
Effect of Product Development and Product Quality on Customer Satisfaction in Superior Gelora Light in West Jakarta

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ABSTRACT

This study aims to determine the effect of product development and product quality on consumer satisfaction at PT. Gelora Cahaya Unggul in West Jakarta. The method used is explanatory research with analysis techniques using statistical analysis with regression testing, correlation, determination and hypothesis testing. This study's results show product development significantly affects consumer satisfaction by 40.5%; hypothesis testing is obtained through $t_{count} > t_{table}$, or $(7.996 > 1.986)$. Product quality significantly affects consumer satisfaction by 38.8%; hypothesis testing obtained $t_{count} > t_{table}$ or $(7,718 > 1,986)$. Product development and product quality simultaneously have a significant effect on customer satisfaction with the regression equation $Y = 10.648 + 0.382X_1 + 0.362X_2$, and the contribution of the effect is 49.7%; the hypothesis test obtained $F_{count} > F_{table}$ or $(46.018 > 2,700)$.

Keywords: Product Development, Product Quality, Customer Satisfaction.

INTRODUCTION

In the globalization era, today's increasingly competitive, any business behaviour that wants to win the competition will pay full attention to product development and product quality. In the industrial world, product development and quality control or product qualities are the most critical factors that lead to business success and an increase in a competitive position. Full attention to quality will have a direct impact on the company in the form of customer satisfaction.

Industries that produce goods and services must be able to produce a product that is acceptable to consumers. A central principle of purchase is to increase further the domination (control) of the national and international markets. Buyers, be they individual consumers, industrial

companies, or government agencies, are now increasingly emphasizing the satisfaction of the customers they are looking for for the goods they pay for, with a renewed concentration on the economy of the best products and services, safety, serviceability and reliability. Prudence in buying is increasing, especially for industrial companies and even more so for consumers.

The high level of customer satisfaction is caused by two main factors, namely internal and external factors. Internal factors of the company include a decline in product quality, product development, customer service and more so that consumers experience saturation or a decrease in the value of products in the market. External factors occur because they are out of reaches, such as changes in consumer tastes, government

policies, the emergence of substitute goods, and new competitors' entry.

Every business in high competition always competes with similar industries. To win the competition, business people must pay full attention to product quality. Attention to quality positively impacts business in two ways: production costs and income (Gaspersz, 2005: 3).

Product development and quality control in the company include developing the industry to be more advanced, producing or making one product, and releasing other products. Quality control is a technique and management, measuring the quality characteristics of the output (goods and services), then comparing the measurement results with the user's output specifications and taking appropriate corrective action if differences are found between actual and standard performance. In controlling the process, we investigate if there is a process disruption, and corrective action can be done before there are too many units that are not suitable (defective). All of this is done so that customer satisfaction is met, and the company is no exception to predict the company's articles of association.

The impact on production costs occurs through the manufacturing process of products with a high degree of conformity to standards so that they are free from the level of damage that may occur. The impact on increasing revenue occurs through increased sales of high-quality, high-priced products.

One of the company's goals is to increase profits, especially from its operating activities. Therefore, company managers in making decisions are aimed at increasing profits. Business strategies to increase competitive advantage can be carried out through quality improvement efforts.

Companies that use quality as a strategic tool will have a competitive advantage over their competitors in controlling the market because not all companies can achieve quality superiority. In this case, the company must produce high-quality products, low prices, process, and delivery on time. A production process that pays attention to quality will produce a product that is free from damage. It can avoid waste and inefficiency so

that unit production costs can be reduced and product prices can be more competitive. A step in implementing quality control is determining the proper planning before production, coupled with product standardization, especially in quality improvement. There is a close relationship between product quality, customer or consumer satisfaction and company profitability. The higher the quality, the higher the customer satisfaction and vice versa, the lower the quality, the lower the customer satisfaction and in this case supports higher prices and lower costs. Therefore, quality improvement programs or QIPs (Quality Improvement Programs) usually increase the company's profitability (Philip Kotler, 2008: 67).

Thus, if a company wants to determine the quality of a product or make a high-quality product, it must pay attention to 3 factors: production costs, production function, and the product's outer form. Production costs that are too high will affect the selling price of the product to be expensive. Quality production functions are by consumer needs. The outward appearance or model or product packaging greatly influences consumer decisions before they use the product.

PT. Gelora Cahaya Unggul is a company engaged in galvalume with the primary material of producing steel alloys that prioritize product quality concerned with the product model in demand. Quality is defined as the totality of a product's characteristics that supports its ability to satisfy specified or defined needs to increase internal and external customer satisfaction (Gaspersz, 2005: 5). Based on this basic understanding of quality, it appears that quality is always customer-focused quality. Quality in statistical process control is how well an output (goods and services) meets the company's design department's specifications and tolerances. Based on the background of the problem above, the authors are interested in researching "The Effect of Product Development and Product Quality on Customer Satisfaction at PT. Gelora Cahaya Unggul in West Jakarta".

1. Product Development

Development is often called innovation, namely the process of creating new ideas and

implementing them in practice. Innovations are new ideas in products, so the results better. In innovation, companies in two forms, product innovation, produce new goods or services or improvements from existing ones and process innovation, which produces new ways of doing a process.

2. Product quality

Products are not only in the form of tangible goods but can be in the form of services, so products can provide different satisfaction so that companies are required to be more creative and have a broad view of the products produced. According to Kotler and Armstrong (2017: 299) argue "Product quality is the ability of a product to perform its function, this includes the useful life of the product, reliability, ease, use and repair, and other values. The quality of the product can be viewed from two points of view, namely an internal point of view and an external point of view".

3. Customer Satisfaction

According to Ferrinadewi (2014: 97), in the attitude model, three components to form attitudes in customer satisfaction consist of components: cognitive, affective, and conative.

- a. Cognitive is the knowledge and perception of customers, obtained through experience with an object, attitudes and information from various sources. This knowledge and perception are usually in the form of belief, in which the customer believes that a product has several attributes. Cognitive knowledge

is often referred to as customer knowledge and trust.

- b. Affective describes customers' emotions and feelings, showing a direct and general assessment of a product, whether the product is liked or disliked, whether the product is good or bad.
- c. Conative shows a person's action or behaviour tendency towards an object; conative is related to the action or behaviour to be carried out by a customer (likelihood or tendency) and is often referred to as intention.

METHOD

The population in this study amounted to 96 respondents PT. Gelora Cahaya Unggul in West Jakarta. The sample in this study amounted to 96 respondents. The type of research used is associative, where the aim is to determine the effect of the independent variable on the dependent variable either partially or simultaneously. The data are analyzing using instrument tests, classical assumption tests, regression, coefficient of determination, and hypothesis testing.

RESULT and DICUSSION

1. Descriptive Analysis

This test is used to determine the minimum and maximum score, the mean score, and each variable's standard deviation. The results are as follows:

Table 1. Descriptive Statistics Analysis Results

	Descriptive Statistics				
	N	Minimum	Maximum	Mean	Std. Deviation
Product development (X1)	96	32	48	38.36	3,814
Product quality (X2)	96	30	45	38.33	3,698
Customer satisfaction (Y)	96	32	46	39.16	3,537
Valid N (listwise)	96				

Product development obtained a minimum variance of 32 and a maximum variance of 48 with

a mean score of 38.36 with a standard deviation of 3.814. The product quality obtained a minimum

variance of 30 a maximum variance of 45 with a mean score of 38.33 with a standard deviation of 3.698. Consumer satisfaction obtained a minimum variance of 32 and a maximum variance of 476 with a mean score of 39.16 with a standard deviation of 3.537.

2. Verification Analysis.

This analysis aims to determine the effect of the independent variable on the dependent variable. The test results are as follows:

a. Multiple Linear Regression Analysis

This regression test is intended to determine changes in the dependent variable if the independent variable changes. The test results are as follows:

Table 2. Multiple Linear Regression Test Results

		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients		
	Model	B	Std. Error	Beta	t	Sig.
1	(Constant)	10,648	2,987		3,565	.001
	Product development (X1)	.382	.085	.411	4,501	.000
	Product quality (X2)	.362	.087	.378	4,139	.000

a. Dependent Variable: Customer satisfaction (Y)

Based on the test results in the table above, the regression equation $Y = 10.648 + 0.382X1 + 0.362X2$ is obtained. From this equation, it is explained as follows:

- 1) A constant of 10.648 means that if product development and product quality are not available, there is a consumer satisfaction value of 10.648 points.
- 2) The product development regression coefficient is 0.382; this figure is positive, meaning that every time there is an increase in product development of 0.382, consumer satisfaction will also increase by 0.382 points.

- 3) The product quality regression coefficient is 0.362; this figure is positive, meaning that every time there is an increase in product quality of 0.362, consumer satisfaction will also increase by 0.362 points.

b. Correlation Coefficient Analysis

Correlation coefficient analysis is intended to determine the level of strength of the relationship between the independent variable and the dependent variable either partially or simultaneously. The test results are as follows:

Table 3. Correlation Coefficient Testing Results of Product Development on Customer Satisfaction.

		Correlations ^b	
		Product development (X1)	Customer satisfaction (Y)
Product development (X1)	Pearson Correlation	1	.636 **
	Sig. (2-tailed)		.000
Customer satisfaction (Y)	Pearson Correlation	.636 **	1
	Sig. (2-tailed)	.000	

The test results obtained a correlation value of 0.636 means that product development has a strong relationship with customer satisfaction.

Table 4. Correlation Coefficient Testing Results of Product Quality on Customer Satisfaction
Correlationsb

		Product quality (X2)	Customer satisfaction (Y)
Product quality (X2)	Pearson Correlation	1	.623 **
	Sig. (2-tailed)		.000
Customer satisfaction (Y)	Pearson Correlation	.623 **	1
	Sig. (2-tailed)	.000	

The test results obtained a correlation value of 0.623, meaning that product quality has a strong relationship with customer satisfaction.

Table 5. Correlation Coefficient Testing Results of product development and product quality simultaneously on consumer satisfaction.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.705a	.497	.487	2,535

a. Predictors: (Constant), Product quality (X2), Product development (X1)

The test results obtained a correlation value of 0.705 means that product development and product quality simultaneously have a solid relationship to customer satisfaction.

c. Analysis of the coefficient of determination

The coefficient of determination is intended to determine the independent variable's influence on the dependent variable either partially or simultaneously. The test results are as follows:

Table 6. Testing Results of the Determination Coefficient of Product Development on Consumer Satisfaction.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.636a	.405	.398	2,743

a. Predictors: (Constant), Product development (X1)

The test results obtained a determination value of 0.405, meaning that product development has an influence contribution of 40.5% on customer satisfaction.

Table 7. Results of Testing the Coefficient of Determination of Product Quality on Customer Satisfaction.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.623a	.388	.381	2,782

a. Predictors: (Constant), Product quality (X2)

Based on the test results, a determination value of 0.388 means that the product quality has an influence contribution of 38.8% on customer satisfaction.

**Table 8. Testing Results of the Determination Coefficient of Product Development and Product Quality on Consumer Satisfaction.
 Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.705a	.497	.487	2,535

a. Predictors: (Constant), Product quality (X2), Product development (X1)

Based on the test results obtained, a determination value of 0.497 means that product development and product quality simultaneously influence 49.7% on customer satisfaction, while other factors influence the remaining 50.3%.

d. Hypothesis testing

Partial hypothesis test (t-test)

Hypothesis testing with the t-test is used to determine which partial hypothesis is accepted. The first hypothesis: There is a significant influence between product development on customer satisfaction.

Table 9. Hypothesis Test Results for Product Development on Customer Satisfaction Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	16,521	2,845		5,807	.000
	Product development (X1)	.590	.074	.636	7,996	.000

a. Dependent Variable: Customer satisfaction (Y)

Based on the test results in the table above, the value of t count > t table or (7,996 > 1,986) is obtained; thus, the first hypothesis that is

proposed is that there is a significant effect between product development on consumer satisfaction is accepted.

Table 10. Hypothesis Test Results on product quality on consumer satisfaction Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	16,321	2,972		5,491	.000
	Product quality (X2)	.596	.077	.623	7,718	.000

a. Dependent Variable: Customer satisfaction (Y)

Based on the test results in the table above, the value of t count > t table or (7,718 > 1,986) is obtained; thus, the second hypothesis proposed that there is a significant effect between product quality on customer satisfaction is accepted.

Simultaneous Hypothesis Test (Test F)

Hypothesis testing with the F test is used to determine which simultaneous hypothesis is accepted. The third hypothesis There is a significant influence between product development and product quality on customer satisfaction.

Table 11. Hypothesis Test Results for Product development and product quality on consumer satisfaction.
ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	591,230	2	295,615	46,018	.000b
	Residual	597,426	93	6,424		
	Total	1188,656	95			

Based on the table above's test results, the calculated F value > F table or (46.018 > 2,700) is obtained; thus, the third hypothesis proposed a significant effect between product development and product quality on consumer satisfaction is accepted.

the value of F count > F table or (46.018 > 2,700). Thus, the third hypothesis proposed that there is a significant effect between product development and product quality on customer satisfaction is accepted.

Discussion of Research Results

1. Effect of product development on consumer satisfaction

Product development has a significant effect on customer satisfaction with a correlation of 0.636 or has a strong relationship with a contribution of influence of 40.5%. Hypothesis testing obtained t value > t table or (7.996 > 1.986). Thus, the first hypothesis proposed a significant effect between product development on customer satisfaction is accepted.

2. Effect of product quality on consumer satisfaction

Product quality has a significant effect on customer satisfaction with a correlation of 0.623 or has a strong relationship with an influential contribution of 38.8%. Hypothesis testing obtained t value > t table or (7,718 > 1,986). Thus, the second hypothesis proposed that there is a significant effect between product quality and consumer satisfaction is accepted.

3. Effect of product development and product quality on consumer satisfaction

Product development and product quality significantly affect consumer satisfaction by obtaining the regression equation $Y = 10.648 + 0.382X_1 + 0.362X_2$, the correlation value is 0.705 or has a strong relationship with the contribution of the influence of 49.7% while factors influence the remaining 50.3%. Hypothesis testing obtained

CONCLUSION

- Product development has a significant effect on consumer satisfaction with a contribution of influence of 40.5%. Hypothesis test obtained t value > t table or (7,996 > 1,986).
- Product quality has a significant effect on customer satisfaction with a contribution of the effect of 38.8%. Hypothesis test obtained t value > t table or (7,718 > 1,986).
- Product development and product quality significantly affect consumer satisfaction with an influence contribution of 49.7%, while other factors influence the remaining 50.3%. Hypothesis testing obtained the value of F count > F table or (46.018 > 2,700)..

REFERENCES

- Algifari. (2015). "Analisis Regresi untuk Bisnis dan Ekonomi". Yogyakarta: BPFE.
- Anjani, R. (2019). Tata Kelola Adminitrasi Keuangan, Dan Pembangunan Desa Tepi Laut Kabupaten Bengkulu Utara. *Jurnal Pengabdian Masyarakat Bumi Raflesia*, 2 (2).
- Arikunto, Suharsimi (2014). "Prosedur Penelitian Suatu Pendekatan Praktek". Jakarta: Rineka Cipta.
- Asmawi, M. (2017). The effect of compensation, empowerment, and job satisfaction on employee loyalty. *International Journal of*

- Scientific Research and Management, 5(12), 7590-7599.
- Candra Dery Bagus, dkk. "Pengaruh Inovasi Produk Dan Brand Image Terhadap Keputusan Pembelian Pada Olivia Cake" Jurnal Aplikasi dan Bisnis. E-ISSN: 2407-5523, Hal. 86-91
- Ghozali, Imam, 2011. "Aplikasi Analisis Multivariate Dengan Program SPSS".
- Gifani Auliannisa, Syahputra. 2017. "Pengaruh Citra Merek Terhadap Keputusan Pembelian Produk Smartphone Oppo Pada Mahasiswa Universitas Telkom" Jurnal Bisnis dan Iptek. Vol.10 No.2, Hal. 82-92
- Gumilang, Ratna Risa. 2019. "Implementasi Digital Marketing Terhadap
- Hanaysha, Jalal, Haim Hilman, Noor Hasmini Abdul-Ghani. 2014." Efek Langsung dan Tidak Langsung dari Inovasi Produk dan Kualitas Produk pada Citra Merek: Bukti Empiris dari Industri Otomotif " Jurnal Internasional Publikasi Ilmiah dan Penelitian. Manajemen Bisnis Vol.4. Edisi 11, Hal.2-5
- Haque, M. G., Nurjaya, N., Affandi, A., Erlangga, H., & Sunarsi, D. (2021). Micro Financial Sharia Non-bank Strategic Analysis: a Study at BMT Beringharjo, Yogyakarta. Budapest International Research and Critics Institute (BIRCI-Journal): Humanities and Social Sciences, 4(2), 1677-1686.
- Indah, Rasyid, Tri. 2018."Pengaruh Inovasi Produk Dan Harga Terhadap Keputusan Pembelian Sepeda Motor Dikota Tangerang Selatan" Jurnal Perspektif. Vol.16 No.1, Hal. 40-49
- Jasmani, J. (2019). Pengaruh Orientasi Pasar Dan Inovasi Produk Terhadap Keunggulan Bersaing Pada PT. Ragam Baja Nusantara. Disrupsi Binis, 2(1).
- Jasmani, J. (2019). Pengaruh Product Development Dan Promotion Mix Terhadap Peningkatan Penjualan Yang Berdampak Pada Keunggulan Bersaing. Jurnal Ekonomi Efektif, 1(2).
- Jasmani, Jasmani, and Denok Sunarsi. "The Influence of Product Mix, Promotion Mix and Brand Image on Consumer Purchasing Decisions of Sari Roti Products in South Tangerang." PINISI Discretion Review 1.1 (2020): 165-174.
- Keller dan Amstrong (2017) "Prinsip-prinsip Pemasaran". Edisi Kedua Belas". Jilid Satu. Jakarta: Erlangga.
- Kevin Keller dan Amstrong (2017) Prinsip-prinsip Pemasaran, Edisi Kedua Belas, Jilid Satu, Jakarta: Erlangga.
- Kharis, Ismu Fadli (2011). "Studi Mengenai Impulse Buying dalam Penjualan Online". Semarang : Skripsi Universitas Diponegoro
- Kotler & Keller (2016) "Manajemen Pemasaran". PT. Macaman Jaya Cemerlang. Jakarta.
- Kotler (2016) "Manajemen Pemasaran". Edisi Keempat belas, Jakarta: PT. Indeks.
- Lupiyadi, Rambat (2016) Manajemen Pemasaran Jasa edisi 2 , Jakarta : Salemba Empat.
- Lupiyoadi (2016) Manajemen Pemasaran Jasa, Edisi 4, Jakarta: Salemba Empat.
- Mani, J. (2017). Pengaruh Persepsi Merek Dan Kualitas Pelayanan Terhadap Kepuasan Pelanggan (Studi Kasus Pada PT. Bisma Narendra Di Jakarta). Jurnal Mandiri, 1(2), 187-206.
- Marheni Eka Saputri, Tutut Ratna Pranata. 2014. "Pengaruh Brand Image Terhadap Ksetiaan Pengguna Smartphone Iphone" Jurnal Fakultas Komunikasi dan Bisnis. Vol.13 No.3, Hal. 191-201
- Nasir, Akhmad. 2018. "Pengaruh Inovasi Produk terhadap Kinerja Pemasaran Industri Mebel di Kabupaten Pasuruan". Penelitian ilmiah," Jurnal Ilmu Manajemen dan Akuntansi Vol.6 No.2, Hal. 18-20
- Nurjaya, N., Affandi, A., Erlangga, H., Sunarsi, D., & Jasmani, J. (2021). The Effect of Product Promotion and Innovation Activities on Marketing Performance in Middle Small Micro Enterprises in Cianjur. Budapest International Research and Critics Institute (BIRCI-Journal): Humanities and Social Sciences, 4(1), 528-540.
- Onsardi, O. (2018). Loyalitas Karyawan pada Universitas Swasta di Kota Bengkulu. COSTING: Journal of Economic, Bussines and Accounting, 2(1), 1-13.
- Onsardi, O. (2019). Pengaruh Kompensasi Dan Pemberdayaan, Terhadap Loyalitas Karyawan Dengan Variabel Intervening Kepuasan Kerja (No. jsypg). Center for Open Science.
- Paramarta, V., Dewi, R. R. V. K., Rahmanita, F., Hidayati, S., & Sunarsi, D. (2021). Halal

- Tourism in Indonesia: Regional Regulation and Indonesian Ulama Council Perspective. *International Journal of Criminology and Sociology*, 10, 497-505.
- Peningkatan Penjualan Home Industri” *Jurnal Ilmiah Manajemen* Vol.10 No.1, Hal. 10-11
- Robins, Coulter. 2010. *Manajemen*. Jakarta Erlangga
- Sedarmayanti. (2011). *Metodologi Penelitian*. Bandung : Munandar Maju. Shaleh, Rifki.
2017. “Pengaruh Inovasi Produk Gaya Hidup, Harga Terhadap Keputusan Pembelian Minyak Rambut Stalker Pomade Di Un Kediri” *Jurnal Ekonomi Manajemen*. Vol.1 No.1, Hal. 2-12
- Semarang: Badan Penerbit Universitas Diponegoro
- Suhaily, Lily dan Syarief Darmoyo. 2017. “Pengaruh Kualitas Produk, Harga Persepsi Dan Citra Merek Terhadap Keputusan Pembelian Diperoleh Kepercayaan Pelanggan (Studi Pada Produk Elektronik Merek Jepang)” *Jurnal Fakultas Ekonomi dan Bisnis*. Vol.21 No.22, Hal. 5
- Tambunan, Elisabet dan Marupa Siregar. 2018. “Pengaruh Promosi Dan Inovasi Produk Terhadap Keputusan Pembelian Batik Azzahra Medan” *Jurnal Mutiara Manajemen*. Vol.3 No.1, Hal. 3-9
- Wulandari, Dwi ajeng dan Farah Oktafani. 2017. “Pengaruh Brand Image Terhadap Proses Keputusan Pembelian Sepatu Nike Pada Mahasiswa Komunikasi Dan Bisnis Telkom University Bandung” *Jurnal Ekonomi dan Bisnis*. Vol. No.1, Hal. 50-58