

THE EFFECT OF QUALITY PRODUCTS TO THE CUSTOMER'S DECISION IN USING PGN GAS IN BATAM SOCIETY WITH THE SERVICE QUALITY AS MODERATION VARIABLE

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Abstract: *This research has the purpose of knowing the role of product quality to consumer decisions in the use of PGN Gas with service quality as a moderation variable. The respondents in this study were households who had used PGN gas with a total of 98 respondents. The data in this study was obtained by distributing questionnaires to respondents. The data that has been collected will be tabulated then processed by using the SPSS data processing program. The results of the study, it is known that the quality of the product has a significant influence on consumer decisions. However, the quality of service is not able to moderate the effect of product quality on consumer decisions in the use of PGN gas.*

Keywords: *Quality of Service; Product Quality; Consumer Decisions*

1. Introduction

Government decision to converse the use of gas from LPG to PGN as suntitute fuel of course has already gone through various studies both from advantages and disadvantages. The gas itself is supplied by PT Perusahaan Gas Negara Tbk (PGN), PGN is considered very helpful and frugal in household expenses.

The weaknesses of LPG Gas which have been experienced by its users are sometimes the users get difficulties to obtain it while the gas is very much needed by the family life to cook food to be consumed. The condequece of this problem in obtaining LPG gas, that the users often have problems in cooking. If LPG gas is difficult to obtain, many gas agents will increase the selling price consequently this condition will add people burdens.

Public desire switch from the use of LPG gas to PGN gas certainly has already been considered. Service and product quality of course become part of public consideration. Quality is a dynamic condition relates to products, services, people, processes and enviroenment which meet or exceed the expectation (Tangkilisan (2007).

High quality services include hope that the government in this case The State Gas Company (PGN) can provide efficient, timely and reliable services, especially service quality relates to the level of community satisfaction with the service provided. The public cerertainly hopes for better services if they have switched from using of LPG gas to PGN gas.

The transition from LPG gas to PGN gas certainly caused by PGN gas has some advantages such as better quality than LPG gas. PGN gas is safer than LPG gas. As it is already known that LPG gas often leaks causing cylinder explodes and fire. By using PGN gas, this bad possibility can be avoided. In addition, the costs incurred for PGN gas are cheaper than LPG gas.

The quality of the product itself can be said to be good if the fuction of the product can meet the consumer needs for the product. Assauri (2010) defines that the product quality is something which needs to be the main

attention for the company or producer. Quality is one of main tools for achieving product position. Quality states the level of ability of a particular brand or certain product in carrying out the functions and expectations. Product quality indicates durability, reliability, accuracy product, easy to operate, maintenance and other evaluated attributes. The results of research conducted by (Rumondor et al., 2017), the results show that product quality has an insignificant effect on purchasing decisions. But the results of research conducted by (Saputra et al., 2017), the results show that product quality has a significant effect on purchasing decision.

2. Theoretical Background

Product Quality

According to Kotler (2009) quality is defined as overall characteristics and nature of goods and services which affect ability to meet stated and implied needs. To achieve the desired product quality need a quality standardization. This method is intended to maintain the products in order to meet stated standard so that the consumers will not lose their confidence in the product.

Product quality is a dynamic condition which relates to the product, services, people, processes, and environment which satisfy or exceed hope (Tjiptono in (Windarti & Ibrahim, 2017).

Product quality is the ability of a product to demonstrate its function, this includes overall durability, reliability, accuracy, ease of operation, and product repair, as well as other product attributes (Kotler, 2012).

Indicator of Product Quality

Indicators of Product quality (Mowen & Minor, 2012) are:

1. Performance
This performance is the main performance of characteristic and operational product
2. Reliability
Reliability is consistency of product performance. Free from damage or malfunction
3. Durability
Product life span / product service life
4. Security
Unsafe products are bad or low quality products

Service Quality

In the business world, it is not only products / services that are of concern. In terms of doing business, service quality must be considered as well, because service quality is a way to retain customers. With quality, it means that companies must meet customer expectations and satisfy their needs.

Service quality is an action taken to meet the needs of other people (consumers, customers, guests, clients, patients, passengers, etc.) whose satisfaction level can only be felt by those who serve and those who are served. In this case there is inner communication between the two parties and the satisfaction obtained depends on the situation when the service interaction occurs (Kotler, 1990: 36 in (Utomo, 2009).

Indicator of Service Quality

Indicator of service quality (Tjiptono dan Chandra, 2005) in Rezha (2013) are as follow:

1. Reliability
2. Responsiveness
3. Emphaty
4. Physical evidence

Consumer Decisions

Purchasing decision of someone is the result of complex interinfluential relationship among cultural, social, personal and psychological factors. Many of these factors only have little influence by marketers. However, these factors are very useful in identifying buyers who may have the greatest interest in a product (Setiadi, Nugroho, 2013).

Consumer Purchasing Decision Stages

Following are stages of Consumer Purchasing Decision (Setiadi, Nugroho, 2013) :

1. Problem Identification
The purchasing process begins when the buyer realizes a need problem. The buyer realizes that there is a difference between the real conditions and the conditions he wants.
2. searching Information
A customer whose arising interest will be motivated to seek more information
3. Alternative Evaluation
How the consumer processes alternative brand to make final decision.
4. Purchasing Decision
Consumers form preferences for brands contained in the selected device. Consumers may also form buying goals for the brands they like best.
5. Post-purchase behavior
After purchasing a product, a consumer will experience some level of satisfaction or dissatisfaction. The consumer will also involve in the post-purchase and use the products which will attract interest of marketers.
6. Satisfaction after purchase the product
After buying a product, a consumer may detect a defect of a product. Some buyers will not want defective products, others will be neutral and some may even see that the defect something which can increase the value of the product.
7. Post-purchase Action
Satisfaction or dissatisfaction of consumer with a product will affect his next actions. If he feels satisfied, he will show his higher possibility to buy that product again.
8. Use and disposal after purchase
Marketers must also control how buyers use and dispose a product if it is not used anymore. If a consumer finds a new way to use the product, it should be interested the marketers because that way can be promoted.

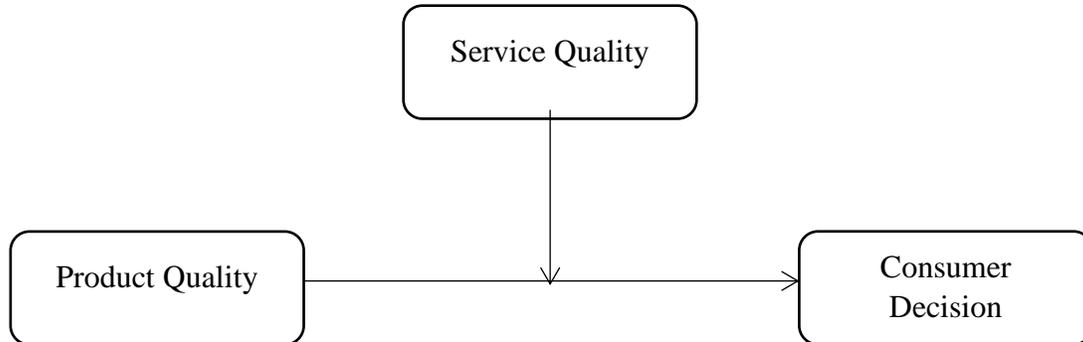
Indicators of Consumer Decision

According to Suwandari in (Nasution & Yasin, 2014) indicators of purchase interest for a potential consumer are as follows:

1. Attention
Attention of potential customer to product offered by producer
2. Interest
The interest of a potential customer to product offered by producer
3. Desire
Desire of potential customer to have product offered by the producer
4. Action
Potential customer buy the product offered by the producer

Theoretical Framework

Theoretical framework can be seen from the following figure



Research Hypothesis

Hypothesis of the research are as follows:

1. Product quality is significantly influence consumer decision
2. Service quality moderately influence product quality toward consumer decision.

3. Research Methodology

This research is descriptive qualitative. Respondents of this research are people who have used PGN gas with the sample of 98 respondents

Hypothesis test is first conducted by simple linear regression. The hypothesis testing equation is as follows:

$$Y = \alpha + b_1x_1 + e$$

- Y : Consumer Decision
- α : Constant
- b_1 : Regressive Coefficient
- x_1 : Product quality
- e : Error

Second Hypothesis testing by using moderating variable. The equation as follows:

$$Y = \alpha + b_1x_1 + b_2x_2 + b_3x_1 x_2 + e$$

- Y : Consumer Decision
- α : Constant
- b_1, b_2, b_3 : Regression Coefficient
- x_1 : Product Quality
- x_2 : Service Quality
- $x_1 x_2$: Interaction between product quality with service quality
- e : error

4. Research Result

Validity Test

Validity test of product quality can be seen in the following table:

Table 1. Validity Test of Product Quality

No	Item	R Count	R Table	Remark
1	X1.1	0,782	0,1986	Valid
2	X1.2	0,663	0,1986	Valid

3	X1.3	0,800	0,1986	Valid
4	X1.4	0,744	0,1986	Valid

From the table above can be seen that the Pearson correlation (R count) for each item in the product quality variable is greater than the R table value (0.1986). So it can be concluded that all items in the product quality variable are valid

The results of the service quality validity test can be seen in the following table:

Table 2. Service Quality Validity Test Results

No	Item	R Count	R Table	Remark
1	X2.1	0,859	0,1986	Valid
2	X2.2	0,854	0,1986	Valid
3	X2.3	0,801	0,1986	Valid
4	X2.4	0,780	0,1986	Valid

From the table above can be seen that pearson correlation (R Count) for each item in the service quality variable are greater than R Table (0,1986). It can be concluded that all items in the service quality variable are valid.

The Result of Consumer Decision Validity Test can be seen from following table:

Table 3. Result of Consumer Decision Validity Test

No	Item	R Count	R Table	Remark
1	Y.1	0,757	0,1986	Valid
2	Y.2	0,835	0,1986	Valid
3	Y.3	0,827	0,1986	Valid
4	Y.4	0,720	0,1986	Valid

From the table above can be seen that value of (R Count) for each item in consumer decision has greater than R Table (0,1986). It can be concluded that all items in the consumer decision variable are valid.

Reliability Test

The result of reliability test can be seen from following table:

Table 4. Result of Reliability Test

Variable	Cronbach Alpha	Remark
Product quality	0,738	Reliable
Service quality	0,834	Reliable
Consumer decision	0,792	Reliable

From table above can be seen that each variable has *Cronbach Alpha* value greater than 0,6. Therefore it can be concuded that measuring instrument in this study is reliable

Hyphothesis Test

Table 5. Result of Simple Regression Test
Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant)	10.713	1.703	6.291	0.000
	Kualitas Produk	0.389	0.097	0.377	3.991

a. Dependent Variable: Keputusan Konsumen

The regression equation obtained:

$$Y = 10.713 + 0.389X_1 + e$$

From above regression equation can be explained as follows:

- Constant value of 10.713, means if independent predicting variable assumed to 0 (zero), the consumer decision has value of 10.713.
- Coeffisien of Product quality regression of 0.389, means if product quality increases one consumer decision will increase by 0.389. T Test is conducted to reveal Significant influence of product quality to consumer decision to use PGN Gas.

Table 6. Result of Regression analysis I Influence of Product Quality to Consumer Decision
Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant)	10.713	1.703	6.291	0.000
	Product quality	0.389	0.097	0.377	3.991

a. Dependent Variable: Consumer Decision

- The role of product quality on consumer decisions

From the results of the t test (partial test), the significance value of product quality is 0.000. This significance value is less than 0.05, which means that there is a significant influence between product quality on the decision to use PGN Gas in Batam city people. Thus the first hypothesis is accepted

Table 7. Result of Regression Analysis II Interaction of Product Quality and Service Quality as Moderating Variables toward Consumer Decision
Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
1 (Constant)	8.029	10.621			.756	.452
Product Quality	.274	.611	.266		.449	.655
Service Quality	.262	.614	.304		.426	.671
Product Quality_Service Quality	.000	.035	.010		.009	.992

a. Dependent Variable: Consumer Decision

Regression equation obtained from above table, namely:

$$Y = 8.029 + 0.274X_1 + 0.262X_2 + 0.000X_1X_2 + e$$

- Constant value of 8.029, means predicting independent variable value is 0 (zero), consumer decision is 8.029
- Coefficient of Product quality regression of 0.274, means product quality positively influence toward consumer decision. This shows that every product quality increase by one point, consumer decision also increase by 0.274.
- Coefficient of service quality regression of 0,262, means service quality positively influence toward consumer decision. It shows that every quality service increase by one point, consumer decision will increase by 0,262.
- Coefficient of product quality regression_product quality of 0.000, means interaction between product quality and service quality do not influence toward consumer decision

Service quality test moderate the influence of product quality toward consumer decision.

Table 8. Service quality test moderate the influence of product quality toward consumer decision

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
1 (Constant)	8.029	10.621			.756	.452
Product Quality	.274	.611	.266		.449	.655
Service Quality	.262	.614	.304		.426	.671
Product Quality_Service Quality	.000	.035	.010		.009	.992

a. Dependent Variable: Consumer Decision

- Service quality does not moderate the influence of product quality on customer decision. Based on the result of regression analysis II, it is known that interaction between product quality and service quality does not significantly influence on customer decisions. So it can be concluded that service quality does not moderately influence product quality toward consumer decision. The results of this study do not support the second hypothesis, so it is rejected

5. Discussion

1. Product quality significantly influence consumer decision form this study.

It is known that product quality has significant influence on customer decision to use PGN Gas. Product quality becomes determining factor for customers' level of satisfaction obtained after purchasing and using of a product or service. A product is said to be quality if it is able to carry out its functions such as durability, reliability, accuracy, ease of operation and repair as well as other valuable attributes.

Judging by the results of the study, the quality of the product has a great influence on the consumer's decision to take the decision to use PGN gas with a coefficient value of 0.389. This means that companies must maintain the quality of their products to keep consumers loyal to the product.

From the results of questionnaire which have been distributed to respondent, it is known that the use of PGN Gas is more economical that the community can save. They agree that by using PGN Gas, they get allot of convenience because they do not worry about running out of gas like using LPG Gas. The use of gas can be for a long time, and the consumer also admit that PGN Gas is saver

The results of this study are supported by the results of research conducted by (Sunarto, 2015) which states that product quality affects consumer purchasing decisions. Research conducted by (Saputra et al., 2017), the results show that product quality has a significant effect on purchasing decision.

2. Service quality does not moderate the effect of product quality toward consumer decision

From result of this study which has been done, it is known that service quality does not moderate the effect of product quality on consumer decision to use PGN Gas. This is caused by the community choose PGN Gas for need of quality product with some advantages offered by PGN Gas such as the community can save cost because PGN Gas is more economical compared with LPG Gas, PGN Gas is also safer and never worried about running out of gas.

The results of this research are supported by the results of research conducted by (Murnilawati et al., 2019) which states that the quality of service is not able to mediate the influence of product quality on purchasing decisions

6. Conclusions and Suggestions

From the result of this study, it can be widrown some conclusions as follows ; Product quality significantly influence on consumer decision to use PGN Gas, Service quality does not moderate the affect of product quality toward PGN Gas Use.

The advice that can be given to the research object is to pay more attention to the quality of the product so that the public still choose and use for a long period of time. The Company must also pay attention and improve the quality of service provided to customers in order for customers to choose to use the product for a long period of time

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