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## Article

# The model development of industrial brand loyalty: Assessing the rational and emotional aspects as antecedents of loyalty

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## MARKETING | RESEARCH ARTICLE

# The model development of industrial brand loyalty: Assessing the rational and emotional aspects as antecedents of loyalty

Andreas Samudro<sup>1\*</sup> and Vonny Susanti<sup>1</sup>

**Abstract:** The purpose of the study is to develop a brand loyalty model with perspectives from rational and emotional aspects. The research investigates the relevant antecedents of the brand loyalty model with the respondents from various industries in the chemical emulsion market. The research is a quantitative approach with SEM-PLS employed to run the data, whereas the data is conducted and collected from the field survey. The study demonstrates the robustness of the model with direct relationships between the constructs in the model. Moreover, it confirms that rational brand quality influences brand loyalty stronger than emotional brand associations; further perceived value has the weakest influence on satisfaction. Authors encourage replicated research with a broader range of product categories to validate the results. The ideal model should be able to be



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### PUBLIC INTEREST STATEMENT

The biggest challenge faced by industries is how to ensure business sustainability in the industrial context. Since industrial relationship studies tend to focus on rational aspects, this paper aims to develop and explore the emotional aspects. Moreover, the paper develops a robust brand loyalty model that assesses the relevant antecedents because of commoditization pressure. The results find that brand quality's rational aspect influences satisfaction and brand loyalty stronger than the emotional aspect of brand association. The finding contributes to the practitioner who concerns with loyalty. Companies should focus on functional quality as a priority, especially technology and services development, to enhance value. However, emotional aspects contribute to the buyer's decision since industrial buyers tend to avoid risks.

implemented with generalization. The research has an insight into the two-sided role of rational and emotional elements during the decision process and their role in satisfaction and brand loyalty; moreover, the proposed model also adds perceived value. With the investigation of the direct and indirect effects among the constructs of the model, this model is considered new in industrial branding; therefore, the paper fulfills the research gap and contributes novelty.

**Subjects: Brand Management; Industrial Relationship and Sales; Marketing Management**

**Keywords: Rational brand quality; emotional brand associations; perceived value; customer satisfaction; brand loyalty**

### 1. Introduction

As the competition for industrial markets gets more intense because of the pressure of commoditization and globalization, industrial firms are necessarily seeking differentiation and competitive advantages by branding products (Li et al., 2011; Marquardt, 2013; Walley et al., 2007) and enhancing a firm's brand equity (Biedenbach et al., 2011; Kumar et al., 2015; Nyadzayo et al., 2016). As a brand equity element, brand loyalty plays a fundamental role in marketing advantages, such as cost efficiency and new customer acquisition (Aaker, 1991); moreover, loyal customers continue to exert powerful impacts on a firm's performance (Lam et al., 2004).

Brand equity is acknowledged as one of the most crucial factors to win the competition by the proceeding point of differentiation (Zhang & He, 2014); a strong brand becomes an asset and sustainable advantage to a firm (Backhaus et al., 2011). Despite the fact that organizational buyers must consider the functional value of a brand (Kemp et al., 2018), the emotional aspects have a strong influence on the industrial relationship (Borg & Johnston, 2013; Kadic-Maglajlic et al., 2016). This paper aims to develop and explore a brand loyalty model with two major aspects as the basis of customer evaluation, which is rational and emotional dimensions. Research needs to identify how industrial buyers perceive branding and the importance of functional and emotional attributes that will enable marketers to convey an appropriate message (Leek & Christodoulides, 2011, p. 835); Authors refer to the few past studies to reveal the separation analysis of rational and emotional constructs (Cassia & Magno, 2012; Elsäßer & Wirtz, 2017; Jensen & Klastrup, 2008; Kuhn et al., 2008) and integrate the model with another success factor as price perception. Therefore, the model is analyzed with the basis of rational and emotional aspects and perceived value.

The past studies do not explore the possibility of the new finding from the path correlations assessment between every latent variable and brand equity outcome, which is satisfaction and brand loyalty; the direct and indirect effects of relevant constructs on brand equity outcomes shall be the basis to have in-depth analysis; therefore this paper shall fulfill the research gap. Authors consider the necessity of having a clear understanding of how all relevant latent variables interact with each other to influence brand equity outcomes in the industrial context. Elsäßer and Wirtz (2017) examine brand equity outcomes, satisfaction, and brand loyalty, from rational and emotional aspects without the involvement of perceived value and further analysis of the quality-value relationship, and direct effect of both quality and brand association on brand loyalty.

This empirical study seeks to examine the model and identify the antecedents of brand loyalty in-depth from a broadening spectrum of rational and emotional aspects and perceived value. In contrast, the involvement of perceived value is purposely to assess the priority base of buyers' decision processes, either rational quality aspects, emotional brand associations, or price perception. Past studies do not assess the role of price or perceived value, although it is essential in the industrial relationship (Alexander et al., 2009). The developed model of rational-emotional-value

constituents is expected to become the robust model of industrial branding; therefore, it is considered as a novelty in the industrial branding concept.

The present paper investigates the antecedents of customer satisfaction and brand loyalty based on rational and emotional aspects and exercised by perceived value involvement. Three research questions are investigated:

1. Does rational brand quality has a stronger effect on satisfaction and brand loyalty than emotional brand association?
2. Does rational brand quality has a stronger indirect effect on brand loyalty than emotional brand association?
3. Which dimension of rational brand quality or emotional brand association does influence brand loyalty stronger?
4. Does perceived value have the ability to halt the influence of both rational brand quality and emotional brand associations on satisfaction and brand loyalty?

The purpose of the study to examine the antecedents of the brand equity outcomes, customer satisfaction, and brand loyalty, with the details and in-depth analysis of all latent variables. Therefore, more specifically, the objectives of the empirical study are as follows:

-to examine the effect of rational brand quality and emotional brand association on customer satisfaction and brand loyalty, determining which has a stronger direct effect on satisfaction and brand loyalty.

-to examine the indirect effect of rational brand quality and emotional brand association on brand loyalty; the results are used to further path analysis between direct and indirect effects on brand loyalty.

-to investigate the role of perceived value and whether perceived value influences satisfaction stronger than quality and brand association do; the result of this investigation indicates whether superior quality, brand association, or price is the priority of buyers in a purchase decision.

-to explore how emotional brand association influences value and quality. These results shall indicate a buyer's appreciation of brand association and price sensitivity.

-to examine the direct effect of perceived brand quality on value and investigate the indirect effect of perceived brand quality on brand loyalty through the mediator variable of perceived value and customer satisfaction.

-to examine the direct effect of emotional brand associations on value and investigate the indirect effect of emotional brand association on brand loyalty, through the mediator variables of perceived value and customer satisfaction.

-to explore further about rational brand quality dimensions, which dimension does contribute more influential to the brand equity outcomes of satisfaction and brand loyalty, either products or services.

-to explore further about emotional brand association dimensions, which dimension does contribute more influential to the brand equity outcomes of satisfaction and brand loyalty, either company reputation-brand image or sales competency.

## **2. Theoretical background and literature review**

Aaker (1991, p. 16) describes five categories of liabilities and assets as brand equity elements: brand loyalty, perceived quality, brand associations, brand awareness, and other proprietary brand assets. With the basis of relationship marketing theory, which is the proven fundamental relationship between satisfaction and loyalty (Chandrashekar et al., 2007; Dong et al., 2011; Samudro & Susanti, 2021), this study assesses antecedents of brand equity outcomes, customer satisfaction and brand loyalty, such as perceived quality and brand associations, combined with perceived value. The following sections describe the conceptual background of every construct, whereas the conceptualization of model examination refers to the brand equity researches, which is built with the basis of customer-based brand equity.

Basically, in B2B relationships, psychological and social benefits are generated through personal associations, while other emotional aspects get involved in the process (Samudro et al., 2019; Selnes & Sallis, 2003; Sweeney & Webb, 2007; Sweeney & Webb, 2002). In the past studies, scholars analyzed and evaluated brands by separating emotional aspects and rational aspects (Cassia & Magno, 2012; Elsässer & Wirtz, 2017; Jensen & Klastrup, 2008; Kuhn et al., 2008). This study evaluates brands based on emotional aspects and rational aspects from the customer's standpoint.

### **2.1. Rational brand quality**

Askariadzad and Babakhani (2015) define perceived quality as the customer's evaluation of recent consumption experience. In the industrial dyadic view of relationship exchange; ultimately, the relationship is driven by economic factors or profits (Hastings & Saren, 2003). The past substantial research confirms the importance of functional benefits, as monetary, strategic competitive advantage and expertise (Sheth & Sharma, 1997; Susanti, 2019a; Susanti et al., 2019b; Sweeney & Webb, 2007); in this research, the functional benefits are the result of three main dimensions: product quality, reliability, and responsiveness, whereas the last two dimensions are the manifestation of services. Spreng et al. (2009, p. 544) argue that industrial customers make decisions with a more cognitive process basis than an emotional process; in other words, the industrial decision tends to be more rational. The quality performance is driven by the cognitive process, whereas perceived performance is compared by expectation; therefore, customer satisfaction is aroused from a rational aspect evaluation (Parasuraman et al., 1988). Moreover, a rational aspect evaluation is based on fundamental customer requirements (customization) that are free from deficiencies (Fornell et al., 1996). Consistent with the concept, this paper proposes the hypothesis as follows.

**Hypothesis 1.** Rational brand quality is a latent variable of second order with the three dimensions of product quality, reliability, and responsiveness, and has a positive direct effect on customer satisfaction.

In industrial branding, customers' positive perception of brand quality shall influence brand value, and to a large extent, influence brand loyalty (Taylor et al., 2007). Past studies demonstrate that buyers' judgment about perceived brand quality indicates the most relevant factor in the industrial branding (Michell et al., 2001); buyers are reluctant to switch to alternative products if buyers perceive that current brand quality is adequate; therefore, a positive brand quality perception shapes buyers' brand loyalty. Some past studies show that perceived quality has a positive effect on loyalty (Molinari et al., 2008; Spreng et al., 2009); hence, we test that hypothesis as follows.

**Hypothesis 2.** Rational brand quality is a latent variable of second order with three dimensions of product quality, reliability, and responsiveness, and has a positive direct effect on brand loyalty.

Perceived quality is the customer's evaluation of the recent consumption, and industrial buyers evaluate custom products and services (Turkyilmaz et al., 2013); if the customer's perceptions toward quality aspects of products and services are positive, then brand quality shall shape the buyer's evaluation of brand value (Michell et al., 2001; Taylor et al., 2007). In the industrial relationship, the buyer's expectations about brand quality are often used as a basis for the perceived value assessment (Gordon et al., 1993; Jalkala & Keränen, 2014; Susanti et al., 2020b). Therefore, rational brand quality is expected to have a positive direct effect on the value, as stated in the following hypothesis.

**Hypothesis 3.** Rational brand quality is a latent variable of second order with three dimensions of product quality, reliability, and responsiveness and has a positive direct effect on perceived value.

## 2.2. Emotional brand associations

Brand association is image dimensions unique to a brand (Aaker, 1996, p. 111) and has four dimensions: consistent advertising style, brand image, country of manufacture, and salesman competency (Elsäßer & Wirtz, 2017). Nevertheless, a consistent advertising style is an inappropriate activity in the chemical market's respondent (Jensen & Jepsen, 2007), as well as the country of manufacture, and authors disregard both dimensions. This paper refers to the corporate image since every chemical company is associated with specific technology leaderships (Wiedmann, 2002). Moreover, the relationship with salesman underlies a personal judgment toward salesman competency; therefore, salesman competency is a relevant factor to be explored in depth.

The corporate brand image serves as a crucial factor influencing a customer's perception of quality (Wallin Andreassen & Lindestad, 1998). Positive images of corporate brands create a higher probability of a brand choice from a customer's point of view and increase brand loyalty (Keller, 1993). In industrial relationships, the interaction between sales and buyers creates positive feelings and attitudes, such as satisfaction (Baumgarth et al., 2011; Baxter & Matear, 2004; Susanti et al., 2019c, 2020a). In this study, the authors test the hypothesis as follows.

**Hypothesis 4.** Emotional brand associations are a latent second-order variable with two dimensions of company reputation—image and salesman competency have a positive direct effect on customer satisfaction.

In the industrial relationship context, Cretu and Brodie (2007) find that the company's reputation has a broader impact on customer loyalty; meanwhile, the supplier's reputation is a significant antecedent of loyalty (Suh & Houston, 2010). As with the findings of past studies, there are positive relationships between corporate brand image and brand loyalty (Hussain et al., 2015; Jani & Han, 2014; Papadimitriou et al., 2015). Meanwhile, past studies have confirmed the influence of salesperson competency on brand-equity outcomes of satisfaction and brand loyalty (Baumgarth et al., 2011; Van Riel et al., 2005).

**Hypothesis 5.** Emotional brand associations are a latent second-order variable with two dimensions of company reputation—image and salesman competency have a positive direct effect on customer brand loyalty.

In the industrial relationship, firms are more concerned with company reputation, brand identity, and brand images than the consumer market (Zablah et al., 2010). Cretu and Brodie



(2007) find that company reputation influences buyer's perceptions of value, products, and services in the industrial relationships; therefore brand association is a basis for industrial buyer to determine purchase decision and also pay a premium price for a favorable brand image (Blombäck et al., 2007; Persson, 2010). The following hypotheses (H6 and H7) are formulated to examine the consistency of the proposed model's concept.

**Hypothesis 6.** Emotional brand associations are as a latent variable of second-order with two dimensions of company reputation-image and salesman competency have a positive direct effect on perceived value.

In the industrial relationship, the brand associations are shaped by buyers' earlier experiences with the provider's performance; therefore, brand associations are expected to affect the perceived quality (Biedenbach & Marell, 2010). Although customers have perceptions towards a specific brand, the brand associations are expected to influence the buyer's perception towards the quality performance of a specific brand; therefore, authors test the hypothesis as follows.

**Hypothesis 7.** Emotional brand associations are as a latent variable of second-order with two dimensions of company reputation-image and salesman competency have a positive direct effect on rational brand quality.

### **2.3. Perceived value**

Perceived value is a trade-off between total benefits received and total sacrifice by considering a supplier's offering and price (Lam et al., 2004; Samudro et al., 2020, 2018b). Although sacrifice can be in either monetary or non-monetary terms (Mayr et al., 2012), Patterson and Spreng et al., 1997, p. 424) claim that emotional elements may not be relevant in an industrial relationship. Therefore, the paper considers price as the sacrifice component in perceived value evaluation; thus, it uses a single-item measure of price in the evaluation process. From the conceptual basis, we test the hypothesis as follows.

**Hypothesis 8.** Perceived value has a positive direct effect on customer satisfaction.

### **2.4. Customer satisfaction and brand loyalty**

Customer satisfaction is an emotional response to a product and/or service consumption experience, which translates into attitudinal loyalty (Babin & Griffin, 1998; Ringham et al., 1994). The evaluation of the affective aspects leads to the formation of attitudinal brand loyalty (Rebekah Bennett, 2001; Carpenter, 2008). Some past studies confirm the positive relationship between customer satisfaction and loyalty, wherein loyalty is a consequence of customer satisfaction (Lam et al., 2004; Rauyruen & Miller, 2007; Ulaga et al., 2006). Thus, the positive relationships between customer satisfaction and loyalty have been widely acknowledged in the past by scholars, researchers, and business practitioners (Jani & Han, 2014; Kaur & Soch, 2018; Samudro et al., 2018a; Sharma, 2017; Watson et al., 2015).

Customer loyalty is a customer's overall commitment to a preferred product, service, brand, or organization (Oliver, 1999); therefore, a loyal customer commits to a specific brand, despite the possible alternative products. Dick and Basu (1994) identify loyalty as a multi-faceted concept with attitudinal and behavioral dimensions. This paper explores behavioral and attitudinal elements of loyalty (Jayawardhena et al., 2007); behavior loyalty is indicated by repurchase as the first choice, whereas attitudinal loyalty acts beyond repeat purchase, the customer even recommends, encourages and circulates positive word of mouth (Askariazad & Babakhani, 2015). In this paper, authors comply with the composite approach of behavior and attitudinal loyalty; the decision



considers that such a behavioral loyalty is not sufficient and cannot anticipate spurious loyalty (R Bennett & Rundle-Thiele, 2002). The following hypothesis is formulated to ensure satisfaction's effect on brand loyalty.

**Hypothesis 9.** Customer satisfaction has a direct and positive influence on brand loyalty.

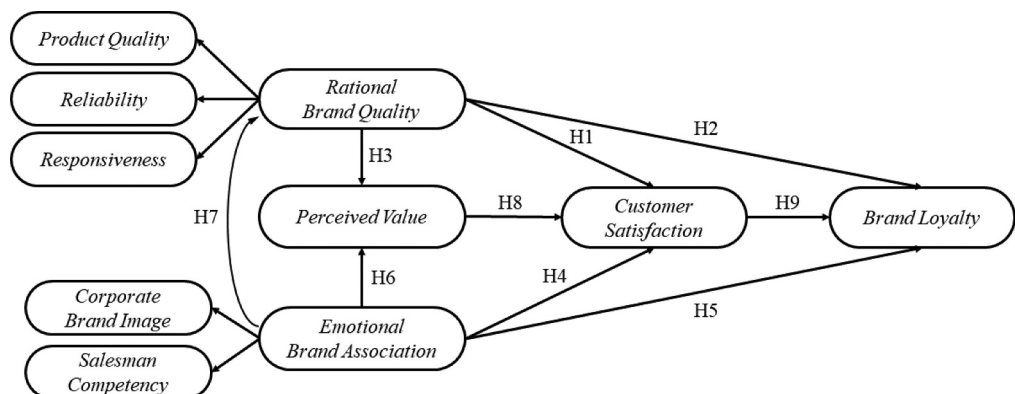
**3. Research Methodology and conceptual model**

In this research, authors estimate a variance-based structural equation model with partial least square (PLS) than covariance-based structural equation model (CBSEM) in Lisrel, AMOS, EQS, SEPATH and RAMONA (Hair et al., 2017), with two main reasons: First, this paper tries to explore the complex model, a few particular path correlations have a relatively low and weak conceptual background (Urbach & Ahlemann, 2010), such as the path of emotional brand associations and rational perceived quality; the paper refers to the research finding in the services industry (Biedenbach & Marell, 2010). Meanwhile this empirical study is in the manufacturing product. The positive relationship between emotional brand association and customer satisfaction is also a challenge to be examined. It considers that the evaluation process of satisfaction is driven by the cognitive process (Parasuraman et al., 1988). Another crucial correlation path is the relationship between an emotional brand association and perceived value; although a successful branding can reduce the level of uncertainty and risks (Mudambi, 2002; Ohnemus, 2009), however, there is very little research investigating how risks and uncertainty influence the perceived value of the brand (Leek & Christodoulides, 2012). Thus, while covariance-based structural equation modeling (CBSEM) is theory and conceptual background oriented to confirm the proposed model (Jöreskog & Sörbom, 1993), partial least square (PLS) is primarily aimed to predict the causal relationship in the complex model but low or weak theoretical background (Urbach & Ahlemann, 2010). That is the background the paper uses PLS to explore and analyze predictive causal relationships; authors run Smart PLS software version 3.0. The second reason is that the PLS algorithm minimizes the variance of the dependent variables in the model; therefore PLS-SEM works efficiently with small sizes (Hair et al., 2016, p. 16). This field research collects 140 responses from respondents in the chemical emulsion market. In this paper, the authors propose the model as follows (Figure 1).

**3.1. Sample and data collection**

Based on the theory of sampling method, contrary to the covariance-based structural equation modeling, which requires a minimum sample of 100, PLS offers an advantage for accommodating a small sample (Gefen et al., 2000; Joseph F. Hair et al., 2012). Our sample size meets the requirement, which is 140. Every chemical industry uses a multi-supplier policy that has between two to four suppliers; therefore, the research team can get more than one response from every respondent. Market data is collected from secondary data, such as the association member list and the chemical market's informants such as APCI (Indonesia Paint Producers Association: <https://www.apci.info/>),

**Figure 1. Conceptual framework.**



**Table 1. Respondents' industry**

Industries	Companies		Samples	
	Number	Percentage (%)	Number	Percentage (%)
Coating	20	37.0	52	37.1
Paper	11	20.4	31	22.1
Textile	4	7.4	11	7.9
Wood panel	6	11.1	12	8.6
Putty	3	5.6	6	4.3
Printing	4	7.4	8	5.7
Furniture	6	11.1	20	14.3
Total	54	100,0	140	100,0

APKI (Indonesia Pulp and Paper Association: <http://apki.net>), API (Indonesia Textiles Association: <http://www.indonesiatextile.id/>), IBCA (Indonesian Barecore Association), PPGI (Indonesian Publishing Companies Association: <https://ppgi.or.id/>), and HIMKI (Indonesia Furniture and Craft Association: <https://www.himki-indonesia.com/>). Based on this secondary data and interviews with the chemical market and sales manager of the leading chemical emulsion manufacture in Indonesia, the chemical emulsion market is comprised of 190 companies. In this research, authors disregard home industries and trading companies but focus on the medium and larger companies, both domestic and multinational. Using the purposive sampling method, authors and research teams have contacted those 190 companies by phone and/or e-mail, but only 54 companies replied and agreed to conduct an interview (Table 1). Therefore, the response rate is only 28.42%. Data is obtained from field survey from 7 January 2019 to 30 April 2019 and 18 November 2019 to 15 January 2020.

### 3.2. Measurement scales

The questionnaire is designed based on a five-point Likert scale. The scale ranges from “1,” which represents “strongly disagree,” and “5,” which represents “strongly agree.” The questionnaire comprises 36 questions with details as below.

-Product quality is indicated by three items adapted from Askariazad and Babakhani (2015); Turkyilmaz et al. (2013)

-Reliability is indicated by five items adapted from Alexander et al. (2009); Elsässer and Wirtz (2017).

-Responsiveness is indicated by four items adapted from Alexander et al. (2009); Elsässer and Wirtz (2017).

-Brand image is indicated by four items adapted from Askariazad and Babakhani (2015); Juntunen et al. (2015).

-Salesman competency is indicated by four items adapted from Chen and Su (2011); Elsässer and Wirtz (2017).

-Perceived value is indicated by four items adapted from Fornell et al. (1996); Turkyilmaz et al. (2013)

-Customer satisfaction is indicated by seven items adapted from Askariazad and Babakhani (2015).

-Customer loyalty is indicated by five items adapted from Lam et al. (2004).

Before the field survey, the questionnaire is pretested to 30 industrial buyers to judge understanding and readability (Dillman, 2007). The questionnaire is attached as appendix 1.

## 4. Data analysis

### 4.1. Participant's profiles

The respondents' profiles are shown in Table 2. Most respondents are male (61.10 percent), with a majority holding a bachelor's degree (87 percent). The respondents are above 25 years old, with

**Table 2. Demographic profile of respondents**

	Quantity	Percentage (%)
Education		
• Diploma graduate	3	5,6
• Bachelor's degree	47	87,0
• Master's degree	3	5,6
• Doctorate degree	1	1,9
Gender		
• Male	33	61,1
• Female	21	38,9
Age		
• 25–35 years old	6	11,1
• 36–45 years old	26	48,1
• 46–55 years old	13	24,1
• > 55 years old	9	16,7
Working experience		
• < 3 years	5	9,3
• 5–10 years	20	37,0
• 11–15 years	8	14,8
• > 15 years	21	38,9
Position		
• Director/GM/Owner	21	38,9
• Purchasing Manager	16	29,6
• Production Manager	10	18,5
• R&D Manager	7	13,0

Source: authors' own research results

83.30 percent between 25 and 55 years old; the majority of respondents have been serving the company for more than five years (90.70 percent). Respondents come from various positions such as GM/director/owner level (38.90 percent), purchasing manager (29.60 percent), production manager (18.50 percent), and R&D manager (13.00 percent).

#### 4.2. The partial least square-based approach

The obtained data from the field survey is analyzed by PLS 3.0 version software, and it considers the complex model with many latent variables (Henseler et al., 2009; Hutchinson et al., 2011). The first step of PLS analysis is to assess the measurement model, including validity and reliability (Ramayah et al., 2011). The validity test measures how accurately an instrument measures a particular concept it is designed to measure. Meanwhile, the reliability test measures stability and consistency of the measuring instrument (Hair et al., 2019; Sekaran & Bougie, 2016).

#### 4.3. Assessment of validity and reliability

Two types of validity tests are measured to achieve validity standards: convergent and discriminant validity (Sekaran & Bougie, 2016). Convergent validity is the extent to which a measure correlates positively with an alternative measurement in the same construct; the measurements employ the average variance extracted (AVE) and item loadings (Joseph F. Hair et al., 2013). The AVE value  $\geq 0.50$  (Joseph F. Hair et al., 2013) and factor loading or item loading  $\geq 0.50$  or ideally  $\geq 0.70$  with t-value  $\geq 1.96$  (Hair et al., 2019). The result confirms all the item loading value  $> 0.70$  at a t-value above 1.96 and AVE  $> 0.5$ ; therefore, the validity standard is achieved (Table 3). Discriminant validity is the uniqueness of a construct, whereas the phenomenon captured by a construct is unique; therefore, it is not represented by other constructs in the model (Joseph F. Hair et al., 2013). Discriminant validity is evaluated by assessing the cross-loadings, whereas the loadings of the constructs must be high on itself and low on other constructs (Vinzi et al., 2010). The paper meets the discriminant validity standard, as shown in appendix 2.

**Table 3. Properties of a measurement model**

Construct and Indicators		Factor Loading	t-value	Cronbach's Alpha	CR	AVE
Rational Brand Quality (RBQ)	PQ			0.946	0.953	0.631
	Rel	Product Quality		0.867	0.919	0.791
	Res	Reliability		0.884	0.915	0.685
		Responsiveness		0.877	0.916	0.733
Product Quality	PQ1	Meeting quality requirements	0.834	21.851		
R <sup>2</sup> : 0.87	PQ2	Good quality product	0.911	48.232		
	PQ3	Consistent good quality product	0.921	45.637		
	Rel1	Excellent technical and formulation solution	0.846	28.027		
Reliability R <sup>2</sup> : 1.00	Rel2	Accurate technical complaint response	0.837	28.657		
	Rel3	Accurate sales complaint response	0.844	31.222		
	Rel4	Fair solution	0.867	33.697		
	Rel5	Meeting the scheduled delivery	0.736	14.726		
	Res1	Fast technical solution	0.778	18.653		
R <sup>2</sup> : 1.00	Res2	Fast sales needs response	0.875	37.885		
	Res3	Fast technical complaint response	0.908	49.060		
	Res4	Fast sales complaint response	0.859	29.949		

(Continued)

**Table 3. (Continued)**

Construct and Indicators		Factor Loading	t-value	Cronbach's Alpha	CR	AVE
Emotional Brand Association	BI			0.923	0.938	0.686
	SP	Brand Image Salesman Competency		0.893	0.926	0.758
Brand Image R <sup>2</sup> : 0.90	BI1	Brand familiarity	33.080	0.937	0.955	0.842
	BI2	Positive image	52.716			
	BI3	Good reputation	58.131			
	BI4	Good brand impression	22.109			
Salesman Competency R <sup>2</sup> : 0.90	SP1	Expertise person	34.999			
	SP2	Knowledgeable person	72.691			
	SP3	Empathy person	64.013			
	SP4	A good communicator	38.642			
Perceived Value	PV1	Product performance/price ratio	38.861	0.918	0.942	0.803
	PV2	Competitive value	32.021			
	PV3	Economic value	37.192			
	PV4	Overall performance/price ratio	64.908			
Customer Satisfaction				0.944	0.955	0.751

(Continued)

**Table 3. (Continued)**

Construct and Indicators		Factor Loading	t-value	Cronbach's Alpha	CR	AVE
R <sup>2</sup> : 0.95	CS1	Satisfied with the quality and solution	19.374			
	CS2	Satisfied with the service	38.395			
	CS3	Satisfied with the fairness business relationship	33.199			
	CS4	Satisfied with overall performance of company	37.636			
	CS5	Satisfied with the integrity of the corporate brand	64.983			
	CS6	Satisfied with being close with the company	21.556			
	CS7	Satisfied with the smooth communication	25.663			
Brand Loyalty				0.908	0.931	0.730
R <sup>2</sup> : 0.94	BL1	Repeat purchase product	57.698			
	BL2	Repeat it with more quantity	19.137			
	BL3	Purchase other products	44.459			
	BL4	Prioritize the company	62.339			
	BL5	Recommend to others	12.811			

There are two tests of reliability measurement, the internal reliability of a construct is achieved when the Cronbach's alpha  $\geq 0.70$  (Nunnally & Bernstein, 1994; Pallant, 2001) and composite reliability  $\geq 0.70$  (Henseler & Sarstedt, 2013). The respective measures of all constructs accept the reliability standard with Cronbach's alpha and composite reliability scores  $>0.70$  (Table 3).

#### 4.4. Assessing structural model

To be statistically significant, the path coefficient between constructs should be  $> 0.05$ , with a  $t$ -value  $> 1.96$  (Hair et al., 2014). As shown in Table 4, all nine hypotheses are supported. Rational brand quality influences satisfaction stronger (H1: 0.570, 6.791) than emotional brand association does (H4: 0.241, 3.186). Moreover, rational brand quality influences brand loyalty stronger (H2: 0.290, 3.261) than emotional brand association does (H5: 0.217, 3.521). In its relationship with perceived value, rational brand quality influences perceived value (H3: 0.437, 3.247) more strongly than emotional brand associations (H6: 0.357, 3.561). Emotional brand associations influence rational brand quality the most (H7: 0.789, 31.207); the opposite result is that the weakest relationship is found between perceived value and customer satisfaction (H8: 0.131, 3.889). Meanwhile, as the past studies have shown, customer satisfaction influences brand loyalty (H9: 0.405, 3.410).

The paper analyzes the indirect effect of antecedents on brand loyalty (Table 4). Rational brand quality influences brand loyalty indirectly through satisfaction (0.231, 3.092); it is a stronger path than emotional brand associations (0.098, 3.682). Meanwhile, both rational brand quality (0.023, 3.352) and emotional brand association (0.019, 1.263) do not have indirect effects on brand loyalty through perceived value, nor indirect perceived value path on loyalty (0.053, 1.588). Emotional brand associations influence brand loyalty indirectly through quality (0.229, 3.104); the indirect effect is stronger than the emotional brand associations-quality-satisfaction-loyalty path (0.182, 3.924); meanwhile, the brand associations-quality-value-satisfaction-loyalty path is rejected (0.018, 1.337).

#### 4.5. Discussion and limitations

The paper's initial starting point is to verify an integrative model containing rational and emotional dimensions of brand loyalty, and moreover, to verify the role of perceived value. The research investigates the effect of rational brand quality, emotional brand association, and perceived quality on customer satisfaction, brand loyalty, and moreover, the relationship among the constructs regarding their direct and indirect effect on brand loyalty.

The results confirm that rational brand quality influences satisfaction stronger (0.570, 6.791) than emotional brand associations do (0.241, 3.186). Moreover, this paper investigates the direct and indirect effects of both rational brand quality and emotional brand association on brand loyalty. The results confirm that rational brand quality has stronger direct (H2:0.290, 3.261) and indirect effect (0.231, 4.092) on brand loyalty than emotional brand associations, do (H5:0.217, 2.521; indirect effect: 0.098, 2.682). The first finding answers the first and the second research questions, confirming the dominant role of rational aspects of customer satisfaction and brand loyalty. The finding confirms that the buyer's decision is influenced more by functional elements (product and services performance) than by emotional aspects.

Furthermore, rational brand quality is reflected stronger by the services dimension (Reliability: 0.970 and Responsiveness: 0.962) than by a tangible product (Product: 0.834); this is the second finding of the paper. The justification is that chemical emulsion tends to be tailor-made, whereas the strong interaction and discussion between sellers and buyers lead to the best chemical formulations. Therefore, the services dimension plays a role a little more dominantly than the tangible product itself, despite both dimensions being essential; the second finding answer the third research question.



The third finding is the weakest effect of perceived value-customer satisfaction path (H8: 0.131, 1.889) that indicates customer satisfaction and loyalty are influenced by rational and emotional aspects, not perceived value. Therefore, price penetration will not be able to halt the influence of functional elements and emotional aspects. This third finding answers the fourth research question, which indicates that chemical emulsion is not a commodity-like product (Reimann et al., 2010).

The fourth finding is the stronger relationship between rational brand quality and perceived value (H3: 0.437, 3.247) than the one between emotional brand quality and perceived value (H6: 0.357, 2.561). The finding confirms that value enhancement comes from functional quality rather than emotional aspects; it is rooted in service dimensions, reliability, and responsiveness. Nevertheless, both direct effects on perceived value do not influence brand loyalty indirectly. In contrast, the quality-value-satisfaction-loyalty path is rejected (0.023, 1.352) and the brand association-value-satisfaction-loyalty path is rejected (0.019, 1.263), (Table 4). The rejection of an indirect effect on brand loyalty is due to the weakest effect of value-satisfaction.

The fifth finding is the strongest relationship between the emotional brand association and rational brand quality (0.789, 21.207). Emotional brand associations are reflected more strongly by brand image (0.932, 67.252) than by salesman competency (0.907, 62.374). Chemical companies are associated with technology companies (Wiedmann, 2002); therefore, brand associations contribute a substantial effect to brand quality. In this chemical emulsion context, brand image contributes to stronger effects on quality perceptions than salesman competency does. Emotional brand associations indirectly influence brand loyalty through quality (0.229, 3.104) more strongly than the brand associations-quality-satisfaction-loyalty path (0.182, 3.924). The finding confirms that rational quality is the crucial mediator, with a strong indirect effect on loyalty, then satisfaction and value.

This paper concludes that both factors, rational brand quality and emotional brand associations, are important when it comes to the final purchase decision in the industrial relationship, while perceived value is less so. In general, both rational brand quality and emotional brand associations lead to satisfaction and brand loyalty directly and indirectly; moreover, both factors lead to brand loyalty indirectly through satisfaction. Meanwhile, perceived value influences satisfaction directly but does not influence brand loyalty indirectly. Drawing a more specific conclusion, rational aspects influence brand loyalty stronger than emotional aspects do; moreover, rational brand quality is reflected in the services dimension stronger than in tangible products, indicating product character as a tailor-made product. Meanwhile, the emotional brand association is reflected by brand image stronger than salesman competency. In a more specific conclusion, the emotional brand association influences rational brand quality in complex products, such as chemical emulsion.

Although the model is relatively complex, as it integrates rational and emotional aspects with perceived value involvement, the results are subject to limitations. First of all, the study is limited to the chemical emulsion industry; therefore, authors recommend empirical replication studies in other industries to ensure applicability in other industries. Future research should focus on various contexts, such as industrial services, manufacturer-distributor relationships, company-personal agents (insurance company, credit card, and multi-level marketing).

Considering the loyalty model and branding in the industrial context, authors recommend putting other crucial constructs into consideration, such as switching costs. Industrial customers stay in the relationship for a reason; therefore, it is necessary to investigate the root of loyalty because of lock-in conditions set up by the seller or valuable factors, such as rational quality, emotional brand associations, or price. Finally, the paper is based on a field survey of the market in

**Table 4. Hypothesis verification and indirect effects**

No	Path line	Hypothesis	Coefficient	t-value	Conclusion
1	Rational Brand Quality → Customer Satisfaction	H1	0.570*	6.791	Supported
2	Rational Brand Quality → Brand Loyalty	H2	0.290*	3.261	Supported
3	Rational Brand Quality → Perceived Value	H3	0.437*	3.247	Supported
4	Emotional Brand Association → Customer Satisfaction	H4	0.241*	3.186	Supported
5	Emotional Brand Association → Brand Loyalty	H5	0.217*	2.521	Supported
6	Emotional Brand Association → Perceived Value	H6	0.357*	2.561	Supported
7	Emotional Brand Association → Rational Brand Quality	H7	0.789*	21.207	Supported
8	Perceived Value → Customer Satisfaction	H8	0.131 <sup>P</sup>	1.889	Supported
9	Customer Satisfaction → Brand Loyalty	H9	0.405*	4.410	Supported
10	Rational Brand Quality → Perceived Value → Customer Satisfaction → Brand Loyalty		0.023	1.352	Rejected
11	Rational Brand Quality → Customer Satisfaction → Brand Loyalty		0.231*	4.092	Supported
12	Emotional Brand Association → Perceived Value → Customer Satisfaction → Brand Loyalty		0.019	1.263	Rejected
13	Emotional Brand Association → Customer Satisfaction → Brand Loyalty		0.098*	2.682	Supported

(Continued)

**Table 4. (Continued)**

14	Perceived Value → Customer Satisfaction → Brand Loyalty	0.053	1.588	Rejected
15	Emotional Brand Association → Rational Brand Quality → Brand Loyalty	0.229*	3.104	Supported
16	Emotional Brand Association → Rational Brand Quality → Customer Satisfaction → Brand Loyalty	0.182*	3.924	Supported
17	Emotional Brand Association → Rational Brand Quality → Perceived Value → Customer Satisfaction → Brand Loyalty	0.018	1.337	Rejected

\*p < 0.05; † p < 0.10

Source: authors' own research results

Indonesia; authors recommend replications of empirical studies in other countries to generalize the results.

#### **4.6. Theoretical and managerial implications**

The first and second findings contribute to the industrial branding theory, which is that the rational aspects have a stronger influence on brand loyalty than the emotional aspect does. The finding is not in line with a past study that shows that emotional aspects strongly influence loyalty (Elsässer & Wirtz, 2017); however, this paper is in line with Elsässer and Wirtz (2017) that both factors are of at least the same importance in the process of a purchase decision. Therefore, the paper confirms that both factors of rational and emotional aspects are essential for brand loyalty in industrial relationships, which factor does have a stronger effect depends on the industry.

The second finding also indicates that service dimensions are necessarily critical at an industrial relationship; therefore, both hard facts, such as product and services quality, and soft facts, such as salesman competency, are important since service performance relates to salesman competency. This finding supports past studies, whereas customers consider salesman competency in the industrial relationships (Elsässer & Wirtz, 2017) and the customer's perceptions of working with a salesman, whose superior skills have a direct positive effect on satisfaction and loyalty in the chemical industry (Van Riel et al., 2005). The finding contributes to the industrial branding concept that excellent services and salesman competency are the roots of successful branding in the complex products; an employee's performance leads to the positive effects on brand associations, brand quality, and brand loyalty.

The fourth finding supports past study that quality would become an essential element to encourage a higher price; moreover, it fits high-quality/high-performance brand associations (Ulaga & Chacour, 2001). The quality-value connection approach is applicable at B2B and B2C relationships. Nevertheless, some past B2C studies suggest the idea of using price as a signal of quality (Vera, 2015); this idea is the opposite of the quality-value approach in the B2B relationship, whereas quality comes first and is followed by a disposition to pay a high price from the buyer.

The fifth finding confirms the relationship between emotional brand associations and rational brand quality path; it confirms the relationship between the emotional aspect and rational aspect in the manufacturing industry. Past research tends to confirm the relationship in the context of the services (Biedenbach et al., 2019). Therefore, the fifth finding contributes to the branding theory that the relationship between emotional and rational aspect applies to the industrial relationships.

The first, third, and fifth findings lead firms to develop functional quality and technology leadership necessarily, considering the chemical industry is classified as technology companies (Wiedmann, 2002). Technology performances and leaderships are an indicator of the company's accomplishment with regards to the R&D capabilities (Hagedoorn & Cloodt, 2003, p. 1367); therefore, management should put the proper research budget in place.

Moreover, the second finding applies to the need for proper talent recruitment, placement, and development, since service dimensions contribute stronger effects than a tangible product in the research. Services are interpreted in terms of the interaction quality between a seller and buyer (Biedenbach & Marell, 2010); therefore, firms should put the best employee in place. The finding implies the necessity of management to address the consistent and established buyer-seller relationship rapport on employees' evaluation program. This implication is in line with the past study, whereas the consistent evaluation and rapport demonstrate the positive effects on brand quality, brand associations, and brand loyalty (Biedenbach et al., 2011). Therefore, firms must invest in training and development programs purposely to ensure that employees meet the expected standards.

The fourth finding applies to the pricing strategy with respect to the inelasticity price trend. Firms should focus more on functional quality and emotional aspects as the basis of competition; nevertheless, pricing strategy should not be underestimated. Firms are not suggested to address low prices as the basis for entering the market nor for gaining a higher market share, but using a high-cost/performance strategy instead (Ulaga & Chacour, 2001).

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### Appendix 1 Questionnaire

The Scale:

- 1 strongly disagree
- 2 disagree
- 3 neutral
- 4 agree
- 5 strongly agree

<b>Product Quality</b>	
PQ1. This company provide products that meet quality requirements.	1 2 3 4 5
PQ2. This company provide good quality products.	1 2 3 4 5
PQ3. This company provide consistent good quality products.	1 2 3 4 5
<b>Reliability</b>	
RL1. This company provide excellent technical and formulation solution.	1 2 3 4 5
RL2. The technical team always ready to solve our complaint accurately.	1 2 3 4 5
RL3. The sales team always ready to solve our complaint accurately.	1 2 3 4 5
RL4. The sales team is reliable to provide fair solution.	1 2 3 4 5
RL5. The emulsion's delivery meets the schedule.	1 2 3 4 5
<b>Responsiveness</b>	
RS1. This company provide fast technical solution.	1 2 3 4 5
RS2. The sales team always respond to our needs fast.	1 2 3 4 5
RS3. The technical team always ready to solve our complaint.	1 2 3 4 5
RS4. The sales team always ready to solve our complaint.	1 2 3 4 5
<b>Perceived Value</b>	
PV1. The emulsion quality performance is equals with the price.	1 2 3 4 5
PV2. The emulsion price is competitive.	1 2 3 4 5
PV3. We received a good service that is equals with the price.	1 2 3 4 5
PV4. The overall performance is equals with the price.	1 2 3 4 5
<b>Corporate Brand Image</b>	
BI1. We are familiar with this corporate brand.	1 2 3 4 5
BI2. This company has a positive image.	1 2 3 4 5
BI3. This company has a good reputation in the industry.	1 2 3 4 5
BI4. This company has a good brand impression.	1 2 3 4 5
<b>Salesman Competency</b>	

(Continued)

<b>Product Quality</b>	
SP1. This company employed expert salespersons that understand the product knowledge.	1 2 3 4 5
SP2. This company employed knowledgeable salespersons that understand our market.	1 2 3 4 5
SP3. This company employed empathic salespersons that understand our company.	1 2 3 4 5
SP4. This company employed communicative salespersons.	1 2 3 4 5
<b>Customer Satisfaction</b>	
CS1. We satisfied with the quality and solution provided.	1 2 3 4 5
CS2. We satisfied with the service provided.	1 2 3 4 5
CS3. We satisfied with the fairness business relationship.	1 2 3 4 5
CS4. We satisfied with overall performance of this company.	1 2 3 4 5
CS5. We satisfied with the integrity of this corporate brand.	1 2 3 4 5
CS6. We satisfied with being close with this company.	1 2 3 4 5
CS7. We satisfied with the smooth communication.	1 2 3 4 5
<b>Brand Loyalty</b>	
BL1. We will purchase the same products from this company.	1 2 3 4 5
BL2. We will purchase the same products from this company with more quantity	1 2 3 4 5
BL3. We will purchase other emulsion products from this company.	1 2 3 4 5
BL4. We will prioritize this company.	1 2 3 4 5
BL5. We will recommend this company to others.	1 2 3 4 5

## Appendix 2 Discriminant Validity

### Fornell-Larcker Criterion

	BL	BRAND	CS	EBA	PQ	PV	RBQ	REL	RES	SALES
BL	0.855									
BRAND	0.715	0.871								
CS	0.823	0.699	0.867							
EBA	0.763	0.932	0.783	0.828						
PQ	0.615	0.581	0.682	0.643	0.889					
PV	0.741	0.684	0.710	0.702	0.560	0.896				
RBQ	0.807	0.700	0.854	0.789	0.834	0.719	0.795			
REL	0.799	0.680	0.815	0.761	0.715	0.720	0.970	0.827		
RES	0.795	0.673	0.855	0.772	0.702	0.693	0.962	0.927	0.856	
SALES	0.715	0.703	0.760	0.907	0.628	0.623	0.779	0.747	0.772	0.917

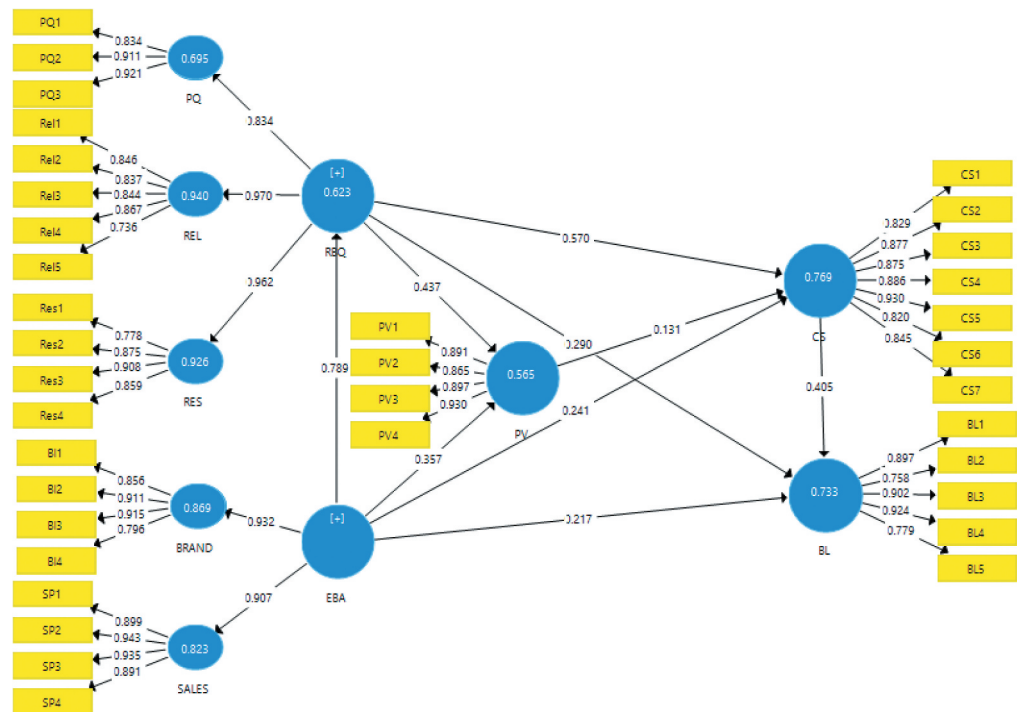
Outer Loadings

	BL	BRAND	CS	EBA	PQ	PV	RBQ	REL	RES	SALES
BI1		0.856								
BI1				0.763						
BI2		0.911								
BI2				0.841						
BI3		0.915								
BI3				0.852						
BI4		0.796								
BI4				0.786						
BL1	0.897									
BL2	0.758									
BL3	0.902									
BL4	0.924									
BL5	0.779									
CS1			0.829							
CS2			0.877							
CS3			0.875							
CS4			0.886							
CS5			0.930							
CS6			0.820							
CS7			0.845							
PQ1					0.834					
PQ1							0.693			
PQ2					0.911					
PQ2							0.748			
PQ3					0.921					
PQ3							0.781			
PV1						0.891				
PV2						0.865				
PV3						0.897				
PV4						0.930				
Rel1								0.846		
Rel1							0.822			
Rel2								0.837		
Rel2							0.827			
Rel3								0.844		
Rel3							0.846			
Rel4								0.867		
Rel4							0.835			
Rel5								0.736		
Rel5							0.665			
Res1									0.778	
Res1							0.794			
Res2									0.875	
Res2							0.847			

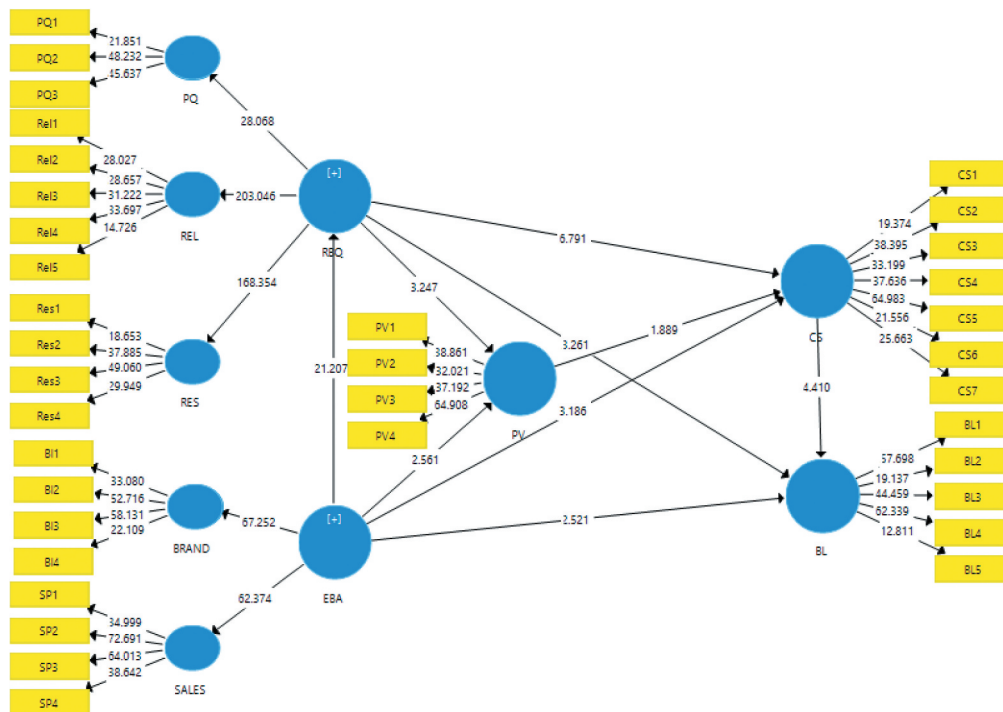
(Continued)

<b>Res3</b>								<b>0.908</b>
<b>Res3</b>						<b>0.861</b>		
<b>Res4</b>								<b>0.859</b>
<b>Res4</b>						<b>0.789</b>		
<b>SP1</b>								<b>0.899</b>
<b>SP1</b>				<b>0.815</b>				
<b>SP2</b>								<b>0.943</b>
<b>SP2</b>				<b>0.875</b>				
<b>SP3</b>								<b>0.935</b>
<b>SP3</b>				<b>0.859</b>				
<b>SP4</b>								<b>0.891</b>

**Appendix 3 PLS 3.0 result—standardized**



**Appendix 4 PLS 3.0 result—t-value**





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