



THE INFLUENCE OF PRODUCT INNOVATION AND PRODUCT ATTRIBUTES ON EVERBRIGHT SALES LEVELS BINJAI BRANCH

Mila Asmawiani Okta
Galeh Sari

Lecturer at STIE Professional Management College Indonesia

meelha82@gmail.com

Abstract

This research was conducted at PT Everbright Binjai Branch. The aim of this research was to determine and analyze the influence of Product Innovation and Product Attributes on the Sales Level of PT Everbright Binjai Branch.

The population is 126 customers, while the sample in this research is: 96 customers. The sampling technique used is simple random sampling. Data collection techniques are by distributing questionnaires, interviews and documentation studies. Data analysis uses multiple linear regression analysis.

The conclusion of the research is that simultaneously Product Innovation and Product Attributes have a positive and significant effect on the Sales Level of PT Everbright Binjai Branch. Partially, Product Innovation has a positive and significant effect on the Sales Level of PT Everbright Binjai Branch. Partially, Product Attributes have a positive and significant effect on the Sales Level of PT Everbright Binjai Branch. The coefficient of determination seen from the Adjusted R Square value is: 0.435, meaning that product innovation and product attributes can explain the sales level by 43.5% and the remaining 56.5% is influenced by other variables outside of this research such as: service quality, sales promotion, customer satisfaction and so on.

Keywords: Product Innovation, Product Attributes, Sales Level

I. INTRODUCTION

The company was founded with the main objective, namely: to seek profits by obtaining maximum profits so that the company's survival can be maintained. The aim of seeking profits requires each company to be able to implement certain strategies and certain policies so that it remains competitive and continues to exist in line with the rapid development of the times. Apart from that, profits by obtaining maximum profits are made to achieve company goals both in the long and short term. Therefore, companies need to

improve and improve their management, such as: in terms of product innovation and product attributes.

Sales are a source of company income, where the greater the sales, the more profitable the company is with greater income. Companies are unable to develop when the sales of the products they produce are unable to compete with competitors. If the company is able to continue to increase sales volume, then the company is able to compete with its competitors. The sales volume achieved greatly influences the company's

business development. Achieving sales volume can be influenced by a number of factors such as: product innovation and product attributes.

PT Everbright Binjai Branch is a company engaged in the production and sales of ABC batteries. Like other companies, this company also hopes for increasingly rapid business development with increased sales. However, the company's hopes have not been realized properly because sales in 2018 decreased compared to sales in previous years.

Product innovation is a way for leaders to add to or improve existing products for the smooth running of their business to attract customers' buying interest through the information and technology they know. Developing a product by carrying out product innovation must maintain the quality of the product produced or even need to be improved further in order to produce a superior product. There is competitive competition in every business, product development needs to be carried out to be able to create superior products in order to achieve competitive advantage. By implementing the latest innovations that are not easily imitated by competitors.

In practice, ABC battery product innovation has not yet been designed and implemented as well as possible. There is a lack of innovation in the battery pack which has never been replaced in terms of color or type of font used. During battery development, ABC still has not designed a battery that is characterized by high quality compared to its competitors, such as alkaline batteries and so on. ABC battery still not adapting the innovations carried out by prioritizing suitability and the needs and desires of its customers. This problem of lack of product innovation has caused many customers to switch to other types of brand batteries, resulting in a decline in sales of ABC batteries.

Product attributes are components which are product characteristics that guarantee that the product can meet the needs and desires expected

by buyers. Business competition begins with something produced and offered to customers, both products and services. A product is something that can be offered for attention, use, ownership or consumption so that it can satisfy someone's wants or needs. The products offered have characteristics or attributes that are attractive to customers.

The declining attributes of ABC battery products can be seen from the level of complaints from customers to the company such as: ease of defects due to packaging that is not strong enough, the lifespan of ABC battery products running out more quickly, quality that is increasingly decreasing can be seen from the frequent performance of products not in accordance with expectations, meaning : when customers use a product it often doesn't work well. So far, the product attributes have been designed quite well because the price can be competitive, so the company has lowered the product attributes in the form of quality and battery life which has decreased. This triggers low sales levels and many customers switch to other brands because the prices are cheaper but have the same quality as ABC batteries.

Based on the explanation of the problem above, researchers are interested in conducting research on this company with the title Thesis: "The Influence of Product Innovation and Product Attributes on the Sales Level of PT Everbright Binjai Branch."

II. LITERATURE REVIEW

According to Kotler and Keller (2015:281), "In a rapidly changing economy, continuous innovation is a necessity. Highly innovative companies are able to identify and scale new market opportunities quickly."

According to Surjaweni (2015: 151), "Product innovation is the creation of new thoughts, new ideas and offering innovative products."

According to Suprpto and Limakrisna (2018:301) "Innovation is a mediator between market orientation and performance."

Based on the definition above, it can be concluded that innovation is a strategy needed to face competition and overcome consumer boredom with a product or service.

According to Assauri (2014:220-221), in developing this product there are several driving factors, both internal and external. Internal factors that encourage product development are:

1. The occurrence of excess capacity in the company needs to be taken into account, so to avoid it, it is necessary to analyze the causes and try to find a solution through product development.
2. There are by-products that may still be made into another type of product.
3. There is an effort to use existing materials to produce a product that has high value.

External factors that encourage product development are:

1. There is close competition with rival products, where the rival product appears to be somewhat superior.
2. There is an effort to become a leader in a certain type of product, in addition to increasing prestige.
3. There is a decline in demand for existing products, especially due to price differences with other cheaper products.

III. RESEARCH METHODS

Research Location and Time

The place that is the object of this research is: at PT Everbright Binjai Branch which is located at Jalan Binjai Kampung Lalang and the time of this research is planned from September 2019 to April 2020.

Population and Sample

The population in this research is: all employees totaling 126 customers. The number of samples in this research was: 96 customers. The sampling technique used is: incidental sampling

Data collection technique

In this research, data collection related to the problems studied by researchers was carried out by:

1. Questionnaire (Questionnaire)

Questionnaires are distributed to customers.

2. Interview

Interviews were conducted with several company consumers at the start of the research to find out about phenomena or problems that occurred in the company.

3. Literature review

The literature study used in this research is: books and journals related to the variables in the research

4. Documentation study

Study documentation obtained from company history, company organizational structure, company vision and mission

Data Types and Sources

This type of research data uses quantitative data, namely the results of respondents' answers which will be processed statistically using the SPSS program.

There are two types of data sources that is :

1. Primary sources

Primary sources are data sources that directly provide data to data collectors.

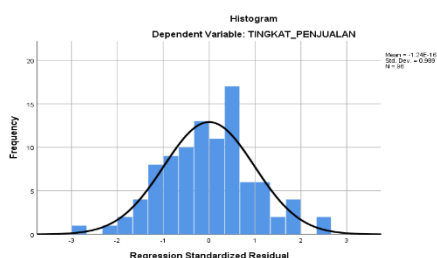
2. Secondary sources

Secondary sources are sources that do not directly provide data for data collection, for example through other people or through documents.

IV. RESEARCH RESULTS AND DISCUSSION

Normality Test

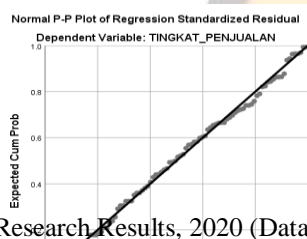
The normality test was tested using graphic analysis. The following are the results of the normality test using histogram graphic analysis and normal P Plot.



Source: Research Results, 2020 (Data processed)

Figure 4.2. Histogram Normality Test

Figure 4.2. shows that the histogram graph has real data forming a curve line that tends to be symmetrical (U) and does not deviate to the left or right, so it can be said that the data is normally distributed.



Source: Research Results, 2020 (Data processed)

Figure 4.3. Normality Test of Normal PP Plot

Figure 4.3. Normality Graph PP Plot, it can be seen that the data is spread around the diagonal line and the data surrounds the diagonal line so that it can be concluded that the data is normally distributed.

The results of the normality test calculations can be seen in the following:

One-Sample Kolmogorov-Smirnov Test

Unstandardized Residuals		
Normal Parameters, b		
	Mean	.0000000
	Std. Deviation	4.25301467
Most Extreme Differences	Absolute	.044
	Positive	.044
	Negative	-.033
Statistical Tests		.044

Asymp. Sig. (2-tailed) .200c,d

- Test distribution is Normal.
 - Calculated from data.
 - Lilliefors Significance Correction.
 - This is a lower bound of the true significance.
- Source: Research Results, 2020 (processed data)

Table 1. Normality Test Results

Table 1 shows a significant value of 0.200 > 0.05, indicating that the data is normally distributed.

Multicollinearity Test

Test results of multicollinearity calculations can be seen in Table 2 below:

	Nearby Statistics	
	Tolerance	VIF
Constant		
INNOVATION_PRODUCT	.891	1.122
PRODUCT_ATTRIBUTES	.891	1.122

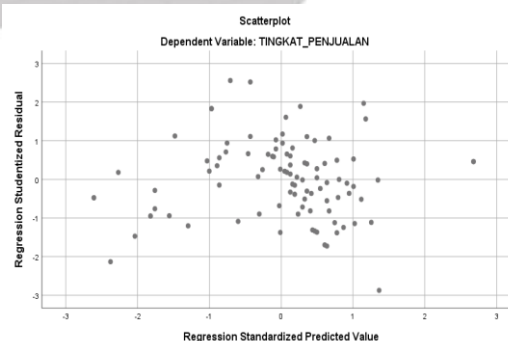
Source: Research Results, 2020 (Data processed)

Table 2. Multicollinearity Test

Table 4.12. shows that the independent variable Product Innovation and the independent variable Product Attribute have a tolerance value of 0.891 > 0.01 and the VIF value of the independent variable Product Innovation and the independent variable Product Attribute is 1.122 < 10. It can be concluded that there is no multicollinearity between the independent variable Product Innovation and the independent variable Product Attributes in this research.

Heteroscedasticity Test

Heteroscedasticity test results with graph scatterplot can be seen at Figure 4.4 follows:



Source: Research Results, 2020 (Data processed)

Figure 4.4. Heteroscedasticity Test

Figure 4.4. shows that the data is spread out in an unclear pattern both above and below zero (0) on the Y axis, not gathered in one place, so

from the scatterplot graph it can be concluded that heteroscedasticity does not occur in the regression model in this study.

The results of the heteroscedasticity test with the Glejser test can be seen at:

Coefficientsa					
		Unstandardized Coefficients		Standardized Coefficients	
		B	Error	Beta	T
	(Constant)	4,417	1,513		2,920
	INOVASI_PRODUK	-.051	,065	-.085	-.779
	PRODUK_ATTRIBUTES	,004	,083	,005	,047

Dependent Variable: ABS_RES

Source: Research Results, 2020 (Data processed)

Table 4.13. above shows a significant value for the independent variable Product Innovation of $0.438 > 0.05$ and a significant value for the independent variable Product Attributes of $0.963 > 0.05$. It can be concluded that heteroscedasticity did not occur in this study.

The results of the heteroscedasticity test with the Spearman's Rho test are as follows:

Correlations				
		JLHX1	JLHX2	Unstandardized Residual
Spearman's rho: INOVASI_PRODUK	Correlation Coefficient	1.000	.277**	-.072
	Sig. (2-tailed)		.006	.483
	N	96	96	96
ATRIBUT_PRODUK	Correlation Coefficient	.277**	1.000	-.083
	Sig. (2-tailed)	.006		.423
	N	96	96	96
Unstandardized Residual	Correlation Coefficient	-.072	-.083	1.000
	Sig. (2-tailed)	.483	.423	
	N	96	96	96

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4.14. Spearman's Rho test

Source: Research Results, 2020 (Data processed)

Table 4.14. shows that the independent variable Product Innovation (X1) has a significant value of $0.483 > 0.05$ and the independent variable Product Attribute (X2) has a significant value of $0.423 > 0.05$, meaning that heteroscedasticity does not occur in this research.

Linearity Test

The results of the linearity test can be seen in Table 4.15 below:

ANOVA Table					
		Sum of Squares	df	Mean Square	F
TINGKAT_PENJUALAN * INOVASI_PRODUK	Between Groups	1931.470	18	107.304	7.032
	(Combined)	1110.838	1	1110.838	72.794
	Linearity	820.632	17	48.272	3.163
	Deviation from Linearity				
Within Groups		1175.020	77	15.260	
Total		3106.490	95		

Table 4.16. Linearity Test

Source: Research Results, 2019 (Data processed)

Table 4.16. that the linearity test of Product Innovation on Sales has a significant value of $0.000 < 0.05$ that Product Innovation and Sales Level have a linear relationship.

Table 4.17. Linearity Test

ANOVA Table						
			Sum of Squares	df	Mean Square	F
TINGKAT_PENJUALAN * ATRIBUT_PRODUK	Between Groups	(Combined)	1704.346	15	113.623	6.483
		Linearity	713.912	1	713.912	40.733
		Deviation from Linearity	990.433	14	70.745	4.036
	Within Groups		1402.144	80	17.527	
Total			3106.490	95		

Source: Research Results, 2020 (Data processed)

Table 4.17. that the linearity test between Product Attributes and Sales Level has a significant value of $0.000 < 0.05$, meaning that Product Attributes and Sales Levels have a linear relationship.

Autocorrelation Test Results

The results of the autocorrelation test can be seen in Table 4.15. the following :

Test Runs

	Standardized Residuals
Test Valuea	.08189
Cases < Test Value	48
Cases >= Test Value	48
Total Cases	96
Number of Runs	40
Z	-1,847
Asymp. Sig. (2-tailed)	,065

Median

Source: Research Results, 2020 (Data processed)

Table 4.15. Autocorrelation Test

Table 4.15. shows a significant value of $0.065 > 0.05$. It can be concluded that there was no autocorrelation in this study.

Autocorrelation testing is as follows:

Model Summary b

	R	Adjusted R Square	Adjusted R Square	Error of the Estimate	Durbin-Watson
Model	.668a	.447	.435	4,299	1,644

Predictors: (Constant), PRODUCT_ATTRIBUTES, PRODUCT_INOVATION

Dependent Variable: SALES_LEVEL

Source: 2020 Research Results (processed data)

Table 4.16. Autocorrelation Test

Table 4.16. obtained a Durbin-Watson value of 1.644. The criterion is if $du < d \text{ count} < 4-du$ then there is no autocorrelation.

Multiple Linear Regression Analysis

The following are the results of multiple linear regression analysis testing, namely:

Model	Coefficientsa		t	Sig.
	Standardized Coefficients B	Error	Standardized Coefficients Beta	
(Constant)	6,667	2,493		,675
INNOVATION_PRODUCT	,650	,108	,494	,000
PRODUCT_ATTRIBUTES	,532	,137	,316	,000

Dependent Variable: SALES_LEVEL

Source: Research Results, 2020 (Data processed)

Table 4.18. Results of Multiple Linear Regression Analysis

$$Y = 6.667 + 0.650 X_1 + 0.532 X_2 + e$$

The meaning of the explanation of multiple linear regression analysis above is:

1. $a = 6.667$

If product innovation and product attributes do not increase, the sales level will be 6,667 units

2. Regression Coefficient for the Independent Variable Product Innovation = 0.650

Every time there is an increase of one unit in the product innovation variable, the sales level will increase by 0.650 units assuming the other variables remain constant.

3. Regression Coefficient for the Independent Variable Product Attribute = 0.532

Every time there is an increase of one unit in the Product Attribute variable, the Sales Level will increase by 0.532 units assuming the other variables remain constant.

Coefficient of Determination

The results of the coefficient of determination test can be seen in Table 4.19. below this:

Model Summary

Model	R	Square	Adjusted R Square	Error of the Estimate
1	.668a	.447	.435	4,299

Predictors: (Constant), PRODUCT_ATTRIBUTES, PRODUCT_INNOVATION

Source: Research Results, 2020 (data processed)

Table 4.19. Coefficient of Determination Test

Table 4.19. that the Adjusted R Square is: 0.435 which means Product Innovation and Product Attributes can explain Level Sale amounting to

43.5% and the remaining 56.5% is influenced by other variables outside of this research such as: service quality, sales promotions, customer satisfaction and so on.

Simultaneous Hypothesis Testing (F-Test)

The following is a table of hypothesis testing result simultaneous ra, namely:

ANOVAa

Model	Sum of Squares	Mean Square	F	Sig.
Regression	1388.117	2694,058	37,563	,000b
Residual	1718.373	93	18,477	
Total	3106.490	95		

Dependent Variable: SALES_LEVEL

Predictors: (Constant), PRODUCT_ATTRIBUTES, PRODUCT_INNOVATION

Source: Research Results, 2020 (processed data)

Table 4.20. Simultaneous Test Results (F Test)

Table 4.20 shows that the Ftable value at the 0.05 significance confidence level at the first degree of freedom = $k-1 = 3-1=2$ and the second degree of freedom = $nk = 96-3= 93$ is 3.09. The calculation results show that the calculated F value is $(37.563) > F \text{ table } (3.09)$ with a significance level of $0.000 < 0.05$, so H_3 is accepted, namely: Product Innovation and Product Attributes have a positive and significant effect on the Sales Level of PT Everbright Binjai Branch.

Partial Hypothesis Testing (t Test)

The following is a table of partial hypothesis testing results, namely:

Coefficientsa

Model	Standardized Coefficients B	Error	Standardized Coefficients Beta	t	Sig.
(Constant)	6,667	2,493			,509
INNOVATION_PRODUCT	,650	,108	,494	1,00	
PRODUCT_ATTRIBUTES	,532	,137	,316	4,00	

Dependent Variable: SALES_LEVEL

Source: Research Results, 2020 (Data processed)

Table 4.21. Partial Test Results (t Test)

Table 4.21. shows that the ttable value for a significance of 0.05 at degrees of freedom $df=nk = 96-3=93$ is 1.986. The results of the t test can be explained as follows:

1. The results of partial hypothesis calculations obtained a value of tcount $(6.041) > t \text{ table } (1.986)$ and a significant value of $0.000 < 0.05$, then H_1 is accepted,

namely:Product Innovation has a positive and significant effect on the Sales Level of PT Everbright Binjai Branch.

2. The results of partial hypothesis calculations obtained a value of t_{count} (3.874) > t_{table} (1.986) and a significant value of $0.000 < 0.05$, then H2 is accepted, namely:Product attributes have a positive and significant effect on the sales level of PT Everbright Binjai Branch.

Discussion

Influence Innovation on the Sales Level of PT Everbright Binjai Branch

According to Priansa (2017:322), innovation can be defined in various ways. The most commonly accepted definition is that innovation is any idea or product perceived by potential adopters as something new. The adopter itself is the result of a process that shows several members of the social system. This is a subjective definition of innovation, because the definition is taken from the mind structure of certain individuals. Innovation can also be defined objectively based on criteria outside the adopter. According to this definition, a new product is: an idea, behavior or item that is qualitatively different from an existing form. This definition is also problematic because of differences of opinion regarding what constitutes a qualitative difference.

According to Kotler and Keller (2015:281), "In a rapidly changing economy, continuous innovation is a necessity. Highly innovative companies are able to identify and scale new market opportunities quickly."

According to Kotler and Keller (2015:281), most well-known companies focus on incremental innovation. Incremental innovation can enable a company to enter new markets by improving products for new customers, using variations of core products to remain market leaders, and creating short-term solutions to entire industry problems.

According to Kotler and Keller (2015:282), another key factor is: a well-defined product concept. The company defines and assesses the target market, product needs, and benefits carefully before proceeding with the product. Other success factors are: technology

and marketing synergy, quality of implementation at all stages, and market attractiveness.

According to Sunyoto (2014: 86), "Product innovation strategies are needed to prevent consumers from feeling bored with the products offered. Consumer saturation occurs when the product being offered has become a common practice for its benefits."

According to Kotler and Keller (2015:279), "In many categories it is increasingly difficult to identify successful products that will change the market but continued innovation to better satisfy consumer needs can encourage competitors to catch up."

Based on the results of research conducted by Hidayat (2016) that Product Innovation has a positive and significant effect on Sales Levels.

The results of partial hypothesis calculations obtained the t value_{count} (6.041) > t_{table} (1.986) and the significant value is $0.000 < 0.05$, then H1 is accepted, namely: partially Product Innovation has a positive and significant effect on the Sales Level of PT Everbright Binjai Branch.

Product innovation is a way for leaders to add to or improve existing products for the smooth running of their business to attract customers' buying interest through the information and technology they know. Developing a product by carrying out product innovation must maintain the quality of the product produced or even need to be improved further in order to produce a superior product. There is competitive competition in every business, product development needs to be carried out to be able to create superior products in order to achieve competitive advantage. By implementing the latest innovations that are not easily imitated by competitors.

In practice, ABC battery product innovation has not yet been designed and implemented as well as possible. There is a lack of innovation in the battery pack which has never been replaced in terms of color or type of font used. During battery development, ABC still has not designed a battery that is characterized by high quality compared to its competitors, such as alkaline batteries and so on. battery ABC still has

not adapted its innovations to prioritize suitability and the needs and desires of its customers. This problem of lack of product innovation has caused many customers to switch to other types of brand batteries, resulting in a decline in sales of ABC batteries.

V. CONCLUSIONS AND RECOMMENDATIONS

Conclusion

Based on the results of research and discussion, it can be concluded that:

1. Partially, Product Innovation has a positive and significant effect on the Sales Level of PT Everbright Binjai Branch.
2. Partially, Product Attributes have a positive and significant effect on the Sales Level of PT Everbright Binjai Branch.
3. Simultaneously, Product Innovation and Product Attributes have a positive and significant effect on the Sales Level of PT Everbright Binjai Branch.

Suggestion

The suggestions in this research are:

1. Increasing product innovation can be done in various ways. One of them is product packaging innovation that is designed to be more attractive.
2. There have been changes that have sparked interest and service innovation, for example creating the ABC website for easy complaint submission.
3. To improve the product attributes of ABC batteries, you can change the color of ABC batteries in different packaging, which aims to encourage consumer interest and increase battery life for longer, so that it can be unique in competing with other types of battery brands. Increasing sales can also be done by increasing product innovation in the form of varying battery packs in even and odd numbers so that they can meet customer needs. Improving product attributes in the form of stronger packaging for the ABC battery box used, in order to maintain the integrity of the ABC battery

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