Assessing the direct influencers of brand loyalty: An investigation of chemical industry in the developing country of Indonesia

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CHRONICLE	ABSTRACT
	This paper aims to analyze the most relevant direct-antecedents of brand loyalty in the chemical emulsion industry. The purpose of the study is to find the crucial antecedents for chemical buyers; therefore, the paper contributes to business practitioners in managing customer loyalty, particularly in the chemical emulsion industry. Some hypotheses are exercised to get the finding, and this research employs the SEM-Lisrel 8.70 software program to process a total of 140 samples from the field. The respondent's industries are varied, such as coating, paper, textile, wood panel, putty, printing, and furniture. The main finding is the buyer's concern with products, services, and satisfaction; rational quality aspects become a brand identity. Images and activities associated with the brand do not affect loyalty.

1. Introduction

Human life without chemicals would be inconceivable (Shonnard et al., 2003). How a firm's environmental concerns are managed to become an essential part of the industrial relationships (Kapitan et al., 2018). A brand-conscious buyer searches for information before the decision making (Mudambi, 2002), the buyer tends to avoid the legal risks of violating environmental rules (Hall, 2000). Therefore, the buyer will stay in the existing relationship if there are environmental risks potency by switching providers. In the situation of high switching costs, dissatisfied buyers are forced to stay in the relationship (Lam et al., 2004); this background leads to the first research question, "Is the purchase decision of chemical emulsion influenced by the switching costs or because of environmental concerns?" Product's failure leads to the serious problem of buyer's firms or buyer personally, therefore purchasing the familiar brand encourages positive emotional aspects such as confidence, comfort, and feel good; positive brand images create the emotional benefit of reducing risks and uncertainty (Gomes et al., 2016; Leek & Christodoulides, 2012). Moreover, relationships between salesman and industrial buyer are meaningful in B2B setting, leading to the specific selling behavior (Kadic-Maglajlic et al., 2016; Liu et al., 2017), which is customized products and services (Mudambi, 2002). Various emotional aspects might manifest throughout the industrial purchase process; Emotional experiences are manifested in terms of positive (e.g., excitement, joy, pride, confidence) and negative (e.g., fear, anxiety) (E. A. Kemp et al., 2018). Nevertheless, the industrial purchase process is more rational than emotional; therefore, emotions and feelings are not relevant (Ćorić & Jelić, 2015; Kuhn et al., 2008). This contradicts results encouraging the second and third research question, "which factor does have a stronger influence on brand loyalty directly, either rational aspects of product

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quality or emotional aspects of brand associations?" and "does personal relationships encourage a customer to stay in the relationship?" Industrial markets are becoming commoditized, industrial branding is a competitive advantage for the firms; therefore, learning about factors influencing brand loyalty becomes imperative to ensure business sustainability (Li & Green, 2011; Marquardt, 2013). Past study indicates that buyers with a strong personal connection to a specific brand have higher loyalty rates and are less price-sensitive (Corporate Executive Board Company, 2013). The brand management is increasingly necessary to ensure loyalty (Mudambi, 2002). Nevertheless, from a brand management perspective, firms can use either a low-cost/price approach or a high-cost/performance approach (Ulaga & Chacour, 2001). The firm's effort to avoid commoditization by branding the product encourages the fourth research question, "does perceived value have a direct effect on loyalty, moreover, how strong does perceived value's affect compare with other antecedents?"

Satisfaction and or dissatisfaction involves intangible attributes such as fear, anxiety, anger, good feeling, and joy; those experiences potentially influence buyer's perception towards a specific brand (Johnson & Grayson, 2005). Brand loyalty is the most often brand equity outcome in industrial relationship studies (Baumgarth & Binckebanck, 2011). The satisfaction-brand loyalty relationship encourages the fifth research question, "how does satisfaction's effect on brand loyalty compare to others direct antecedents?"

To the best of our knowledge, the investigation about the direct antecedent of brand loyalty involving all possible factors in the industrial context, particularly of risk product context, such as chemical, has not been done before. The purpose of the study is to fulfill this gap so that firms can manage the buyer's loyalty based on the direct antecedent's priority.

2. Literature Review

2.1 Brand quality: product quality and services

Brand quality is defined as a customer's evaluation and experiences towards a specific brand (Elsäßer & Wirtz, 2017). A specific brand's general quality is perceived by each industrial customer differently (Aaker, 1991). Two primary components of brand quality are the degree to which a product or service provides customization, and the firm's offering is free from deficiencies (Fornell et al., 1996). The problem of product commoditization encourages firms to offer service as a point of differentiation (Ross, 2016; Samudro et al., 2018a, 2020; Susanti et al., 2018a, 2020b).

2.2 Brand associations: brand image and salesman competency

The brand is the overall impression formed in the customer's mind about a firm (Ball et al., 2004), and a living memory that connects psychological dimension to the concept (Kapferer, 2012). This perspective describes that brand is built up by buyer's interactions or experiences with tangible and or intangible features the brand represents such as goods and or services (Grace & O'Cass, 2002). The chemical industry is classified as a technology company and recognized by its name; for example, Bayer, the name is associated with pharmaceutical technology leadership, and Henkel, the name is associated with the premium quality in the detergent product (Wiedmann, 2002). The relationship between brand images and loyalty are also confirmed by past studies (Chen & Su, 2011; Suh & Houston, 2010). The management study highlights that intelligence and brainpower supersede tangible and physical assets and even play the role of the firms' competitive advantage; intelligence and human capital have the dimensions of knowledge, skills, and abilities (Youndt et al., 2004). The past study with multinational chemical companies as respondents indicates that the buyer's perception of working with the salesman, who have superior knowledge and skills, positively affects brand loyalty (Susanti et al., 2019c; van Riel et al., 2005).

2.3 Personal relationship

The relationship between a buyer and a salesman underlies a personal judgment in terms of trust and sympathy so that personal relationship influences the brand equity outcomes, or brand loyalty (Lynch & de Chernatony, 2007). The personal relationship generates pleasant feelings (Gwinner et al., 1998); moreover, the personal relationship encourages positive emotions. It creates positive feelings and attitudes, such as brand loyalty (Baumgarth & Binckebanck, 2011).

2.4 Perceived value

Perceived value is defined as a trade-off between total benefits received to total sacrifices (Lam et al., 2004). Fornell et al. (1996) define perceived value as the perceived product quality relative to customers' price or a rating of the quality perceived for the price paid. This paper uses price as being the single sacrifice component for evaluating value. Some studies show that perceived value leads to loyalty (Jayawardhena, 2010; Samudro et al., 2018b; Susanti et al., 2019b).

2.5 Switching costs and Environmental concerns

Switching costs are defined as the perceived economic and psychological costs associated with changing from one provider to another (Jones et al., 2002, p. 441). In this research, switching costs are indicated by few crucial dimensions associated

with economic and psychological costs, such as search and learning costs (Jones et al., 2002), psychological risk on the part of the buyer, for example, brand damage because of failure products (Fornell, 1992, p.10). Past research has identified that switching costs influence customer loyalty (Jap & Ganesan, 2000; Samudro et al., 2019b; Susanti et al., 2019a).

2.6 Customer satisfaction and brand loyalty

Satisfaction is a customer's overall experiences with a product and or services (M. D. Johnson & Fornell, 1991). Loyalty is a buyer's commitment to a product, service, brand, or organization (Oliver, 1999). Some past studies confirm the existence of a positive link between satisfaction and loyalty directly (Rauyruen & Miller, 2007; Susanti et al., 2020a) and indirectly (Samudro et al., 2019a).

3. Research Method

The sample is identified according to a few critical criteria that reflect the research context of industrial branding. For instance, the respondent's industry must be manufactured, not a distributor; therefore, the sampling method is purposely sampling (Short et al., 2002). The respondent's industry is chemical emulsion users such as coating, paper, textile, wood panel, putty, printing, and furniture; a total of 54 companies contribute to 140 samples since every company has a multi-supplier policy. Based on respondents' information, the population size is limited to 128 companies; therefore, the response rate is 42%. The question-naire is designed based on five-point Likert; prior to the field survey, questionnaires are pretested to 30 respondents to ensure readability and understandable (Dillman, 2007). Data is obtained from a field survey from January 7th to April 30th, 2019, and November 18th, 2019, to January 15th, 2020. Lisrel 8.70 SEM (Structural Equation Method) is employed to analyze the data.

3.1 Theoretical Model and Hypothesis Development

Based on the conceptual framework, the authors address the following hypotheses.

H$_1$. *Brand quality, which is reflected by three dimensions, product quality, reliability, and responsiveness, has a positive direct effect on brand loyalty.*
H$_2$. *Brand associations, which is reflected by two dimensions, brand images, and salesman competency, has a positive direct effect on brand loyalty.*
H$_3$. *The personal relationship has a positive direct effect on brand loyalty.*
H$_4$. *Customer satisfaction has a positive direct effect on brand loyalty.*
H$_5$. *Perceived value has a positive direct effect on brand loyalty.*
H$_6$. *Switching costs have a positive direct effect on brand loyalty.*
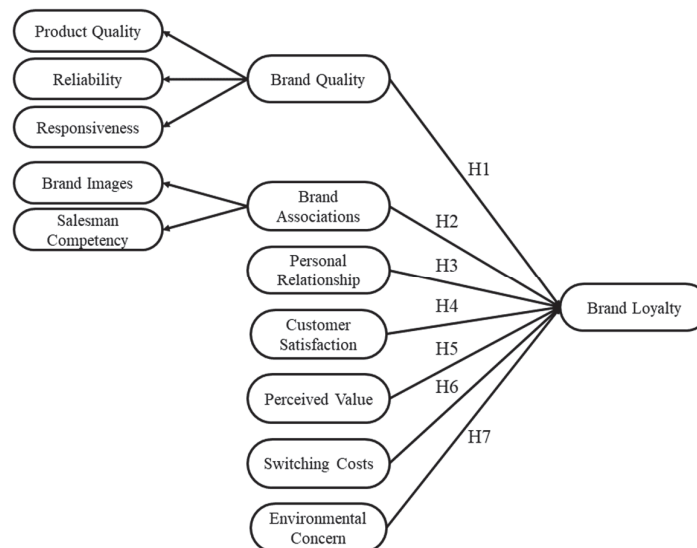H$_7$. *Environmental concerns have a positive direct effect on brand loyalty.*

Fig. 1. Conceptual framework

3.2 Measurement Model Testing

In evaluating the level of compatibility of original data (obtained from the field survey) on the model, this paper refers to the three steps: overall model fit, measurement fit, and structural fit (Wijanto, 2015). Overall model fits are measured by some indexes such as absolute fit index, incremental fit index, and parsimony fit index (Table 1). All the results pass the standards.

Table 1
Overall model fit

Goodness-of-fit	Cut-off value	Result	Remarks
RMSEA (Root Mean Square Error of Approximation)	≤ 0.08	0.08	Good fit
NNFI (Non-Normed Fit Index)	$0.90 \leq NNFI < 1.00$	0.96	Good fit
NFI (Normed Fit Index)	$0.90 \leq NFI < 1.00$	0.94	Good fit
PNFI (Parsimonious Normed Fit Index)	Higher is better	0.88	Good fit
CFI (Comparative Fit Index)	$0.90 \leq CFI < 1.00$	0.97	Good fit
IFI (Incremental Fit Index)	$0.90 \leq IFI < 1.00$	0.97	Good fit
RFI (Relative Fit Index)	$0.90 \leq RFI < 1.00$	0.94	Good fit

Source: Author's research result

Measurement model fit is done for validity and reliability tests. A validity test is a measurement to determine how accurate an instrument measures a concept it is designed to measure, whereas a reliability test is a measurement to find the stability and consistency of the measuring instruments (Sekaran & Bougie, 2016). Validity standard is measured by factor loadings ≥ 0.50 or ideally ≥ 0.70 and t-value ≥ 1.96 (Hair Jr. et al., 2019); meanwhile reliability standard is measured by construct reliability (CR)≥ 0.70, variance extracted (AVE)≥ 0.50 and Cronbach's Alpha≥ 0.70 (Pallant, 2001). All the detailed standards of validity and reliability are above the minimum standards.

4. Results Discussion

A structural fit test is a measurement of path coefficients; to be statistically significant, it must be greater than 0.05 at- t value 1.96 (Hair Jr. et al., 2019). Brand quality has the strongest direct-effect on loyalty (H1); on the opposite point, brand associations have not a direct-effect on loyalty (H2); It is the first finding and answers the second research question. In this research, brand associations are reflected by a broader spectrum of technology leaderships, and forwards-looking or reputation (BI1), respect with a brand due to its charity and community relationship, and (BI2) and a salesman competency; nevertheless, respondents consider their consumption experiences with products and services as the first priority in repeat purchase. Based on the respondent's explanation during the interview, respondents perceive brand images relate to a premium price; meanwhile, a few respondents need such a high technology of chemical emulsion in their manufacturing process. These are the justifications of why brand associations do not have an effect on brand loyalty. In the past studies of other industries, brand associations have a positive effect on loyalty such as industrial services (Zhang et al., 2016), industrial durable goods or machinery (Elsäßer & Wirtz, 2017), industrial, medical equipment or audiologist hearing aids (Cassia et al., 2017), technology and telecom, technology (others), healthcare and pharma (Hutchins & Rodriguez, 2018), others industries (Bagozzi, 2006; E. Kemp et al., 2013; Kidwell et al., 2007). Therefore, H2 is rejected, and it contradicts past studies; meanwhile, H1 is accepted and confirms past studies (Biedenbach et al., 2018; Jayawardhena, 2010; Molinari et al., 2008; Patti et al., 1991). Moreover, brand quality is reflected stronger by service dimensions, which is reliability (0.97; 19.28) and responsiveness (1.00; 18.63), than product quality (0.94) (Appendix A). Brand loyalty is influenced by the rationale of brand quality more than the emotion of brand associations. The pattern of the first finding contradicts with a past study in the capital goods (industrial machinery), whereas emotional brand quality influences brand loyalty stronger than functional quality (through satisfaction as mediating variable) (Elsäßer & Wirtz, 2017); nevertheless, the first finding is in line with Elsäßer and Wirtz (2017) in term of the stronger dimensions of brand quality, which is services quality and distribution quality. In the study of the chemical industry, this first finding confirms the past study of Ćorić and Jelić (2015), whereas the emotional aspect of feelings towards the brand is described as less important than functional aspects. In another research of the chemical industry, van Riel et al. (2005) find an emotional aspect of brand associations to be insignificant in industrial branding. Therefore, the first finding confirms past both chemical studies (Ćorić & Jelić, 2015; van Riel et al., 2005). Since technology leadership is one indicator of brand association, it means that buyers' perception of technology leadership will not lead to repeat purchases. Buyers tend to make a purchase decision based on the consumption experiences on products and services and satisfy the business relationship; Buyer's impressions on technology leadership on a specific brand, its impressions to the chemical firm's social and charity programs and salesman professionalism are not a priority in a purchase decision.

Another rational aspect of perceived value directly affects loyalty (0.18; 2.82); although the effect is weaker than the functional quality aspect; however, H5 is accepted. The results answer the fourth research question and confirm past studies (Jayawardhena, 2010; Molinari et al., 2008; Samudro et al., 2018). The second finding indicates that chemical emulsions are non-commodity chemical products (PV2:0.85; Competitive price indicator is the lowest loading factor), whereas buyers are more concerned about quality aspects (H1 coef.>H5 coef.). The tendency of non-commodity is indicated also by the effect of personal relationship (0.07; 2.07); industrial buyers whose personal connection with a specific brand leads to the less price-sensitive; therefore, the second finding confirm past studies (Bendixen et al., 2004; Corporate Executive Board Company, 2013; Michell et al., 2001; Mudambi et al., 1997; Netemeyer et al., 2004). The personal relationship has a direct effect on loyalty (0.07; 2.07); therefore, H3 is accepted. Conceptually, a personal relationship is developed with the basis of trust; In the context of industrial services, a personal relationship has a positive effect on outcomes of the services (Lian & Laing, 2007). The result of H3 confirms past studies (Baumgarth & Binckebanck, 2011; Baxter & Matear, 2004; Lynch & de Chernatony, 2007). Human capital, which content of both professional and social relationship skills, has a weaker direct effect on loyalty, than perceived quality in the context of the services (Biedenbach et al., 2018). This research finds the same pattern, whereas perceived quality has a stronger effect on loyalty than a personal relationship (0.42, 2.92>0.07; 2.07); However, this

research is done on tangible goods, not services. Therefore, this third finding confirms the pattern of stronger effect of quality on loyalty than personal relationships in both goods and services context.

Switching costs have not significant effects on loyalty (H6). It means the incurring cost potency is low or meaningless in the chemical emulsion industry in the Indonesia market. The meaningless result of switching costs on loyalty contradicts past studies (Lam et al., 2004; Matzler et al., 2015), but the result supports a past study on the chemical pesticide in Taiwan (Yeh & Liao, 2016). Since all respondents address multi-supplier policy on their purchasing process, there will most likely not be any quality and consistency issues by switching suppliers. Therefore, although buyers concerned with quality as a top priority, buyers can still replace the supplier since the incurring costs are not significant. Meanwhile, environmental concerns have a very weak effect on loyalty (0.13;1.86); nevertheless, H7 is accepted. The strong justification is most likely the low awareness of industrial buyers concerning the risks potency from the products; Refer to the global sustainability index, 2020 Environmental Performance Index score of Indonesia is 37.8 and the rank is 117 (Wendling et al., 2020). It indicates that Indonesia environmental concerns are still low compared to other countries; moreover, it is even still a challenge to the Indonesia government in pollution control, despite the fact that the disclosure form of environmental certification is in places such as, ISO14000 and PROPER (the Program for Pollution Control Evaluation and Rating) (García et al., 2007). This fourth finding answers the first research question, whereas chemical emulsion buyers have less awareness and compliment with green products and environmental issues, since law enforcement is still low in a such developing country, as Indonesia. Buyers are not worry to switch suppliers because regulators do not impose the environmental rules; therefore, switching costs are low. The finding does not confirm past studies, whereas brand image and loyalty are affected by incorporating environmental aspects (Alvarez & Galera, 2001; Chan et al., 2012; Kapitan et al., 2018; Sharma & Vredenburg, 1998). The paper finds that satisfaction has a second stronger effect on brand loyalty; therefore, H4 is accepted. The positive effect of satisfaction on loyalty confirms past classical model of both ACSI, American Customer Satisfaction Index (Fornell et al., 1996; Lam et al., 2004; Rauyruen & Miller, 2007; Ulaga & Eggert, 2006) and ECSI application, European Customer Satisfaction Index (Askariazad & Babakhani, 2015). Refer to the results (Table 2); chemical emulsion buyers are processing purchase decision with the basis of their consumption experiences with products and services as the first priority, buyer's satisfaction along their experiences with specific brands as the second priority, then the result of appraisal between benefits and price as a third priority; The other two factors are relatively weak effects, which is the personal relationship and environmental concerns.

Table 2
Path Coefficient Results

Hypotheses	Path	Coefficient	t-value
H1	Brand quality → brand loyalty	0.42*	2.92
H2	Brand associations → brand loyalty	-0.11	-1.34
H3	Personal relationship → brand loyalty	0.07*	2.07
H4	Customer satisfaction → brand loyalty	0.35*	2.69
H5	perceived value of → brand loyalty	0.18*	2.82
H6	Switching costs → brand loyalty	-0.01	-0.26
H7	Environmental concerns → brand loyalty	0.13	1.86

Source: Author's research result

5. Theoretical Implications

The research finds brand associations have no effect on loyalty, but quality does. It means that the chemical emulsion brand has an identity of quality aspects that influence loyalty; therefore, quality is considered equally important as the brand itself. With the basis of the results, in the context of multi-suppliers and low environmental concerns country as Indonesia, chemical emulsion buyers concern with quality, services, and consistency performances, buyers will not reckon other factors beyond the quality aspects such as technology advances and forward-looking and overall corporate's activities (as a charity and community relationships). Therefore, in the case of risk chemical products, brand associations have no effect on brand loyalty in the context of multi-supplier buyers, not the existence of switching costs and low awareness of environmental issues in developing countries such as Indonesia. This theoretical contribution should be applicable to the same risk industries such as, oil and gas.

6. Managerial Implications

The first finding implies the necessity to keep quality performances of products and services and consistency. Since services contribute a stronger effect on brand loyalty and anticipate the meaningless effect of switching costs (forth finding), firms need to focus more on services as a competitive advantage because buyers have nothing issues to switch suppliers. Therefore, firms need to address an excellent product formulation and applications supervision, on-time delivery, fair and accurate technical handling in response to the technical complaints, moreover the fast and fair deals in handling business complaints. Brand associations have not a direct-effect on brand loyalty, despite the fact of technology leadership as an indicator of an image; since buyers are concerned with brand quality performance, chemical firms are necessary to keep addressing research and development on the company's budget purposely to anticipate future's products need and trend. Hence, chemical firms will

always come to the solution once the new need arrives at the market. Since buyers are focused on quality performances and consistency as a top priority, considering a custom product and non-commodity, firms should address the fair and proper prices, not economical prices (as indicated by the second finding); The right prices lead to profit maximization. Fair prices are imperative, anticipating meaningless incurring costs since buyers place multi-supplier policy so that there are no issues to switch suppliers. Chemical emulsion firms are necessary to ensure the buyer's satisfaction because of their strong effect on loyalty. Firms need to address some proper and crucial skills, system, and transparency on business relationships such as smooth and more transparent communications so that buyers feel comfortable with the responses; insured goods, and fast claim process so that buyers are always feeling secure with every business transaction. Furthermore, fair and transparency during business negotiations and deals are important. Purposely to ensure customer satisfaction, the firm's policy must be in place to ensure those all activities work properly.

7.   Conclusion and Limitations

The path coefficient results confirm three major factors as direct-antecedents of brand loyalty in sequence as follows: brand quality, which is product and services; buyer's consumption experiences on products and services lead to brand loyalty. The second is the buyer's satisfaction with specific brands and then perceived value. The weaker effect of perceived value than quality aspects and satisfaction strongly indicate the non-commodity products character and in-elasticity price, buyers consider quality aspect first, then satisfaction and benefits-price appraisal. A personal relationship has a weak direct-effect on brand loyalty; meanwhile, the other two factors are meaningless: brand associations and switching costs. The meaningless effect of brand associations concludes that the non-product related brand development is less effective on brand loyalty management, neither technology leadership and advance. With the low awareness of environmental issues, the development of positive image and impressions, including green products, will not contribute a strong positive impact on buyer's perspectives; This is a classical issue of secondary emerging countries such as Indonesia whereas the government still faces a challenge in designing effective instruments to deal with environmental issues. All in all, chemical emulsion firms have to focus on two major direct-antecedents: products and services qualities, and satisfaction; moreover, it is necessary to address the proper pricing to maximize profits, since non-commodity products character and in-elasticity printing tendency. This study has a few limitations as follows, first, the study is done in a developing country as Indonesia, therefore authors suggest to do a replication in other more established countries whose high awareness of environmental issues such as, Scandinavian countries, Denmark, Finland, Sweden or Norwegian. There will be a higher potency to have different results, in particular the environmental-loyalty path, switching costs-loyalty path and brand associations-loyalty path. Second, authors propose to have a replication study in Indonesia with other pure-commodity products such as oil and gas, it is purposely to have a generalization of the model.

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Appendix A
Validity and Reliability

			Factor Loading	t-value	Cronbach's Alpha	CR	AVE
Brand Quality					0.946	0.98	0.80
Source: Elsäßer and Wirtz (2017); Biedenbach, Hultén and Tarnovskaya (2018)	PQ	Product Quality	0.94		0.868	0.96	0.90
	RL	Reliability	0.97	19.28	0.884	0.95	0.81
	RS	Responsiveness	1.00	18.63	0.877	0.96	0.85
Product Quality	PQ1	Meeting quality requirements	0.92				
R²: 0.88	PQ2	Good quality products	0.95	23.86			
	PQ3	Consistent good quality product	0.96	26.52			
Reliability	RL1	Excellent technical and formulation solution	0.91				
R²: 0.95	RL2	Accurate technical complaint response	0.93	19.71			
	RL3	Accurate sales complaint response	0.94	20.56			
	RL4	Fair solution	0.91	18.37			
	RL5	Meeting the scheduled delivery	0.80	13.51			
Responsiveness	RS1	Fast technical solution	0.88				
R²: 1.00	RS2	Fast sales response	0.95	18.88			
	RS3	Fast technical complaint response	0.95	18.71			

			Factor Loading	t-value	Cronbach's Alpha	CR	AVE
	RS4	Fast sales complaint response	0.90	16.69			
Brand Associations					0.917	0.98	0.87
Askariazad and Babakhani (2015); Elsäßer and Wirtz (2017)	BI	Brand Images	0.98		0.818	0.93	0.90
Elsäßer and Wirtz (2017)	SM	Salesman Competency	0.92	17.30	0.937	0.97	0.90
Brand Images	BI1	Technology reputation	0.93				
R²: 0.95	BI2	Respect with the brand in overall organization activities	0.94	24.70			
Salesman Competency	SM1	Expertise person	0.93				
R²: 0.84	SM2	Knowledgeable person	0.94	21.52			
	SM3	Empathy person	0.93	20.94			
	SM4	A good communicator	0.94	21.39			
Personal Relationship					0.943	0.96	0.80
Barry and Johnson (2004); Doney, Barry and Abratt (2007)	PR1	Good friendship	0.82				
	PR2	The personal relationship with the sales team	0.99	16.65			
	PR3	The personal relationship with the technical team	0.98	16.30			
	PR4	Good personal relationship	0.83	12.21			
	PR5	Consider friendship relation	0.91	14.15			
Customer Satisfaction					0.956	0.98	0.80
Askariazad and Babakhani (2015);	CS1	Satisfied with overall performances	0.90				
Russo et al. (2017)	CS2	Satisfied with customized performances	0.87	15.76			
	CS3	Fulfilling buyer's expectations	0.82	13.74			
	CS4	Feeling goods during the business relationship	0.93	18.70			
	CS5	Feel good with transparency in price discussion	0.93	18.55			
	CS6	Fair in payment period setting	0.91	17.53			
	CS7	Feel comfortable doing business with a good company	0.94	18.91			
	CS8	Satisfied with the claim process	0.97	21.27			
	CS9	Satisfied with the guaranteed good	0.96	20.65			
	CS10	Feel close with the company	0.88	16.20			
	CS11	Smooth communication	0.90	17.15			
Perceived Value					0.927	0.96	0.80
Russo et al. (2017)	PV1	Quality equals the price	0.90				
	PV2	Competitive price	0.85	14.67			
	PV3	Delivery service equals the price	0.91	17.41			
	PV4	Technical service equals the price	0.93	18.19			
	PV5	Non-technical service equals the price	0.93	18.37			
	PV6	Benefit equals the price	0.91	17.26			
Switching Costs					0.936	0.96	0.80
Burnham, Frels and Mahajan (2003); Blut et al. (2014); Russo et al. (2017)	SC1	The cost incurred by lower quality potency	0.92				
	SC2	The cost incurred by quality inconsistency potency	0.97	22.67			
	SC3	New and additional cost	0.92	19.15			
	SC4	Negative image risk	0.87	16.40			
Environmental Concern					0.739	0.88	0.80
Mustonen, Karjaluoto and Jayawardhena, (2016); Yeh and Liao, (2016)	EC1	A right image of pollution control	0.93				
	EC2	A good impression of green products	0.84	15.83			
Brand Loyalty					0.900	0.95	0.80
R²: 0.96	BL1	Will rebuy the product	0.98				
Cassia, Cobelli and Ugolini (2017); Russo et al. (2017); Biedenbach, Hultén and Tarnovskaya (2018)	BL2	Will rebuy with higher quantity	0.72	12.00			
	BL3	Will buy other products	0.94	27.96			
	BL4	Will prioritize the company	0.95	29.29			
	BL5	I Will recommend it to others	0.82	15.95			

Source: Author's research result