Analysis of the Impact of Product Quality, Price, Service Quality on Consumer Satisfaction (Case Study of Umkm Cakepa in Batam City)

Eddo Nanda Oktarici[1], Putri[2]
[1] Politeknik Negeri Batam
Business Management Department
Jl. Ahmad Yani, Batam Centre, Batam 29461, Indonesia

Email: putriputri101800@gmail.com

Absract. Companies are required to increase their competitiveness continuously, to improve and maintain business and fierce competition requires a way, one of which is to increase customer satisfaction. The purpose of this study was to determine the variables that affect customer satisfaction, this study was conducted to determine whether product quality, price, and service quality affect customer satisfaction at Cakepa cake shop in Batam City. The writing method uses descriptive with a quantitative analysis approach, the population in this research is Cakepa customers in Batam city. The sampling technique in this study used purposive sampling method with a sample of 85 respondents. The analytical tool used to measure the influence of the elements mentioned above is multiple linear regression. Based on the analysis, it can be concluded that simultaneously the variables of product quality (X1), price (X2), and service quality (X3) affect customer satisfaction (Y). Partially, the variables of product quality (X1), price (X2) and service quality (X3) have a significant effect on customer satisfaction (Y).

Keywords: Product Quality, Price, Service Quality, Customer Satisfaction

1. Introduction

Competition in the increasingly tight business world makes entrepreneurs look for the right strategy to market their products [1] To always maintain and be able to survive, of course, every business must have its own way of running its business in order to achieve its short and long-term goals, one of which is to increase customer satisfaction.

The Center for Economics and Development Studies of Padjadjaran University (CEDS Unpad) said that the Business Competition Index (IPU) in Indonesia increased at the level of 4.91 in 2023 compared to 2022, which was at 4.87. One business that is growing and feeling the tight competition today is a business in the food sector or often referred to as culinary. This culinary business looks promising if you look at the number of culinary businesses that survive. In Batam City itself there are many culinary businesses, especially in the field of business (bakery and cake). The cake business has a demand that never subsides like the food business in general. Starting a cake business does not have to have a large store, home-based cake business is one of the business options that are in great demand by novice business people. One of the home-based cake businesses in Batam is Cakepa.

Cakepa opened in 2019, the owner of Cakepa himself started his business with the aim of finding a busy life or work that can still be run from home and minimize capital. Cakepa offers several cake products with its own advantages and uniqueness, namely, customers can customize cakes according to their budget. The ordering system is carried out in a scheduled manner, namely with a Pre-order (PO) system which is carried out every day and is not limited to the number of po.

Cakepa was chosen as the object of research, where currently Cakepa's customer satisfaction is not optimal. From the results of interviews with several Cakepa customers, they feel that the quality of the products provided, especially in taste and texture, is inconsistent. Apart from product quality, some Cakepa customers feel that there is a price mismatch with the target market. As well as in terms of Cakepa's service quality, there are also several customers who complain that the quality of service is slow to respond, therefore, an in-depth analysis of product quality, price and service quality is needed to understand the extent to which these factors contribute to customer satisfaction in the baking industry. Through a better understanding of consumer preferences and expectations, cake businesses can optimize marketing strategies, improve product quality, and enhance service to win over consumers and ensure business sustainability in a competitive market.

2. Theory and Literature Review

2.1 Product Quality

According to [2] that product quality is a product's ability to perform its function, that ability includes durability, reliability, accuracy, which is obtained by the product as a whole. Companies must always improve the quality of their products or services because improving product quality can make customers feel satisfied with the products or services provided and will influence customers to repurchase these products. According to research conducted by [3] which is used to measure the quality of food products (food quality) there are four dimensions, which include freshness, presentation, taste, and innovative food.

2.2 Price

Quality according to [4] states that price is an element in the marketing mix that not only determines the probability but also as a signal to communicate the value proposal of a product, price is a monetary or other measure that is exchanged in order to obtain the right to ownership or use of a good or service. And price is the only element of the marketing mix that provides income or revenue for the company compared to other elements of the marketing mix. According to [5] there are four indicators that characterize price, namely, price affordability, price compatibility with product quality, price competitiveness in the market and price compatibility with benefits.

2.3 Service Quality

According to [6] service quality is a form of consumer assessment of the level of service received with the expected level of service. If the service received or felt is as expected, then the service quality is perceived as good and satisfying. Satisfaction that has been formed can encourage consumers to make repeat purchases and hopefully become loyal customers. According to [7] service quality can be seen from five dimensions, among others, Direct evidence (Tangibles), Reliability, Responsiveness, Assurance, Empathy).

2.4 Consumer Satisfaction

According to [4] states that consumer satisfaction is a person's feeling of pleasure or disappointment that arises from comparing the performance or results felt against his expectations. So, the level of satisfaction is a function of the difference between performance and expectations. If the performance is below expectations, it will certainly make consumers feel dissatisfied or disappointed, but if the performance is above expectations, it will certainly make consumers feel very satisfied. According to [8] states five indicators that make up customer satisfaction, including product quality, service quality, emotional, price, and cost.

2.5 Literature Review

Slamet Widodo (2021) which discusses the Influence of Product Quality, Service Quality and Price on Molivia Consumer Satisfaction. The results of this study show that product quality has a positive and significant effect on consumer satisfaction, service quality has a negative and statistically significant effect on consumer satisfaction, and price has a positive and significant effect on consumer satisfaction.

Evilaili Kumrotin & Ari Susantri (2021) which discusses the effect of product quality, price, and service quality on satisfaction at Ko We Ok café. The results of this study indicate that the product quality variable has a significant and positive effect on consumer satisfaction, consumer satisfaction is influenced by the significant and positive results of the price variable, the service quality variable gives significant and positive results on consumer satisfaction.

Mariansyah & Syarif (2020) which discusses the effect of product quality, service quality, and price on café kabalu customer satisfaction. The results of this study indicate that product quality has no positive and significant effect on customer satisfaction, service quality and price have a positive and significant effect on customer satisfaction.

2.6 Theoretical Framework

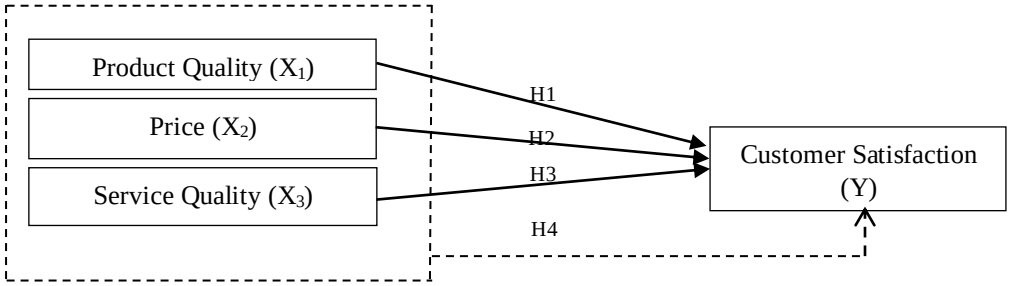

Figure 1. Theoretical framework

2.7 Hypothesis Development

1. H1 : Product quality has a positive and significant effect on consumer satisfaction.

2. H2 : Price has a positive and significant effect on consumer satisfaction.

3. H3 : Service quality has a positive and significant effect on consumer satisfaction.

4. H4 : Product Quality, Price, and Service Quality have a positive and significant effect on consumer satisfaction.

3. Research Methods

This study uses quantitative methods and there are two main types of variables, namely the independent variables consisting of product quality, price, and service quality, and the dependent variable, namely customer satisfaction. The type of data in this research is primary data obtained through questionnaire results. To obtain the instruments needed in this research, researchers used a method by distributing questionnaires online using Google Form which was compiled using a Likert scale. In this research, the sample was determined using the Slovin formula. The number of Cakepa buyers in Batam City over the past 1 year is 450 and the sample obtained using this formula is 81.8 which is rounded up to 85 respondents using purposive sampling technique, where respondents who have bought Cakepa products at least 3 times in the past 1 year who live in Batam City are considered as data sources. In processing and analyzing the data from filling out the questionnaire, the researchers used the IBM SPSS Statistics version 26 application. There are several tests that will be carried out, namely the instrument test consisting of reliability and validity tests; classical assumption test consisting of multicollinearity test, normality test, and heteroscedasticity test; and multiple linear regression test consisting of F test, T test, and coefficient of determination test**.**

4. Results and Discussion

4.1 Descriptive Analysis

Table 1. Gender

Age	Number of Respondents	Presentase (%)
Male	4	4,7%
Female	81	95,3%
Total	85	100%

Based on the table of respondents above, the majority of consumers who buy Cakepa products are female with 81 respondents. It can be concluded that the majority of Cakepa consumers are female. Female are often interested in following popular culinary/food trends, which encourages them to buy or try these foods more often.

Table 2. Age

Age	Number of Respondents	Presentase (%)
18-30 years	77	90,6%
31-45 years	8	9,4%
Total	85	100%

Based on the table of respondents above, the majority of ages who buy Cakepa products are 18-30 years old with 77 respondents. Thus it can be concluded that the majority of Cakepa consumers are aged 18-30 years. The influence of social media such as Instagram greatly affects the consumptive lifestyle of the younger generation, many of whom are inspired by culinary content and often buy food that looks visually interesting.

Table 3. Jobs

Jobs	Number of Respondents	Presentase (%)
Student	38	44,7%
Private Employee	34	40%
Entrepreneur/Businessman	13	15,3%
Total	85	100%

Based on the table of respondents above, the majority who buy Cakepa products are students with 38 respondents. It can be concluded that students are the first to purchase Cakepa products. This is because the prices offered by Cakepa are still affordable for students, where they can order cakes according to their budget.

Table 4. Purchase Frequency

Purchase Frequency	Number of Respondents	Presentase (%)
3	66	77,6%
4	14	16,5%
>4	5	5,9%
Total	85	100%

Based on the table of respondents above, the majority of the frequency of purchasing Cakepa products is 3 times with 66 respondents. Many consumers may buy cakes for specific events, but not for personal consumption on a frequent base. This purchase is usually based on a specific need, such as a birthday, holiday celebration, or family gathering. Therefore, purchasing 3 times a year is considered reasonable and enough to fulfill these needs.

Descriptive Statistics

Tabel 5. Descriptive Statistics

Variabel	Mean	Category
Product Quality	3,25	**Good**
Price	3,11	**Good**
Service Quality	3,02	**Good**
Kepuasan Konsumen	3,19	**Good**

Based on the table above, it is known that the total Mean in the product quality dimension is 3.25 which is in the good category. The price dimension is 3.11 which is in the good category. Furthermore, the service quality variable is known to have a total Mean of 3.02 which is in the good category. And based on the total Mean in the dimension of customer satisfaction of 3.19 which is in the good category.

4.2 Instrument Test Results

Validity Test

Table 6. Validity Test Results

Variables	Indicator	rhitung	rtabel	Description
Product Quality (X_1)	K 1	0,907	0,213	Valid
	K 2	0,765	0,213	Valid
	K 3	0,813	0,213	Valid
	K 4	0,851	0,213	Valid
	K 5	0,813	0,213	Valid
	K 6	0,825	0,213	Valid
	K 7	0,804	0,213	Valid
	K 8	0,855	0,213	Valid
Price (X_2)	H 1	0,718	0,213	Valid
	H 2	0,673	0,213	Valid
	H 3	0,760	0,213	Valid
	H 4	0,695	0,213	Valid
	H 5	0,786	0,213	Valid

	H 6	0,733	0,213	Valid
	H 7	0,791	0,213	Valid
	H 8	0,745	0,213	Valid
Service Quality (X_3)	KP 1	0,859	0,213	Valid
	KP 2	0,558	0,213	Valid
	KP 3	0,867	0,213	Valid
	KP 4	0,827	0,213	Valid
	KP 5	0,832	0,213	Valid
	KP 6	0,732	0,213	Valid
	KP 7	0,741	0,213	Valid
	KP 8	0,836	0,213	Valid
	KP 9	0,773	0,213	Valid
	KP 10	0,736	0,213	Valid
Customer Satisfaction (Y)	KK 1	0,823	0,213	Valid
	KK 2	0,811	0,213	Valid
	KK 3	0,780	0,213	Valid
	KK 4	0,799	0,213	Valid
	KK 5	0,656	0,213	Valid
	KK 6	0,841	0,213	Valid
	KK 7	0,818	0,213	Valid
	KK 8	0,684	0,213	Valid
	KK 9	0,803	0,213	Valid
	KK 10	0,631	0,213	Valid

Based on the table above, it can be seen that all indicators have a value of rhitung> rtable so it can be concluded that the indicators used in this study are valid. Thus, none of the statement indicators in this questionnaire need to be changed or omitted, because all of them have shown valid results.

Reliability Test

Table 7. Reliability Test Results

Variables	Cronbach's Alpa	Cronbach's Minimun	Description
Product Quality (X1)	0,935	0,6	Reliabel
Price (X_2)	0,875	0,6	Reliabel
Service Quality (X_3)	0,928	0,6	Reliabel
Consumer Satisfaction (Y)	0,918	0,6	Reliabel

Based on the table above, it can be seen that each variable has a Cronbach's Alpha value greater than 0.6. Thus, it can be concluded that all indicators are reliable, and the questionnaire used in this study can be trusted and can be used as a data collection tool.

4.3 Classical Assumption Test Results

Normality Test

Table 8. Normality Test Results

		Unstandardized Residual
N		85
Normal Parameters	Mean	0,0000000
	Std Deviation	1,29269444
Most Extreme Differences	Absolute	0,051
	Positive	0,041
	Negative	-0,051
Test Statistic		0,051
Asymp. Sig. (2-tailed)		0,200

Based on the table above, the results obtained from the Kolmogorov Smirnov test are normally distributed, this is indicated by its significance of 0.200 which is more than 0.05.

Multicollinearity Test

Table 9. Multicollinearity Test Results

Variables	**Tolerance Value**	**VIF Value**	**Description**
Product Quality (X_1)	0,233	4,293	No Multicollinearity Occurs
Price (X_2)	0,127	7,887	No Multicollinearity Occurs
Service Quality (X_3)	0,231	4,336	No Multicollinearity Occurs

Based on the results listed in the multicolinerity test, it can be seen that all variables have a tolerance value above 0.1 and a VIF value below 10, so it can be concluded that the regression model in this study does not occur multicolinerity disorders.

Heteroscedasticity Test

Table 10. Heteroscedasticity Test Results

Variables	**thitung**	**Sig.**	**Description**
Product Quality (X_1)	0,162	0,872	No Heteroscedasticity Occurs

Price (X_2)	-1,523	0,132	No Heteroscedasticity Occurs
Service Quality (X_3)	1,042	0,301	No Heteroscedasticity Occurs

Of the three values it has a significant > 0.05 so it can be concluded that the model is not exposed to heteroscedasticity problems.

4.4 Multiple Linear Regression Test Results

Table 11. Multiple Linear Regression Test Results

Independent Variables	Regression Coefficient
(Constant)	1,610
Product Quality (X_1)	0,720
Price (X_2)	0,351
Service Quality (X_3)	0,095

Based on the table above, it can be seen that a significant correlation or relationship exists between the variables of product quality, price, service quality and customer satisfaction variables and obtained a regression equation as follows:

Y = 1,610 + (0,720)X1 + (0,351)X2 + (0,095)X3 + Error

4.5 Hypothesis Test Results
Partial Significance Test (T Test)

Table 12. T Test Results

Variables	thitung	ttabel	Sig.	Description
Product Quality (X_1)	12,634	1,663	0,000	Significant
Price (X_2)	4,366	1,663	0,000	Significant
Service Quality (X_3)	2,100	1,663	0,039	Significant

Based on the test results, it is obtained that the thitung value is 12,634> 1,663 and the significance value for variable X1 on Y is 0.000 which is smaller than the 5% or 0.05 significance level. Therefore, it can be concluded that the results of testing H1 in this study state that the Product Quality variable has a significant effect on customer satisfaction.

Based on the test results, the thitung value is 4.366> 1.663 and the significance value for variable X2 on Y is 0.000 which is smaller than the significance level of 5% or 0.05. Therefore, it can be concluded that the results of testing H2 in this study state that the price variable has a significant effect on customer satisfaction.

Based on the test results, it is obtained that the thitung value is 2.100> 1.663 and the significance value for variable X3 on Y is 0.039 which is smaller than the significance level of 5% or 0.05. Therefore, it can be concluded that the results of testing H3 in this study state that the Service Quality variable has a significant effect on customer satisfaction.

Simultaneous Significance Test (F Test)

Table 13. F Test Results

Model	F	Sig.
Regression	561,510	0,000

Based on the table above, it is known that the Fhitung value is 561.510 with a significance level of 0.000. Thus, Fhitung> Ftable, namely 561.510> 2.72. This shows that the variables of product quality (X1), price (X2), service quality (X3) together have a significant effect on customer satisfaction (Y). So it can be concluded that hypothesis H4 is accepted.

Test Coefficient of Determination (R2)

Table 14. Determination Coefficient Test

Model	R	R Square
1	0,977	0,954

From the above calculations, the R Square value is 0.954 which indicates that there is a very strong relationship between product quality (X1), price (X2), and product quality (X3) on customer satisfaction (Y). This says that the effect of the independent variables, namely product quality, price, and product quality on customer satisfaction is 95.4%, while the remaining 4.6% is influenced by other variables not included in this study.

5. Conclusions and Suggestions

5.1 Conclusion

Based on data analysis and discussion of the influence of product quality, price, service quality variables on customer satisfaction at Cakepa, it can be concluded that, based on the results of the simultaneous test (F test), the variables of product quality, price, service quality have a significant influence and strong correlation on customer satisfaction at Cakepa. Because it can be seen from the F test that Fhitung> Ftabel (561.510> 2.71), the hypothesis in this study has a simultaneous and significant effect. Based on the partial test results (T test), the study shows that product quality, price and service quality have a significant effect on customer satisfaction.

5.2 Suggestions

Based on the results of the research, discussion and conclusions obtained, the suggestions that can be given by researchers are as follows:

1. Due to the influence of product quality, price, service quality on customer satisfaction, it is recommended that Cakepa maintain and improve customer satisfaction as a top priority.

2. In terms of product quality, Cakepa needs to apply several effective processing, storage and packaging techniques so that the product maintains its quality.

3. In terms of price, Cakepa must ensure that the raw materials used are in accordance with the set price, if the seller wants to maintain a high price, then the seller must add some value to his own product.

4. In terms of service quality, Cakepa must respond to complaints as soon as possible, a quick response shows a commitment to solving the problem, even if the solution takes time, give a time limit for each complaint so that it is not delayed.

5. For further researchers, it is recommended to add variables other than product quality, price, service quality that affect customer satisfaction so that the results studied are maximized.

References

[1] F. Ghanimata and M. Kamal, "Analisis Pengatuh Harga, Kualitas Produk, dan Lokasi Terhadap Keputusan Pembelian (Studi pada Pembeli Produk Bandeng Juwana Elrina Semarang)," Halaman, 2012. [Online]. Available: http://ejournal-s1.undip.ac.id/index.php/djom

[2] Kotler & Keller, *Marketing Management*, 15th ed. Global Edition, 2016.

[3] M. Rizaimy Shaharudin, S. Wan Mansor, and S. Jamel Elias, "Food Quality Attributes among Malaysia's Fast Food Customer," *International Business and Management*, vol. 2, no. 1, pp. 198–208, 2011, doi: 10.3968/j.ibm.1923842820110201.015.

[4] Kotler & Keller, *Manajemen Pemasaran*. Jakarta, 2009.

[5] Kotler & Armstrong, *Prinsip-Prinsip Pemasaran*, 12th ed. Jakarta: Erlangga, 2008.

[6] Kotler, *Manajemen Pemasaran* , 12 Jilid 1. Pearson Education, 2019.

[7] Parasurman and V. A. B. L. L. Zeithaml, "SERVQUAL: A multiple-Item Scale for measuring consumer perceptions of service quality," 1988. [Online]. Available: https://www.researchgate.net/publication/225083802

[8] Yuniarti, *Perilaku Konsumen Teori dan Praktik* , 1st ed. Bandung: CV Pustaka Setia, 2015.