention

Conclusion

There are four hypotheses proposed in this study, and three are supported. Based on the hypotheses' test results, the pull factor is the most substantial factor that triggers consumers' switching intention and is followed by the push factors. The respondents generally considered green cosmetics to be more attractive than conventional cosmetics.

It is because green cosmetics are safer, more functional, profitable, and appropriate than conventional cosmetic brands. Green cosmetics are basically aimed at ensuring environmental sustainability (Kapoor et al., 2019) since they are made from renewable materials, such as plants and extracts or fruit juices (Prothero, 1996; Lin et al., 2018). Meanwhile, conventional cosmetics contain ingredients that can pollute the environment, such as parabens, triclosan, and plastics (Juliano and Magrini, 2017). These perceptions trigger the consumers' switching intention.

The push factors in this research are the strongest after the pull factor on the consumers' switching intention to green cosmetics, as described by dissatisfaction and low-quality variables which increase the consumers' intention to switch to green cosmetics. This can also be caused by the majority of the respondents being of the millennial generation, aged between 20 to 30 years old. The millennials are recognized as a different generation when associated with environmental concerns (Chaudhary and Bisai, 2018). This generation has high environmental awareness (Chaudhary and Bisai, 2018), a strong awareness toward green preferences (Smith, 2010), and the desire to buy eco-friendly products (Rogers, 2013).

On the other hand, although the respondents stated that green cosmetics are attractive alternatives, low variety-seeking and unfavorable subjective norm variables reduce the consumers' switching intention. The lack of environmental support and the low motivation to look for other cosmetics' variants have impacts on consumers' switching intention even though they have a favorable perception. However, the absence of support from the surrounding environment to use green cosmetics and the low motivation to look for green cosmetics does not affect the consumers' switching intention even though conventional cosmetics are unsatisfying.

Based on research findings, the attractiveness of the alternatives is the strongest driving force for consumers to have the switching intention to green branded cosmetics. Therefore, it is important for green cosmetic business actors to continue to prioritize their products as attractive cosmetic alternatives in the eyes of consumers. Attractive relates to the safety factor for the environment as well as for users. Business actors can continue to intensify environmental sustainability campaigns so that consumers are more aware, interested, and intend to switch. In addition, green cosmetic manufacturers must continue to innovate to create products that are in line with consumer trends and needs. Strengthening the goals and benefits of creating green cosmetics can increase the attractiveness element it has.

Limitation and Future Research

There are some critical limitations that are associated with this study and can be a note for future research. First, the variables used to explain the push and mooring factors are limited to dissatisfaction, low-quality, low variety-seeking, and unfavorable subjective norm variables. It is still open to use other variables, such as brand image and product attribute (Joshi and Rahman, 2015), to explain the push factors, while emotion, knowledge, value (Joshi and Rahman, 2015) and previous switching behavior (Hsieh et al., 2012) can be used to describe the mooring factors. Second, the sampling technique applied in this study is non-probability sampling, namely purposive sampling. The application of the sampling technique means the findings of this study are not able to be generalized. However, in this case, it was difficult for researchers to ascertain the population. It was explained that the population of this study is conventional cosmetics consumers in Indonesia, and non-probability sampling was chosen since it was the only possible alternative, it is cheap, and does not take a long time. Lastly, the researchers only examined the consumers' switching intention to green cosmetics, not the consumers' actual behavior. Future research can explore the consumers' actual behavior since the migration theory, with the push-pull-mooring framework, is able to measure the behavior. It could help marketers a lot to understand their consumers' if future research can measure the actual behavior. Several studies that have measured actual behavior with the same framework are those by Bansal et al. (2005), Lai et al. (2012), and Hsieh et al. (2012).

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