



# The Effect of Product Innovation on Purchasing Decisions for Custom T-shirts with Quality as a Moderating Variable (Study on Sarkastem Lampung Tengah)

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**Abstract:** This study aims to prove whether product innovation affects purchasing decisions for custom t-shirts with quality as a moderating variable in Sarkastem Lampung Tengah. This study uses quantitative research methods. The sampling method used was purposive sampling with a sample size of 95 respondents. This study uses SEM-PLS (Structural Equation Modeling - Partial Least Squares) data analysis measurement tools with the SmartPLS program. The results of this study indicate that product innovation has a positive and significant effect on purchasing decisions and product quality can affect the relationship between product innovation and purchasing decisions, but in a negative direction, namely weakening the relationship between the two.

**Keywords :** Innovation, Product Quality, Purchase Decision

## 1. Introduction

The apparel industry, especially t-shirts, is experiencing rapid growth in Indonesia. T-shirts have become an important part of people's lifestyle and are used every day by all groups. Along with this development, there is a trend of custom t-shirts where consumers can design their own t-shirts. This is supported by the development of digital printing technology that allows printing designs directly onto t-shirt media without the need for a plate or screen.

The rapid development of the custom t-shirt industry is also influenced by the growing influence of the media and entertainment industry. Many consumers, especially fans of movies, idols, or television series, are willing to pay more to get a t-shirt with the design of their favorite logo or slogan. This shows that product personalization is one of the relevant and desirable trends in the modern market. However, the rapid development of the custom t-shirt industry has also triggered increasingly fierce competition.

In this situation, product innovation and quality play an important role in determining consumer purchasing decisions. Product innovation can be defined as the process of creating a new product or updating an existing product by changing its design, features, or functions. In the context of the custom t-shirt industry, product innovation has a very important role because it can help businesses to differentiate their products from competitors' products, and increase consumer satisfaction. Meanwhile, product quality according to Gunawan (2022) Product quality is the ability of a product to meet consumer needs and expectations, and meet predetermined standards. This includes various aspects, such as reliability, durability, performance, safety, and conformity to specifications.

In addition, product innovation can also be a means of self-expression for consumers so that they can show their identity and personality through the clothes they wear.

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Sarkastem is a custom t-shirt business that was founded in 2020 in Lampung Tengah and has become one of the favorite choices of people who want to have unique and quality custom t-shirts. However, sales data in 2024 shows that sales of custom t-shirts at Sarkastem are still unstable and are affected by intense competition in the custom t-shirt industry in the region. Therefore, Sarkastem must continue to innovate and improve the quality of its products to compete with other business actors.

The sales data of custom t-shirts in Sarkastem in 2024 are described as follows:

**Table 1** Sales Data of Custom T-shirts at Sarkastem in 2024

No	Month	Sales Data	Percentage Growth
1.	January	640 pcs	-
2.	February	410 pcs	-35,9%
3.	March	350 pcs	-14,6%
4.	April	300 pcs	-14,2%
5.	May	320 pcs	6,7%
6.	June	300 pcs	-6,2%
7.	July	520 pcs	42,3%
8.	August	720 pcs	38,5%
9.	September	400 pcs	-44,4%
10.	October	335 pcs	-16,2%
11.	November	330 pcs	-1,5%
12.	December	450 pcs	36,7%

Source: Sarkastem (2024)

Sarkastem produces custom t-shirts using two techniques, namely manual screen printing and DTF (Direct to Film). Although both techniques are available, Sarkastem prioritizes the manual screen printing technique because the results are more durable and of better quality compared to other screen printing techniques. On the other hand, the DTF screen printing technique is used to meet the demand of consumers who want to make t-shirts in a faster and more efficient time. Thus, Sarkastem is committed to delivering high-quality products that meet customer expectations.

The majority of Sarkastem's customers come from students and communities. This is because the custom t-shirts offered are very much in line with their needs and interests. Therefore, Sarkastem needs to continue to understand the needs and interests of its customers so that it can continue to improve the quality of the products and services it offers. However, to be able to continue to compete in the increasingly tight custom t-shirt industry, Sarkastem must continue to innovate in its product design. Unique and attractive designs can be one of the factors that distinguish Sarkastem from other businesses and make customers prefer its products.

## 2. Literature Review

### 2.1 Product Innovation (X)

According to Kotler and Keller (2012), product innovation is the creation of new products, services, or features that provide more benefits to customers. This includes entirely new products or significant improvements to existing products.

Nelly et al (2001) explain that product innovation includes the development and introduction of new products or changes in the design, components and architecture of successfully marketed products.

Based on this explanation, it can be concluded that product innovation is the process of creating, developing and implementing new or updated products, which provide added value to customers and improve company performance. Product innovation can be in the form of changes in design, components, product architecture, or significant improvements to existing products.

## 2.2 Product Quality (Z)

Kotler and Keller (2012) define product quality as the ability of a product to perform its functions, including aspects such as durability, reliability, accuracy, ease of use and other valuable attributes. Quality also reflects customer satisfaction with the product.

Garvin (2000) states that product quality is the ability of a product to meet or exceed customer expectations. Garvin identifies eight dimensions of quality that can be measured: performance, features, reliability, fit, durability, serviceability, aesthetics and perceived quality.

Based on this explanation, it is concluded that product quality can be defined as the ability of a good or service to meet or even exceed user expectations. This includes durability, reliability, ease of use, and other attributes that consumers consider important.

## 2.3 Purchase Decision (Y)

Kotler and Armstrong (2014) explain that purchasing decisions are the stage in the decision-making process where consumers actually make purchases. This includes how products, services, or experiences can meet individual or group needs and desires.

According to Tjiptono (2008), purchasing decisions are a process in which consumers recognize problems, seek information about certain products or brands and consider existing options.

Swastha and Irawan (2008) define purchasing decisions as consumers' understanding of the wants and needs for a product, which involves an assessment of various sources to determine purchase objectives and identify existing alternatives.

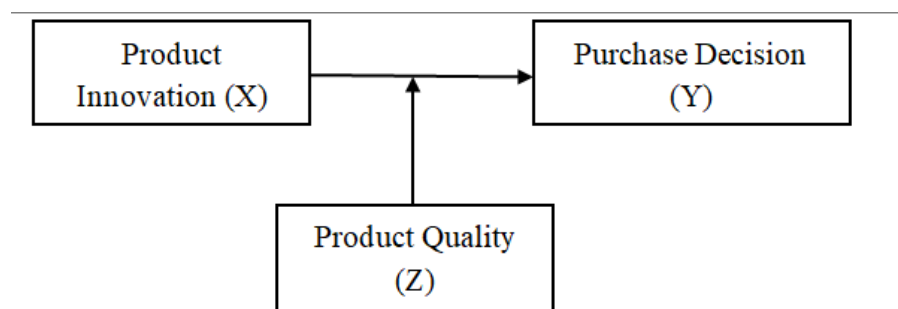
According to Kotler (2009) there are 5 stages of purchasing decision making, namely problem recognition, information search, alternative evaluation, purchase decisions and post-purchase behavior.

## 2.4 Previous Research

Several previous studies have shown that product innovation and product quality have a significant influence on consumer purchasing decisions.

1. In a journal (Sari, N. E., & Roza, 2017) entitled The Effect of Product Innovation on Business Consumer Purchasing Decisions at UMKM Keripik Pisang Dharma Jaya concluded that product innovation affects purchasing decisions by 41.3% at UMKM Keripik Pisang Dharma Jaya.
2. In the journal (Almira, A., & Sutanto, 2018) entitled The Effect of Product Innovation and Product Quality on Purchasing Decisions of Maison Nob concluded that product innovation and product quality have a significant influence on Maison Nob's purchasing decisions.
3. Dalam In the journal (Saputra, N. F., & Faidah, 2022) entitled The Effect of Product Innovation and Product Quality on Consumer Purchasing Decisions with Service Quality as a Moderating Variable (Study on Consumers of Rumah Leha Tenun Pagatan) concluded that product innovation has an impact on purchasing decisions and product quality affects consumer choices at Rumah Leha Tenun Pagatan.

## 2.5 Theoretical Framework



**Figure 2** Theoretical Framework

### 3. Method

This research applies a quantitative approach with the aim of testing hypotheses and analyzing numerical data through statistical techniques. This quantitative approach is used to collect and evaluate data that is measurable and can be calculated, so that the results can be generalized and objective. According to Sugiyono (2018), quantitative research is a method based on positivist philosophy that aims to describe and test hypotheses. By using this method, this research allows accurate and relevant data collection to determine the effect of product innovation on purchasing decisions for custom t-shirts at Sarkastem Lampung Tengah, taking into account product quality as a moderating variable.

The population in this study were all customers who had bought custom shirts at Sarkastem Lampung Tengah. The sampling technique used is Purposive Sampling, with the determination of the sample size of 95 respondents based on the Hair et al formula,

**Hair et al formula:**

**n = Number of indicators used x (5 to 10)**

**n = 19 x 5 = 95**

Data analysis was carried out using Structural Equation Modeling-Partial Least Squares (SEM-PLS) with the SmartPLS 4 program.

### 4. Results

#### 4.1 Test Coefficient of Determination (R<sup>2</sup>)

	<i>R-Square</i>	<i>R-Square Adjusted</i>
Purchase Decision (Y)	0.856	0.852

Source: processed using SmartPLS 4 (2025)

The results of data analysis show that the R-Square value is 0.856, which indicates that the product innovation variable (X) is very effective in explaining the purchasing decision variable (Y), with a percentage of 85.6%. Based on commonly used standards, the R-Square value of 0.856 can be considered strong, indicating that the product innovation variable has a significant impact on purchasing decisions. Therefore, it can be concluded that the effect of product innovation variables in explaining purchasing decisions is strong, which is 85.6%. Meanwhile, the remaining 14.4% comes from other independent variables that are not measured in this study, such as other factors that may affect consumer purchasing decisions.

#### 4.2 Hypothesis Test

	<i>Original Sample (O)</i>	<i>Sample Mean (M)</i>	<i>Standard Deviation (STDEV)</i>	<i>T Statistics ( O/STDEV )</i>	<i>P Value</i>
Product Innovation (X) → Purchase Decision (Y)	0.478	0.473	0.088	5.458	0.000
Product Quality (Z) x Product Innovation (X) → Purchase Decision (Y)	-0.068	-0.066	0.031	2.216	0.027

Based on the results of data analysis, it can be concluded that:

1. Product innovation has a positive and significant influence on purchasing decisions for custom t-shirts at Sarkastem Lampung Tengah, with a path coefficient value of 0.478 and a highly significant P Value (0.000).
2. Product quality also has a significant moderating role in the relationship between product innovation and purchasing decisions, but in a negative direction, namely weakening the relationship between the two, with a path coefficient value of -0.068 and a significant P Value (0.027). Therefore, companies need to consider the role of product innovation and product quality in developing marketing strategies to improve consumer purchasing decisions."

## 5. Discussion

### 5.1 The effect of product innovation on purchasing decisions for custom t-shirts at Sarkastem Lampung Tengah.

Hypothesis testing conducted with SmartPLS 4 shows that product innovation has a positive and significant influence on the choice of purchasing custom t-shirts at Sarkastem Lampung Tengah. With a path coefficient of 0.478 and a highly significant P value (0.000), this result indicates that product innovation has an important role in influencing consumer purchasing decisions. The higher the level of product innovation offered, the more likely consumers are to make purchases.

This result is in line with the innovation theory put forward by Tidd and Bessant (2009) which states that product innovation can increase consumer satisfaction and purchasing decisions. In addition, this research is also reinforced by a previous study (Almira, A., & Sutanto, 2018) which found that product innovation has a significant impact on purchasing decisions. Therefore, product innovation can be considered an important element in improving consumer purchasing decisions

### 5.2 The effect of product innovation on purchasing decisions for custom t-shirts at Sarkastem Lampung Tengah with product quality as a moderating variable.

Hypothesis testing through SmartPLS 4 shows that product quality serves as a moderator in the relationship between product innovation and custom t-shirt purchasing decisions at Sarkastem Lampung Tengah. With a path coefficient that reaches -0.068 and a significant P Value (0.027), this finding indicates that product quality has the potential to influence the relationship between product innovation and purchasing decisions, albeit in a negative direction. This means that the better the product quality, the weaker the relationship between product innovation and purchasing decisions.

This finding is corroborated by research (Simamora, V., & Kusmiyati, 2017) which states that product quality, as a moderating variable, can fade the relationship between product design and purchasing decisions. Therefore, companies must pay attention to the role of product quality in designing product innovation strategies to increase consumer purchasing decisions

## Conclusion

Based on the results of data analysis conducted using SmartPLS 4, it can be concluded that:

1. Product innovation has a positive and significant effect on the decision to buy custom t-shirts at Sarkastem Lampung Tengah, which means that the more innovation in the products offered, consumers will be more likely to make purchases.
2. Product quality plays a moderating role in the relationship between product innovation and purchasing decisions, although with a negative impact, namely reducing the strength of the relationship between the two. In other words, the higher the product quality, the weaker the effect of product innovation on the decision to buy.

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