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## Analysis Of Factors Affecting Brand Loyalty On Cosmetic Products In Batam

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### Abstract

This study aims to determine the effect of service quality, brand identification, convenience, trustworthiness, and product quality on brand loyalty by mediating consumer satisfaction on cosmetic products in Batam City. The technique of collecting data is by means of a survey using a questionnaire. The data collected were 330 respondents consisting of women who use cosmetics and live in Batam. The research methodology used is quantitative research methodology and Structural Equation Model analysis method using Smart Partial Least System 3. The results of this study find that service quality and brand identification have a significant positive effect on consumer satisfaction. Convenience, trust, and product quality have no effect on consumer satisfaction. The consumer satisfaction variable has a significant negative effect on brand loyalty.

**Keywords:** Service Quality, Brand Identification, Convenience, Trust, Product Quality, Consumer Satisfaction, and Brand Loyalty.

## 1. Introduction

At present, female is the biggest consumers of cosmetic product such as makeup products include as foundations, face creams., concealer, face powder, bronzer, etc. A company maintaining brand loyalty in the competition between companies. Brand loyalty has the power to influence customers when making decisions and prevent switching to other brands so that brand loyalty becomes a valuable asset for the company. The importance of brand loyalty for companies, brand loyalty can increase added value for companies and products.<sup>1</sup>

Service quality is very important to provide benefits to the business and achieve customer satisfaction and loyalty. However, despite a number of published research results on service quality, specific constructive characteristics remain under-explored due to inconsistent conceptual and measurement and have different contexts between services or products offered. This study focuses on the service quality of cosmetic product stores. Intensive growth and competition, rapidly changing customer lifestyles, customers demand that sellers meet or exceed their expectations and the opportunity for customers to shop for more cosmetic products.<sup>2</sup>

The concept of brand identification in customer or consumer perception offers a deeper understanding of marketing.<sup>3</sup> Trust is importance to build brand loyalty between company and consumers. When selecting a new product, they want to make sure it is safe, complies with market regulations, and will live up to the claims made by the manufacturer.<sup>4</sup> Convenience has a big role in consumer activities going forward. When consumers receive a bad response at the beginning from a company, it will cause their customers to be unappreciated and

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<sup>1</sup> Annisa Marliawati and Dwi Cahyaningdyah, "Impacts the Brand of Experience and Brand Image on Brand Loyalty: Mediators Brand of Trust," *Management Analysis Journal* 9, no. 2 (2020): 140–151.

<sup>2</sup> Tasya Nandy and Dudi Permana, "Analysis Of The Effect Of Electronic Customer Relationship Management (E-CRM) and Brand Trust On Customer Satisfaction and Loyalty In Pixy Cosmetic Products," *Dinasti International Journal of Management Science* 2, no. 3 (2021): 467–483.

<sup>3</sup> Raouf Ahmad Rather et al., "Customer Brand Identification, Affective Commitment, Customer Satisfaction, and Brand Trust as Antecedents of Customer Behavioral Intention of Loyalty: An Empirical Study in the Hospitality Sector," *Journal of Global Scholars of Marketing Science* 29, no. 2 (2019): 196–217.

<sup>4</sup> IGAW Diputra and N N Yasa, "The Influence of Product Quality, Brand Image, Brand Trust on Customer Satisfaction and Loyalty," *American International Journal of Business Management* 4, no. 1 (2021): 25–34.

uncomfortable.<sup>5</sup> High product quality can lead to customer satisfaction. Product quality can give companies the ability to meet consumer needs or expectations.<sup>6</sup> Customer satisfaction plays an important role in market share.<sup>7</sup>

## 2. Literature Review

### 2.1 Service Quality

Research of Khawaja et al. (2021), at private universities in Lebanon. Customer satisfaction have significant influence on brand loyalty. According to this research, service quality significant and positive effected on customer satisfaction. Relationship between service quality and brand loyalty with the intervening customer satisfaction variable have significant influence. Customer satisfaction will increase along with the increase in service quality.<sup>8</sup> Research of Lie et al. (2019) service quality has a positive but not significant effect on customer satisfaction.<sup>9</sup> Research of Arman and Shabbir (2020), service quality significant and positive influenced significant positive effect on brand loyalty. Service quality also have positive effect on customer satisfaction. Customer satisfaction has positive relationship with brand loyalty.<sup>10</sup> This research also supported by research of Devi and Yasa (2021), that finding same result.<sup>11</sup>

<sup>5</sup> Renny Oktaviani Daud et al., “Delivering Service Convenience To Enhance Customer Satisfaction: Quantitative Analysys on Shopee,” *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis Dan Akuntansi* 7, no. 4 (2019): 5674–5683.

<sup>6</sup> Cynthia Chadwick and Putu Saroyini Piartrini, “Product Quality, Convenience and Brand Loyalty: A Case Study of Silverqueen’s Adolescent Consumers,” in *12th International Conference on Business and Management Research (ICBMR 2018)*, vol. 72 (Atlantis Press, 2019), 111–115.

<sup>7</sup> Anak Agung Diah Tarama Devi and Ni Nyoman Kerti Yasa, “The Role of Customer Satisfaction in Mediating the Influence of Service Quality and Perceived Value on Brand Loyalty,” *International Research Journal of Management, IT and Social Sciences* 8, no. 3 (2021): 315–328.

<sup>8</sup> L Khawaja, A Ali, and N Mostapha, “The Mediating Effect of Customer Satisfaction in Relationship with Service Quality, Corporate Social Responsibility, Perceived Quality and Brand Loyalty,” *Management Science Letters* 11, no. 3 (2021): 763–772.

<sup>9</sup> Darwin Lie et al., “Analysis of Mediation Effect of Consumer Satisfaction on the Effect of Service Quality, Price and Consumer Trust on Consumer Loyalty,” *International Journal of Scientific and Technology Research* 8, no. 8 (2019): 421–428.

<sup>10</sup> Arman and Sayyed Adnan Shabbir, “Impact of Service Quality and Brand Image on Brand Loyalty: The Mediating Role of Customer Satisfaction,” *Eurasian Journal of Social Sciences* 8, no. 2 (2020): 75–84.

<sup>11</sup> Anak Agung Diah Tarama Devi and Ni Nyoman Kerti Yasa, “Role of Customer Satisfaction in Mediating the Influence of Service Quality and Perceived Value on Brand Loyalty,” *International Research Journal of Management, IT and Social Sciences* 8, no. 3 (2021): 315–28, <https://doi.org/10.21744/irjmis.v8n3.1786>.

Based on previously research above. The hypothesis:

H1 : Service quality has positive and significant effect on customer satisfaction.

## 2.2 Brand Identification

Research of Kataria and Saini (2019), brand identification has not an significant relationship with brand loyalty.<sup>12</sup> Research of Saputra, Indarini, and Margaretha (2020), obtained the results that influence variable brand identification on customer satisfaction is nothing.<sup>13</sup>

Based on previously research above. The hypothesis:

H2 : Brand identification has no signification effect on customer satisfaction.

## 2.3 Trust

Research of Diputra & Yasa (2021), trust has a positive and significant influence on customer satisfaction. The product have high trust will make customer satisfaction. Trust can be said as the most important factor and consumer perceptions of brands and sellers.<sup>14</sup> Research of Ismulyana Djan and Siti Rubbiah Adawiyyah (2020), found same result.<sup>15</sup> Lie et al. (2019), Consumer trust has a positive and significant influence on customer satisfaction.<sup>16</sup>

Based on previously research above. The hypothesis:

H3 : Trust has positive and signifacnt effect on customer satisfaction.

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<sup>12</sup> Sonia Kataria and Vinod Saini, "The Mediating Impact of Customer Satisfaction in Relation of Brand Equity and Brand Loyalty: An Empirical Synthesis and Re-Examination," *South Asian Journal of Business Studies* 9, no. 1 (2020): 62-87, <https://doi.org/10.1108/SAJBS-03-2019-0046>.

<sup>13</sup> Darwis Saputra, Indarini Indarini, and Silvia Margaretha, "The Effect of Consumer-Based Brand Equity on Customer Satisfaction and Brand Loyalty in the Coffee Bean & Tea Leaf or Maxx Coffee," *Advances in Economics, Business and Management Research* 115 (2020): 193-198.

<sup>14</sup> Diputra and Yasa, "The Influence of Product Quality, Brand Image, Brand Trust on Customer Satisfaction and Loyalty." *American International Journal of Business Management* 4, no. 1 (2021): 25-34.

<sup>15</sup> Ismulyana Djan and Siti Rubbiah Adawiyyah, "The Effect of Convenience and Trust to Purchase Decision and Its Impact to Customer Satisfaction," *International Journal of Business and Economics Research* 9, no. 4 (2020): 263-269.

<sup>16</sup> Lie et al., "Analysis of Mediation Effect of Consumer Satisfaction on the Effect of Service Quality, Price and Consumer Trust on Consumer Loyalty." *International Journal of Scientific and Technology Research* 8, No. 8 (2019): 421-428.

## 2.4 Convenience

Research results of Djan and Adawiyyah (2020), on Shopee application users in Bogor City found that convenience did not significantly affect consumer satisfaction.<sup>17</sup> In research of Chadwick & Piartrini (2019), the correlation between convenience and SilverQueen brand loyalty is also not significant in the adolescent segment in Denpasar City.<sup>18</sup>

Based on previously research above. The hypothesis:

H4 : Convenience has no effect on customer satisfaction.

## 2.5 Product Quality

Research of Diputra & Yasa (2021), consumer satisfaction will arise from the quality of the product itself. The findings reveal that product quality positive and significant influenced on customer satisfaction. Product quality is the functionality and suitability of products that serve buyers and users satisfactorily.<sup>19</sup> That research also support by reseach Uzir et al. (2021), that show same finding.<sup>20</sup> Results of Suhartanto et al. (2020) and Shalehah et al. (2019), product quality have a positive and significant effect indirect on customer loyalty as well as through customer satisfaction.<sup>2122</sup>

Basen on previously research above. The hypothesis:

H5 : Product Quality has a positive and significant effect on customer satisfaction.

<sup>17</sup> Djan and Adawiyyah, "The Effect of Convenience and Trust to Purchase Decision and Its Impact to Customer Satisfaction." *International Journal of Business and Economics Research* 9, no. 4 (2020): 263-269.

<sup>18</sup> Chadwick and Piartrini, "Product Quality, Convenience and Brand Loyalty: A Case Study of Silverqueen's Adolescent Consumers." *12th International Conference on Business and Management Research (ICBMR 2018)* 72, (2019): 111-115

<sup>19</sup> Diputra and Yasa, "The Influence of Product Quality, Brand Image, Brand Trust on Customer Satisfaction and Loyalty." *American International Journal of Business Management* 4, no. 1 (2021): 25-34.

<sup>20</sup> Md. Uzir Hossain Uzir et al., *Customer Satisfaction and Brand Loyalty to Electronic Home Appliances in Bangladesh: The Contingent Role of Brand Trust*, SN Business & Economics, vol. 1 (Springer International Publishing, 2021), <https://doi.org/10.1007/s43546-021-00088-z>.

<sup>21</sup> Dwi Suhartanto et al., "Does Religiosity Matter for Customer Loyalty? Evidence from Halal Cosmetics," *Journal of Islamic Marketing* 12, no. 8 (2020): 1521-1534.

<sup>22</sup> Anita Shalehah et al., "The Effect of Korean Beauty Product Characteristics on Brand Loyalty and Customer Repurchase Intention in Indonesia," in *2019 16th International Conference on Service Systems and Service Management (ICSSSM)* (IEEE, 2019), 1-5.

## 2.6 Customer Satisfaction

Research of Devi and Yasa (2021), Saputra, Indarini, and Margaretha (2020), and Kataria and Saini (2019) show that customer satisfaction has a significant and positive influence on brand loyalty.<sup>2324</sup> Brand loyalty can increase if consumers are satisfied, making consumers buy again and again for the same brand and product. Satisfaction plays an important role in making consumers loyal for a long time. Customer satisfaction can affect brand loyalty.<sup>25</sup> Research of Soleh et al. (2021), shows customer Satisfaction can influence on brand loyalty positively<sup>26</sup> Research of Javed et al. (2021), the findings of this study also validate that customer satisfaction has a significant effect on brand loyalty.<sup>27</sup> Research results of Lee (2019), found customer satisfaction can positive significant influence on brand loyalty. Customer who have experience that match with product of company will result customer satisfaction because what customer buy is match with their experience.<sup>28</sup>

Based on previously research above. The hypothesis:

H6 : Customer satisfaction has a positive and significant effect on brand loyalty.

<sup>23</sup> Sonia Kataria and Vinod Saini, "The Mediating Impact of Customer Satisfaction in Relation of Brand Equity and Brand Loyalty: An Empirical Synthesis and Re-Examination," *South Asian Journal of Business Studies* 9, no. 1 (2019): 62-87."type":"article-journal","volume":9,"uris":["http://www.mendeley.com/documents/?uuid=130e3114-ee82-4ee7-9616-459f1568070b"]],"mendeley":{"formattedCitation":Sonia Kataria and Vinod Saini, "The Mediating Impact of Customer Satisfaction in Relation of Brand Equity and Brand Loyalty: An Empirical Synthesis and Re-Examination," <i>South Asian Journal of Business Studies</i> 9, no. 1 (2019)

<sup>24</sup> Devi and Yasa, "Role of Customer Satisfaction in Mediating the Influence of Service Quality and Perceived Value on Brand Loyalty." *International Research Journal of Management, IT and Social Sciences* 8, no. 3 (2021): 315-28, <https://doi.org/10.21744/irjmis.v8n3.1786>.

<sup>25</sup> Saputra, Indarini, and Margaretha, "The Effect of Consumer-Based Brand Equity on Customer Satisfaction and Brand Loyalty in the Coffee Bean & Tea Leaf or Maxx Coffee." *Advances in Economics, Business and Management Research* 115 (2020): 193-198.

<sup>26</sup> Mohamad Nur Soleh, Wiwiek Rabiatul Adawiyah, and Nur Chourul Afif, "The Influence of The Halal Logo on Cosmetic Products on Brand Loyalty Is Mediated By Brand Satisfaction , and Brand Trust," *International Conference on Rural Development and Entrepreneurship 2019 : Enhancing Small Business and Rural Development Toward Industrial Revolution 4.0* 5, no. 1 (2019): 237-244.

<sup>27</sup> Sara Javed et al., "Combined Effects of Drivers and Impact of Customer Satisfaction on Brand Loyalty: The Contingent Effect of Social Trust," *SAGE Open* 11, no. 1 (2021): 21582440211003570.

<sup>28</sup> Nandy and Permana, "Analysis Of The Effect Of Electronic Customer Relationship Management (E-CRM) and Brand Trust On Customer Satisfaction and Loyalty In Pixy Cosmetic Products."

## 2.7 Brand Loyalty

Brand loyalty is defined as behavior, it can be interpreted that brand loyalty is defined as repeated purchases of a brand consistently by customers. Loyalty from an attitude perspective reviews how consumers feel or attitudes towards certain brands compared to other brands.<sup>29</sup> Brand loyalty is the preference of consumers who consistently make the same brand of product or service. In company, brand loyalty is an important antecedent because brand loyalty can make profitability and it is strength of company to achieve more customer.<sup>30</sup>

## 3. Method

This research uses quantitative methods. Quantitative methods are traditional research methods that have been used for a long time, quantitative methods can also be called positivistic methods because quantitative methods are based on the philosophy of positivism. The quantitative method research data is in the form of numbers and to generate conclusions from the quantitative method, descriptive statistical analysis is carried out.<sup>31</sup> Data from surveys through questionnaires. The population in this study were residents of Batam City. The criteria for the sample in this study were women, used cosmetics, and lived in Batam City. The analysis method of this research is using Smart PLS 3 software. Data analysis is using the SEM (Structural Equation Modeling) method.

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<sup>29</sup> The Nam Tran and Van Trang Tieu, “The Impacts of Consumer Value and Brand Identification on Brand Loyalty and Electronic Word of Mouth: The Case of Smartphone Market in Ho Chi Minh City,” *Journal of International Economics and Management* 20, no. 2 (2020): 60–74, <https://doi.org/10.38203/jiem.020.2.0011>.

<sup>30</sup> Jae Kwang Hwang et al., “Impact of Susceptibility to Global Consumer Culture on Commitment and Loyalty in Botanic Cosmetic Brands,” *Sustainability* 13, no. 2 (2021): 892.

<sup>31</sup> Sugiyono, *Metode Penelitian Kuantitatif Kualitatif Dan R&D*, Edisi Kedua (Bandung: Alfabeta, 2019).

#### 4. Result and Discussion

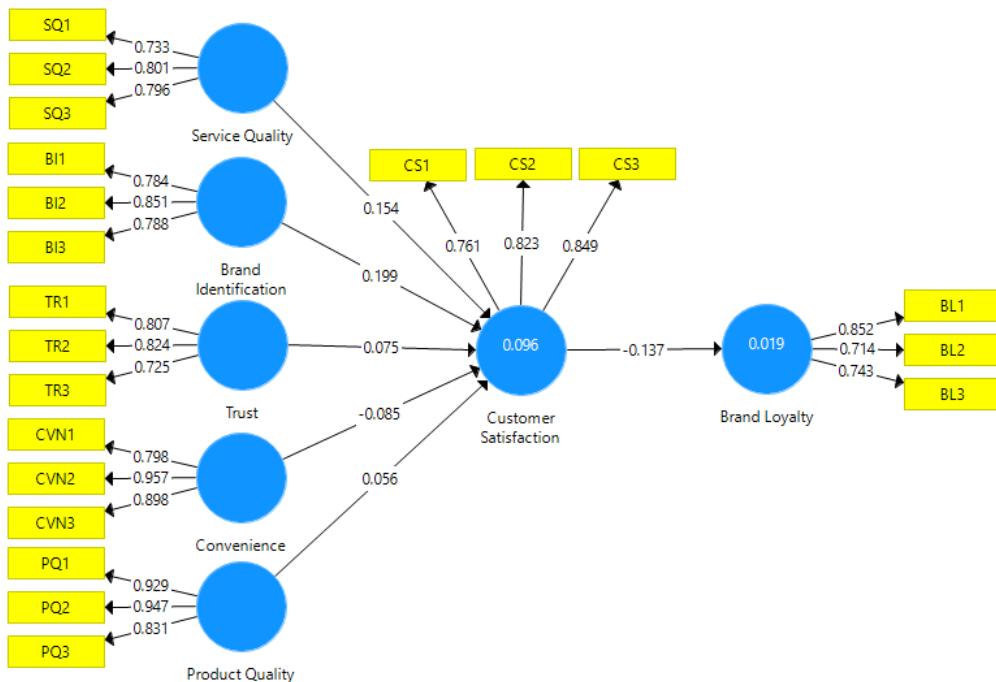


Figure 1 Structure Model

Table 1 Outer Loading and Cross Loadiang

	Outer Loading	Cross Loading	Result
BI1	0.784	0.784	Valid
BI2	0.851	0.851	Valid
BI3	0.788	0.788	Valid
BL1	0.852	0.852	Valid
BL2	0.714	0.714	Valid
BL3	0.743	0.743	Valid
CS1	0.761	0.761	Valid
CS2	0.823	0.823	Valid
CS3	0.849	0.849	Valid

	Outer Loading	Cross Loading	Result
CVN1	0.798	0.798	Valid
CVN2	0.957	0.957	Valid
CVN3	0.898	0.898	Valid
PQ1	0.929	0.929	Valid
PQ2	0.947	0.947	Valid
PQ3	0.831	0.831	Valid
SQ1	0.733	0.733	Valid
SQ2	0.801	0.801	Valid
SQ3	0.796	0.796	Valid
TR1	0.807	0.807	Valid
TR2	0.824	0.824	Valid
TR3	0.725	0.725	Valid

According to Hair et al., (2018), the *outer loading* is at least 0.50 and a good *outer loading* value is  $>0.7$  so that the value to be declared valid on *outer loadings* must be more than 0.5 and 0.7 is better and recommended<sup>32</sup>. The results of the outer loading analysis above show a value of more than 0.7 so that all data are valid. Test requirements Cross loadings to pass discriminant validity loading constructs with latent variables must be more than 0.7.

**Table 2 Construct Reliability and Validity**

	Cronbach's Alpha	Composite Reliability	AVE
Brand Identification	0.734	0.849	0.653
Brand Loyalty	0.660	0.815	0.596
Convenience	0.881	0.916	0.786
Customer Satisfaction	0.748	0.853	0.659
Product Quality	0.892	0.930	0.817
Service Quality	0.676	0.820	0.604
Trust	0.692	0.829	0.619

Average Variance Extracted value that must be achieved to meet the

<sup>32</sup> Joseph F. Hair et al., *Multivariate Data Analysis*, Eighth Edi (Hampshire,; Cengage Learning, EMEA, 2018), <https://doi.org/10.1002/9781119409137.ch4>.

convergent validity criteria to be declared valid is 0.5.<sup>33</sup> In the Average Variance Extracted (AVE) table, all latent variables have an AVE value of more than 0.5 so that all latent variables pass the convergent validity test. Validity test using Cronbach's Alpha and Composite Reliability. To declare that the variable is reliable in the study, the value of Cronbach's Alpha and Composite Reliability that is good and recommended is  $> 0.7$ . However, Cronbach's Alpha and Composite Reliability 0.6 are still acceptable.<sup>34</sup> Cronbach's Alpha and Composite Reliability, the value of all variables is more than 0.6 in Cronbach's Alpha and Composite Reliability so that all variables used are reliable.

**Table 3 Fornell-Larcker Criterion.**

	BI	BL	CVN	CS	PQ	SQ	TR	Result
BI	0.808							Valid
BL	-0.064	0.772						Valid
CVN	0.007	0.255	0.886					Valid
CS	0.232	-0.137	-0.091	0.812				Valid
PQ	-0.058	0.272	0.003	0.059	0.904			Valid
SQ	-0.066	-0.036	-0.028	0.150	0.094	0.777		Valid
TR	0.626	-0.140	-0.044	0.205	0.010	0.010	0.787	Valid

Next, test the discriminant validity through the Fornell-Larcker Criterion. The requirement to pass validity is if the Fornell-Larcker Criterion value between latent variables is greater than the value of other latent variables.<sup>35</sup> Based on the Fornell-Larcker Criterion table, all variables are declared valid because the Fornell Larcker value among latent variables is greater than the other variables.

**Table 4 Heterotrait-Monotrait Ratio HTMT**

	BI	BL	CVN	CS	PQ	SQ	TR	Result
BI								Valid
BL	0.105							Valid
CVN	0.061	0.339						Valid

<sup>33</sup> Hair et al.

<sup>34</sup> Hair et al.

<sup>35</sup> Hair et al.

	BI	BL	CVN	CS	PQ	SQ	TR	Result
CS	0.305	0.199	0.095					Valid
PQ	0.085	0.360	0.031	0.078				Valid
SQ	0.102	0.153	0.047	0.199	0.125			Valid
TR	0.872	0.202	0.105	0.274	0.058	0.069		Valid

HTMT value must be  $<0.9$  to be declared valid variables used.<sup>36</sup> Based on the HTMT table, all variables meet the criteria for discriminant validity in HTMT because the constructs in this study value HTMT  $<0.9$  so that the overall construct used in this study has differences.

**Table 6 Outer VIF Value**

	VIF	Result
BI1	1.444	Acceptable
BI2	1.659	Acceptable
BI3	1.384	Acceptable
BL1	1.498	Acceptable
BL2	1.298	Acceptable
BL3	1.245	Acceptable
CS1	1.518	Acceptable
CS2	1.629	Acceptable
CS3	1.406	Acceptable
CVN1	2.274	Acceptable
CVN2	2.673	Acceptable
CVN3	2.510	Acceptable
PQ1	3.404	Acceptable
PQ2	3.163	Acceptable
PQ3	2.132	Acceptable
SQ1	1.324	Acceptable
SQ2	1.351	Acceptable

<sup>36</sup> Hair et al.

	VIF	Result
SQ3	1.275	Acceptable
TR1	1.740	Acceptable
TR2	1.690	Acceptable
TR3	1.153	Acceptable

Table 7 Innerr VIF Value

BI	BL	CVN	CS	PQ	SQ	TR	Result
BI			1.671				Acceptable
BL							Acceptable
CVN			1.005				Acceptable
CS	1.000						Acceptable
PQ			1.015				Acceptable
SQ			1.017				Acceptable
TR			1.663				Acceptable

Multicollinearity test with VIF aims to determine how big the correlation between constructs and variables. A good VIF value is  $<5$  so that there is no multicollinearity.<sup>37</sup> VIF Value there is no construct that has a VIF value  $> 5$  so there is no very high correlation in the construct.

Table 8 R Square

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( $ O/STDEV $ )	P Values	Result
BL	0.019	0.024	0.015	1.275	0.203	Weak
CS	0.096	0.124	0.033	2.912	0.004	Weak

<sup>37</sup> Joseph F Hair et al., "When to Use and How to Report the Results of PLS-SEM," *European Business Review* 31, no. 1 (2019): 2–24, <https://doi.org/10.1108/EBR-11-2018-0203>.yet concise, overview of the considerations and metrics required for partial least squares structural equation modeling (PLS-SEM)

According to Hair et al. (2019), the value of R square is classified into three groups, namely 0.25 which means the model is weak, 0.50 which means a moderate model, and 0.75 which means a strong model.<sup>38</sup>

The value of R squares is 0.024 on brand loyalty. This means that the exogenous construct of the customer satisfaction affects brand loyalty by 2.4%. R square value of 0.208 indicates that the model is weak. The value of R squares is 0.124 on customer satisfaction. This means that the exogenous constructs of service quality, brand identification, trust, convenience, and product quality simultaneously affect customer satisfaction by 0.124%.

**Table 9 F Square**

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( $ O/STDEV $ )	P Values	Result
BI -> CS	0.026	0.033	0.021	1.236	0.217	Small-Moderate
CVN -> CS	0.008	0.014	0.010	0.781	0.435	Small
CS -> BL	0.019	0.025	0.016	1.223	0.222	Small
PQ -> CS	0.003	0.009	0.009	0.401	0.688	Small
SQ -> CS	0.026	0.034	0.020	1.292	0.197	Small-Moderate
TR -> CS	0.004	0.008	0.009	0.402	0.688	Small

The magnitude of the influence between variables is measured by *Effect Size* or *f-square*. The *F square* is 0.02 as small, 0.15 as moderate, and 0.35 as large.<sup>39</sup>

**Table 10 SRMR**

	Original Sample (O)	Sample Mean (M)	95%	99%
Saturated Model	0.070	0.051	0.088	0.111
Estimated Model	0.088	0.054	0.089	0.106

SRMR is the difference between correlation with matrix model. In order for the model to meet the model fit criteria according to the Rule of Thumbs, the

<sup>38</sup> Hair et al. yet concise, overview of the considerations and metrics required for partial least squares structural equation modeling (PLS-SEM)

<sup>39</sup> Hair et al. yet concise, overview of the considerations and metrics required for partial least squares structural equation modeling (PLS-SEM)

SMSR value must be less than 0.1. In the SRMR table, the saturated model value is 0.051 and the estimated model is 0.054 so that it can be accepted and to meet the SRMR criteria.

Goodness of Fit Index can be used as a validation of the measurement model and overall structural nodes. GoF value  $> 0.1$  means weak, GoF value  $> 0.25$  means moderate, and GoF value  $> 0.36$  means strong. In this study, the Goodness of Fit Index 0.9079 means that the measurement model used in this study is quite strong. GFI formula:

Goodness of Fit Index =

Rata rata AVE = = 0,6762857

Rata-rata  $R^2$  = = 0,148

Goodness of Fit Index = = 0,9079

**Table 14 Hypotheses Result**

	Sample Mean (M)	T Statistics ( $ z/STDEV $ )	P Values	Result	Hypothesis
BI $\rightarrow$ CS	0.206	2.737	0.006	Positive Significant	Accepted
CVN $\rightarrow$ CS	-0.091	1.301	0.194	Not Significant	Accepted
CS $\rightarrow$ BL	-0.146	2.519	0.012	Negative Significant	Rejected
PQ $\rightarrow$ CS	0.060	0.867	0.386	Not Significant	Rejected
SQ $\rightarrow$ CS	0.165	2.957	0.003	Positive Significant	Accepted
TR $\rightarrow$ CS	0.082	1.134	0.258	Not Significant	Rejected

H1: Service quality has positive significant effect on customer satisfaction.

The T statistics 2,957 and the P value is 0.003 which means it has a significant effect. The sample mean 0.165 so that service quality has a significant positive effect on customer satisfaction of 16.5 percent. So the first research hypothesis is accepted. The results of this study are also supported by previous research Khawaja et al., (2021), which states that service quality has a significant positive impact on customer satisfaction.<sup>40</sup> Research of Slack & Singh (2020), also supports

<sup>40</sup> Khawaja, Ali, and Mostapha, "The Mediating Effect of Customer Satisfaction in Relationship with Service Quality, Corporate Social Responsibility, Perceived Quality and Brand Loyalty." Management Science Letters 11, no. 3 (2021): 763–772.

the results of this study which states that service quality has a significant positive effect on customer satisfaction.<sup>41</sup> Research of Arman & Shabbir (2020) also found that service quality has a positive influence on customer satisfaction. From the results of this study and supported by previous research, we can know that the quality of service plays an important role in customer satisfaction. Consumers who get the best service from the seller will be satisfied.<sup>42</sup>

**H2:** Brand identification has no significant effect on customer satisfaction.

The T statistics value is 2.737 and the P value is 0.006, which means it has a significant effect. The sample mean 0.206 so that brand identification has a significant positive effect on customer satisfaction by 30.6 percent. So the second research hypothesis is rejected. The results of this study are contrary to previous research, which studies of Saputra et al. (2020), Kataria & Saini (2020), and Arman & Shabbir (2020) proved that brand identification has no effect on customer satisfaction.

**H3:** Trust has a significant positive effect on customer satisfaction. The T statistics value of 1.134 and P value of 0.258 means that it has no significant effect. The sample mean value is 0.082 so that trust has a positive effect of 8.2 which is not significant on customer satisfaction. So the third research hypothesis is rejected.

**H4:** Convenience does not have a significant positive effect on customer satisfaction. The T statistic value of 1.301 and the P value of 0.194 means that it has no significant effect. The sample mean value is -0.091 so that convenience has a negative effect of 9.1 percent which is not significant on customer satisfaction. So the fourth research hypothesis is accepted. The results of this study are also supported by research of Djan & Adawiyyah (2020), which states that convenience does not have a significant effect on customer satisfaction.<sup>43</sup>

<sup>41</sup> Neale J Slack and Gurmeet Singh, "The Effect of Service Quality on Customer Satisfaction and Loyalty and the Mediating Role of Customer Satisfaction: Supermarkets in Fiji," *The TQM Journal* 32, no. 3 (2020): 543–558.

<sup>42</sup> Arman and Shabbir, "Impact of Service Quality and Brand Image on Brand Loyalty: The Mediating Role of Customer Satisfaction." *Eurasian Journal of Social Sciences* 8, no. 2 (2020): 75-84.

<sup>43</sup> Djan and Adawiyyah, "The Effect of Convenience and Trust to Purchase Decision and Its Impact to Customer Satisfaction." *International Journal of Business and Economics Research* 9, no. 4 (2020): 263-269.

H5: Product quality has a significant positive effect on customer satisfaction.

The T statistics value is 0.867 and the P value is 0.386, which means that it has no significant effect. The sample mean value is 0.060 so that product quality has a positive influence of 6 percent which is not significant on customer satisfaction. So the fifth research hypothesis is rejected.

H6: Customer satisfaction has a significant positive effect on brand loyalty. The T statistic value of 2.519 and P value of 0.012 means that it has a significant effect. The sample mean value is -0.146 so that customer satisfaction has a significant negative effect on *brand loyalty*. So the sixth research hypothesis is rejected.

## 5. Conclusion

This study aims to determine the factors that can affect brand loyalty of cosmetic products in Batam City. In this study, researchers used brand identification, service quality, trust, convenience, and product quality variables as independent variables with the help of customer satisfaction as an intervening variable. This study involved women who had used cosmetics and lived in Batam City. The results of this study indicate that service quality and brand identification have a significant positive impact on customer satisfaction. Meanwhile, convenience, product quality, and trust do not have a significant effect on customer satisfaction. Customer satisfaction has a significant negative effect on brand loyalty from cosmetics.

From this study, we can see that cosmetic consumers, especially women, prefer shops and sellers of cosmetic products that provide good service quality to customers. Quality of service is the main thing that is done by the seller to the buyer. Good service will give the impression to consumers that themselves they are well served and appreciated. When women buy cosmetics both in stores and online stores, they will expect that there will be a waiter who welcomes them well. With good service quality, consumers will create customer satisfaction.

Brand identification has a significant positive effect on customer satisfaction. This can be caused by consumer perceptions of cosmetic products that are bought well and have a social image in the view of consumers so that they can increase the self-confidence and social status of users. This causes the satisfaction of consumers who buy it. From the findings above, cosmetic

manufacturers and sellers are required to look forward to improving the quality of service for customers. In addition, brand identification also needs to be considered in order to make the brand on cosmetics famous in the eyes of consumers. Thus, customer satisfaction will be achieved.

### **Limitation**

The results of this study have limitations in terms of research, including the research area is only located in Batam City, the object of research used in this study is cosmetic products, the respondents involved in the research are all female, and the limitations of the variables used are only five variables. independent and one intervention without moderating variables.

### **Recommendation**

Based on the results of the study, researchers can recommend cosmetics sellers both offline and online to maintain the quality of service and their identification on cosmetic products. The waiters and sellers must also provide the best quality service to consumers. If necessary, the quality of service must be improved. For cosmetic manufacturers, they must also strengthen the identification of the cosmetic brands they produce because of their strong identification in the minds of consumers. Why are the distinctive and identical characteristics of cosmetics easy for consumers to recognize. That way, consumers will have a familiar cosmetic product. Of the two things that have been explained will give a sense of satisfaction of consumers who use cosmetic products.

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