

DOES PRODUCT QUALITY, WORD OF MOUTH INFLUENCE CONSUMER LOYALTY THROUGH CONSUMER SATISFACTION?

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ABSTRACT

Analysis of product quality and Word of Mouth that affects consumer loyalty directly or indirectly through consumer satisfaction is the purpose of this research in the culinary business. The instrument was developed using the Likert scale. Respondents as many as 100 consumers, validity and reliability tests using 30 respondents. This study uses quantitative path analysis methods to determine direct and indirect influences. Research results; Product Quality, Word of Mouth, and Consumer Satisfaction variables have an immediate effect on Consumer Loyalty. Indirect impact: both dependent variables can affect consumer loyalty indirectly through consumer satisfaction.

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1. INTRODUCTION

During the pandemic, many small and medium businesses emerged in anticipation of the community facing a crisis due to local government regulations that limited community social activities. It also affects the social and economic sectors through restrictions on human movement, distribution, and transportation [1]. The development of the business world is currently digital-based and led to the growth of online shops in cyberspace [2]. They serve the needs of the community with online services. Business development is increasing due to increasingly sophisticated technology. It is easy for entrepreneurs to provide information about their products on social media, in person, and even by word of mouth. Intense competition will make entrepreneurs try hard to continue improving the quality of their products for the sake of public trust in meeting their needs so that the effect of consumers being satisfied with their products will make them continue to meet their constant requirements for these products. Changes in consumer behavior in conditions like this must be detected as early as possible to maintain the wheels of business. Satisfaction can be seen from a consumer's feelings after feeling and comparing whether it follows his expectations [3]. Good quality products will become selling points for businesses in the culinary field to meet the needs of consumers and attract the attention of consumers [4]. Good-quality products will influence the decision to use/taste because consumers will believe in our products. According to Kotler & Armstrong (2008), Product quality is a characteristic that depends on the product's ability to satisfy customer needs and with the hope of being loyal to the products offered.

Equally important, word of mouth also affects consumer satisfaction and consumer loyalty [6]. Word of mouth in various ways online or by word of mouth from consumers, in conditions that are completely limited from the social side. Word of Mouth allegedly plays an essential role in the availability of information. Pertiwi (2021) Word of Mouth is one of the many unique features of word-of-mouth promotion. Consumers will pay close attention to these characteristics and then provide information about their experiences in their social environment.

2. LITERATURE REVIEW

Product Quality

Products are designed in such a way as to meet the needs and desires of consumers so that it is hoped that they will also generate consumer satisfaction and loyalty. Products have a strategy that includes several uses, quality, features, brands, packaging, warranties, designs, and choices (various product features). The decision to diversify products is necessary in line with marketing developments [8]. The form of the product is not only tangible. It also includes something intangible such as services. All culminate in satisfying the needs and desires of consumers [9]. Laksana [10] Products are everything that is physical in the form of goods and non-physical in the form of services offered to consumers to fulfill their needs and desires.

According to Wibowo & Fauzi [11], there are eight dimensions of product quality to provide good service: Performance, characteristics or advantages over other products, Reliability, appropriate specifications, Durability, Serviceability, Aesthetics, and perception of quality.

H₁ Product Quality Affects Consumer Satisfaction

H₂ Product Quality Affects Consumer Loyalty

H₃ Product Quality affects Consumer Loyalty mediated by Consumer Satisfaction.

Word Of Mouth

Word of Mouth is one way in which consumers get information about products/services. Word of mouth, or word of mouth promotion, is conveyed orally, and very excited to share information with the community. Chatting becomes a common thing when gathering with the district. Even though the strategy is ancient, this method is still influential today, especially in the culinary field [12]. According to Bancin [13], word of mouth is often referred to as word of mouth. This activity is formed due to perceptions of products consumers use and informs these perceptions to other consumers. This variable is also believed to be one of the most effective and efficient forms of promotion.

The method of promotion of word of mouth communication (Word of Mouth) is a form of written, spoken, or electronic communication between consumers who have a good perception of the product or experience of the product or service that is felt. Word of mouth is a spontaneous event, where this news can happen anytime and anywhere [14]

H₄ Word of Mouth Affects Consumer Satisfaction

H₅ Word of Mouth Affects Consumer Loyalty

H₆ Word of Mouth Affects Consumer Loyalty mediated by Consumer Satisfaction

Consumer Satisfaction

The primary foundation of a company's success is customer satisfaction, so it is expected to be loyal to its products. Consumers will reuse the same product/service after feeling the benefits and creating a sense of satisfaction with the product/service [15]. Based on the compatibility between what they feel and the desired expectations, consumers' feelings about the goods and services they have used can be interpreted as consumer satisfaction. The satisfaction felt by consumers will win the competition if the company can create it and, of course, can also retain customers so as not to be interested in trying products/services from competitors. The main component that contains modern marketing thoughts and practices has indicators of customer satisfaction in the form of conformity to product expectations, the desire to revisit, and the willingness to recommend to other parties [16].

H₇ Consumer Satisfaction Affects Consumer Loyalty.

Consumer Loyalty

Consumer Loyalty represents loyalty to a particular product or service, and consumers who have reused it will provide more benefits to the company. Consumers committed to the development do not easily change their opinion of the product. On the other hand, consumers will promote their communities indirectly [17]. Consumer Loyalty is part of human activity that constantly changes according to the circumstances and conditions of the social environment, but the company maintains the expected consumer behavior. Loyalty means customers will continue making regular purchases [18]. Customer loyalty is a form of consumer loyalty in terms of attitudes and behavior shown through a long-term commitment to regularly and repeatedly using products and services [19]. Loyalty is seen in behaviour that repeatedly uses products/services. These four characteristics describe loyal consumers: regular purchases, interest in using the products offered, recommending them to other parties, and showing immunity to the attractiveness of other company products [18]. Figure 1 Research structure, with substructure 1 in Figure 2 and substructure 2 in Figure 3.

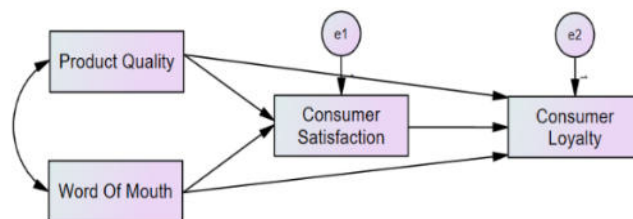


Figure 1. Structure of path analysis

Table 1. Operational Definition of Research Variables

No.	Variable	Operational Definition	Indicator
1.	Product Quality (X ₁)	Characterize products and services in their ability to satisfy customer needs [20]	<ol style="list-style-type: none"> 1. <i>Flavor</i> 2. <i>Consistency</i> 3. <i>Texture</i> 4. <i>Nutritional</i> 5. <i>Visual</i> 6. <i>Aromatic</i> 7. <i>Temperature</i>
2.	Word Of Mouth (X ₂)	Oral, written, or electronic communication involves excellent experience buying or using products or services. [14]	<ol style="list-style-type: none"> 1. <i>Talkers</i> 2. <i>Topics</i> 3. <i>Tools</i> 4. <i>Taking Part</i> 5. <i>Tracking</i>
3.	Customer Satisfaction (Y ₁)	Efforts to meet needs make something adequate for the needs and desires of consumers.[21]	<ol style="list-style-type: none"> 1. Match expectations 2. Interest in revisiting 3. Willingness to recommend
4.	Consumer Loyalty (Y ₂)	Consumer behavior that continuously making purchases periodically [22].	<ol style="list-style-type: none"> 1. Make purchases regularly 2. Make purchases across all product or service lines 3. Recommend products to others 4. Demonstrate immunity from the attractiveness of similar products from competitors.

3. METHODS

In this section, it is necessary to define a quantitative research method, and a survey method was used in this study. Thirty respondents were assigned to test the validity and reliability, and one hundred respondents were used to calculate the path analysis test. The research respondents were 100 respondents/consumers of Can Bos Cibinong Skin Rice. Sampling used a survey method with the Roscoe technique, 10 to 20 times the number of variables.

Questionnaires with a Likert scale are used to test hypotheses with four instruments: Product Quality, Word of Mouth, Consumer Satisfaction, and Consumer Loyalty. Data collection is intended to obtain a valuable score in seeing the influence of Product Quality and Word of Mouth on Consumer Loyalty through Consumer Satisfaction. This research was conducted in July 2022.

Path Analysis is used by testing the instrument for each variable's validity, reliability, and classical assumptions. The IBM SPSS 26 application was used to test the direct effect, and the Sobel calculator was used to test the indirect effect.

4. RESULTS AND DISCUSSION

Validity test

Validity test it is known that all statements in Product Quality (X₁), Word of Mouth (X₂), Consumer Satisfaction (Y₁), and Consumer Loyalty (Y₂), are declared valid, namely r -table of $0.361 < r$ -count value at significance level 5 %

Reliability Test

Table 1 below proves that all variables have Alpha coefficients above 0.700, and all variables have met the reliability test we can conclude.

Table 2. Reliability Test Results

Variable	Cronbach's Alpha	Results
Product Quality	0.947	Reliable
Word of Mouth	0.952	Reliable
Customer Satisfaction	0.950	Reliable
Customer Loyalty	0.929	Reliable

Classic assumption test

Table 3. Classical Assumption Test Results

Substructure 1				
	Multi collinearity	Heteros elasticity	Linearity	Norm
Product Quality	2.564	Heteros elasticity does not occur	0.000	0.379
Word of Mouth	2.564		0.000	
Customer Satisfaction				
Substructure 2				
	Multi collinearity	Heteros elasticity	Linearity	Norm
Product Quality	2.822	Heteros elasticity does not occur	0.000	0.199
Word of Mouth	5.139		0.000	
Customer Satisfaction	5.105		0.000	
Customer Loyalty				

Table 2 shows that all classical assumption tests have met the requirements for using multiple linear regression analysis: Multicollinearity = $>1 < 10$, no heteroscedasticity, linearity = $0.05 <$, and normality test = $> .05$.

Hypothesis test

Based on Figure 1 above, there are two exogenous variables: Product Quality (X1) and Word of Mouth (X2). There are also two endogenous variables: Consumer Satisfaction (Y1) and Consumer Loyalty (Y2), each of which must have a residual value.

Table 4. model summary 2 Substructure

	Substruktur 1	Substruktur 2
R	0.897	0.906
R2	0.804	0.821

Table 5. Feasibility Test Model 2

	Substruktur 1	Substruktur 2
F	199.110	146.754
Sig.	0.000	0.000

Analysis of the Effect of Product Quality and Word of Mouth on Consumer Satisfaction (Substructure 1)

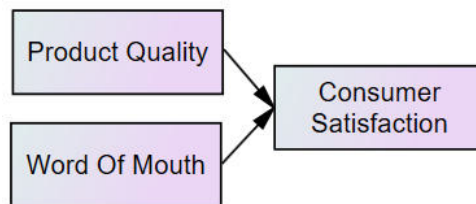


Figure 2. Substructure 1

R^2 has a value of 0.804, seen in Table 3, used to see the simultaneous effect of exogenous variables on consumer satisfaction with the calculation of the coefficient of determination: $R^2 \times 100\% = 0.804 \times 100\% = 80.4\%$. This figure indicates the effect of exogenous variables on consumer satisfaction simultaneously at 80.4%, while the remaining 19.6% is the size of other factors that can influence it. The value of e_1 is a variant of the Consumer Satisfaction variable not explained by the independent variables in this study, namely Product Quality and Word of Mouth. The magnitude of $e_1 = \sqrt{1 - R^2} = \sqrt{1 - .804} = .443$.

The feasibility of the regression model is described in Table 4. Based on a significant number of $0.000 < 0.05$, it means that there is a linear relationship between Product Quality and Word of Mouth on Consumer Satisfaction.

The partial effect of exogenous variables on consumer satisfaction variables will be explained in the t-test.

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Table 6. Substructure 1 Test t

Model		t	Sig.
1	(Constant)	-1.820	0.072
	Product Quality	3.122	0.002
	Word Of Mouth	9.870	0.000

Effect of Product Quality on Consumer Satisfaction

The t-value is 3.122 with a significance of 0.002, a sense of 0.05, and a t-table of 1,983. It means t-count>t-table, namely 3.122>1.983, which means H₁ is accepted. Product quality has a significant positive effect on consumer satisfaction. Customer satisfaction is very dependent on how the level of product quality offered and the level of product performance exceeds consumer expectations so that consumers will feel satisfied and vice versa [2], [23], [24].

The Effect of Word of Mouth on Consumer Satisfaction

The calculated t-value is 9,870 with a significance level of 0.000, a significance of 0.05, and a t-table of 1,983. It means t-count > t-table, namely 9.870 > 1.983, which means H₂ is accepted. Word of Mouth has a significant positive effect on consumer satisfaction. Word of Mouth can be effective in marketing with the conformity of expectations desired by consumers so that satisfaction and loyalty can be generated [6], [25]

Analysis of the Influence of Product Quality, Word of Mouth, and Consumer Satisfaction on Consumer Loyalty (Substructure2)

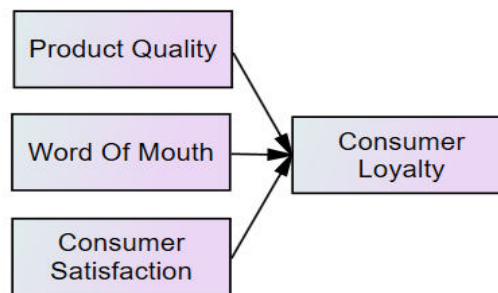


Figure 3. Substructure 2

Table 3 in substructure two shows the simultaneous effect of Product Quality, Word of Mouth, and Consumer Satisfaction on Loyalty by calculating the Coefficient of Determination: $KD = R^2 \times 100\% = .821 \times 100 = 82.1\%$. This figure indicates the simultaneous influence of Product Quality, Word of Mouth, and Consumer Satisfaction on Consumer Loyalty of 82.1%. The remaining 17.9% is the size of other factors that can influence it. e^2 is a variant value of the Consumer Loyalty variable not explained by exogen variables: Product Quality, Word of Mouth, and Consumer Satisfaction. The magnitude of $e^2 = \sqrt{1 - R^2} = \sqrt{1 - .821} = .423$. The feasibility of the model in substructure two can be seen in Table 4. The significance value is $0.000 < 0.05$, meaning a linear relationship exists between exogenous variables and consumer loyalty.

The partial effect of exogenous variables on variables on Consumer Loyalty variables will be explained by testing each variable using the t-test.

Table 7. Substructure 2 Test t

Model		t	Sig.
2	(Constant)	0.525	0.600
	Product Quality	2.170	0.032
	Word Of Mouth	2.446	0.016
	Consumer Satisfaction	5.690	0.000

Effect of Product Quality on Consumer Loyalty

The calculated t-value is 2.170 with a significance level of 0.000, with a significance of 0.05, and a t-table of 1.983. It means t-count>t-table, namely 2.170>1.983, which means H₃ is accepted. Product quality has a significant positive effect on consumer loyalty. Products are the result of production activities that aim to fulfill and satisfy consumer needs and desires to achieve potential consumers [24], [26], [27]

The Effect of Word of Mouth on Consumer Loyalty

The calculated t-value is 2.446 with a significance level of 0.000, with a significance of 0.05, and a t-table of 1.983. It means $t\text{-count} > t\text{-table}$, namely $2.446 > 1.983$, which means H_4 is accepted. Word of Mouth has a significant positive effect on Consumer Loyalty Word of Mouth can be effective in marketing with the conformity of expectations desired by consumers so that satisfaction and loyalty can be generated. In other words, satisfaction and dedication can be increased—good Word of Mouth [6], [28].

Effect of Consumer Satisfaction on Consumer Loyalty

The calculated t-value is 5.690 with a significance level of 0.000, with a significance of 0.05, and a t-table of 1.983. It means $t\text{-count} > t\text{-table}$, namely $5.690 > 1.983$, which means H_5 is accepted. Consumer satisfaction has a significant positive effect on consumer loyalty. Consumers often form comfortable perceptions of products after comparing their expectations with performance or results that they feel exceed expectations, so repeat purchases will occur. [6], [24], [29], [30]

Indirect Influence

Table 8. Sobel test results

Hypothesis 6						
		B	Std. Error	t-value	Sig.	
X_1	→	Y1	0.166	0.053	2.748	0.005
Y_1	→	Y2	0.401	0.070		
Hypothesis 7						
		B	Std. Error	t-value	Sig.	
X_2	→	Y1	0.642	0.065	4.955	0.000
Y_1	→	Y2	0.401	0.070		

The indirect influence between exogenous variables and endogenous variables, namely:

Product Quality on Consumer Loyalty through Consumer Satisfaction.

The calculated t-value and significance level is 2.748, and the significance level is 0.005 compared to the t-table of 1.978 and a significance of 0.05, namely $t\text{-count} > t\text{-table}$, $2.748 > 1.978$ and $0.005 < 0.05$, which means H_6 is accepted. Thus, the sixth hypothesis is accepted. Product Quality significantly influences Consumer Loyalty through Consumer Satisfaction. It indicates that when product quality adjusts to the needs and desires that satisfy consumers, it will automatically make them potential consumers.

The Effect of Word of Mouth on Consumer Loyalty through Consumer Satisfaction

The calculated t-value and significance level is 4.955, and the significance level is 0.000 compared to the t-table of 1.978 and a significance of 0.05, namely $t\text{-count} > t\text{-table}$, namely $4.955 > 1.978$ and $0.000 < 0.05$, which means H_7 is accepted. Thus, the seventh hypothesis is accepted. Word of Mouth significantly influences Consumer Loyalty through Customer Satisfaction. The conversation is something consumers usually do when they get together. Word-of-mouth information is conveyed orally, and very excited about sharing information with the community. Of course, positive chat satisfies consumers and eventually becomes potential customers.

5. CONCLUSION

After testing the hypothesis, we find the following conclusions: In the direct effect, Product Quality and Word of Mouth partially affect customer satisfaction and Consumer Loyalty. In indirect effects, both Product Quality and Word of Mouth affect Consumer Satisfaction, and the subsequent effect affects Consumer Loyalty. From the results of the conclusions above, it can be seen that the culinary business cannot be separated from the performance of product quality needed, and following the wishes of consumers, this kind of thing will increase consumer satisfaction, which is ultimately expected to become a potential consumer.

REFERENCE

- [1] A. Budiono, "Employee performance analysis of Paul Bakery Restaurant in Jakarta during the COVID-19 pandemic by measuring leadership, motivation and compensation through job satisfaction," *Turyzm/Tourism*, vol. 32, no. 1, pp. 141–157, Sep. 2022, doi: 10.18778/0867-5856.32.1.07.
- [2] M. Malian, "Analisis Pengaruh Kualitas Produk, Citra Perusahaan dan Kepercayaan Konsumen Does Product Quality, Word Of Mouth Influence Consumer Loyalty Through Consumer Satisfaction?," *Heidi*

- Terhadap Kepuasan Konsumen Produk Online," *POINT J. Ekon. dan Manaj.*, vol. 3, no. 2, pp. 57–70, Dec. 2021, doi: 10.46918/point.v3i2.1145.
- [3] N. Nurmala and S. Sullaida, "Pengaruh Fasilitas Wisata, Daya Tarik Wisata Dan Kualitas Layanan Terhadap Kepuasan Pengunjung Wisata Pantai Ujong Blang Lhokseumawe," *E-Mabis J. Ekon. Manaj. dan Bisnis*, vol. 23, no. 2, pp. 73–78, 2022, doi: 10.29103/e-mabis.v23i2.861.
- [4] R. B. Amalia and A. Budiono, "Consumer Satisfaction Analysis That Affected Product Quality, Word Of Mouth, With Price Perception As A Mediation Variable," *Asian J. Manag. Entrep. Soc. Sciene*, vol. 2, no. 3, pp. 189–213, Aug. 2022, doi: 10.98765/ajmesc.v2i03.120.
- [5] P. Kotler and G. Armstrong, *Prinsip - Prinsip Pemasaran*, 12th ed. Jakarta: Penerbit Erlangga, 2008.
- [6] A. A. Hendrata, N. Tinaprilla, and A. Safari, "The Effect of Brand Equity and Electronic Word of Mouth (E - WOM) on Customer Satisfaction and Loyalty in E-commerce Marketplace," *Int. J. Res. Rev.*, vol. 8, no. 4, pp. 308–315, Apr. 2021, doi: 10.52403/ijrr.20210437.
- [7] D. Pertiwi, *Pemasaran Jasa Pariwisata*. Yogyakarta: Budi Utama, 2021.
- [8] P. N. Bloom and L. N. Boone, *Strategi Pemasaran Produk*. Jakarta: Prestasi Pustakaraya, 2006.
- [9] A. Manap, *Revolusi Manajemen Pemasaran*. Jakarta: Mitra Wacana Media, 2016.
- [10] F. Laksana, *Praktis Memahami Manajemen Pemasaran*. Jawa Barat: Khalifah Mediatama, 2019.
- [11] H. A. Wibowo and M. Fausi, *Pelayanan Konsumen*. Yogyakarta: Parama Publishing, 2017.
- [12] C. G. G. T. Sibarani, N. Armayanti, Irwansyah, and J. Suharianto, *Dasar-dasar Kewirausahaan*. Yayasan Kita Menulis, 2019.
- [13] J. B. Bancin, *Citra Merek dan Word Of Mouth*. Surabaya: Jakad Media Publishing, 2021.
- [14] P. Kotler and K. L. Keller, *Manajemen Pemasaran*, 13th ed. Jakarta, 2009.
- [15] Faudi, E. Sudarmanto, B. Nainggolan, R. S. M. Noni, and N. P. Ningrum, *Ekonomi Syariah*. Yayasan Kita Menulis, 2021.
- [16] F. Tjiptono, *Strategi Pemasaran*, 4th ed. Yogyakarta: Yogyakarta, ANDI, 2015.
- [17] M. H. Reza, *Pelayanan dalam dunia perguruan tinggi*. Malang: Literasi Nusantara Abadi, 2020.
- [18] A. M. Firmansyah, *Perilaku Konsumen*. Yogyakarta: Budi Utama, 2018.
- [19] Suwanto and D. J. Priansa, *Manajemen SDM Dalam Organisasi Publik dan Bisnis*. Bandung: Alfabeta, 2016.
- [20] P. Kotler and G. Armstrong, *Prinsip-Prinsip Pemasaran*. Gelora Aksara Pratama, 2008.
- [21] F. Tjiptono, *NOT YET*. 2012.
- [22] J. Griffin, *Customer Loyalty: how to earn It, how to keep It*. Jakarta: Erlangga, 2005.
- [23] F. A. Puji Lestari, "Pengaruh Web E-Commerce, Kualitas Produk dan Kualitas Layanan terhadap Kepuasan Konsumen," *Sosio e-kons*, vol. 10, no. 1, p. 87, 2018, doi: 10.30998/sosioekons.v10i1.2411.
- [24] A. K. Putera and Wahyono, "Pengaruh Kualitas Pelayanan, Citra Merek dan Kualitas Produk terhadap Loyalitas Konsumen melalui Kepuasan Konsumen," *Manag. Anal. J.*, vol. 7, no. 1, pp. 110–119, 2018, doi: 10.15294/maj.v7i1.20445.
- [25] A. Tandon, A. Aakash, and A. G. Aggarwal, "Impact of EWOM, website quality, and product satisfaction on customer satisfaction and repurchase intention: moderating role of shipping and handling," *Int. J. Syst. Assur. Eng. Manag.*, vol. 11, no. S2, pp. 349–356, Jul. 2020, doi: 10.1007/s13198-020-00954-3.
- [26] E. Grace, R. M. Girsang, S. Simatupang, V. Candra, and N. Sidabutar, "Product Quality and Customer Satisfaction and Their Effect on Consumer Loyalty," *Int. J. Soc. Sci.*, vol. 1, no. 2, pp. 69–78, 2021, doi: 10.53625/ijss.v1i2.138.
- [27] G. Supiandi, "Effect of Product Development and Product Quality on Customer Satisfaction in Superior Gelora Light in West Jakarta," *Kontigensi J. Ilm. Manaj.*, vol. 9, no. 1, pp. 116–124, May 2021, doi: 10.56457/jimk.v9i1.104.
- [28] B. Bismoaziiz, U. Suhud, and S. Sagaruddin, "Influence Of Social Media Marketing, Electronic Word Of Mouth And Consumer Engagement To Brand Loyalty In Indonesia Grab Company," *Int. J. Bus. Soc. Sci. Res.*, vol. 2, no. 2, pp. 16–26, Feb. 2021, doi: 10.47742/ijbssr.v2n2p3.
- [29] A. Budiono, "Pengaruh Kualitas Produk, Persepsi Harga, Promosi, Lokasi, Kualitas Pelayanan Terhadap Loyalitas Konsumen Melalui Kepuasan Konsumen Di Rumah Makan Bebek Kaleo Tebet Jakarta Selatan Dimasa Pandemi Covid-19," *SEGMENT J. Manaj. dan Bisnis*, vol. 17, no. 2, pp. 223–247, Jul. 2021, doi: 10.37729/sjmb.v17i2.6868.
- [30] R. J. Kathlya and E. L. Paramita, "Kepuasan Pelanggan Sebagai Pemediiasi Pengaruh Harga, Kualitas Produk Dan Loyalitas Pelanggan," *E-Mabis J. Ekon. Manaj. dan Bisnis*, vol. 21, no. 2, pp. 105–112, Feb. 2021, doi: 10.29103/e-mabis.v21i2.503.