

# The Influence of Environmental Literacy and Product Innovation on Consumer Decisions to Purchase Environmentally Friendly Batik with Product Image as an Intervening Variable

Elsye Ayu Faradilla<sup>1\*</sup>, Mahirun<sup>2</sup>, Wenty Ayu Sunarjo<sup>3</sup>

<sup>1</sup> Department of Management, Faculty of Economics and Business, University of Pekalongan, Pekalongan, 51111, Indonesia

<sup>2</sup> Department of Management, Faculty of Economics and Business, University of Pekalongan, Pekalongan, 51111, Indonesia

<sup>3</sup> Department of Management, Faculty of Economics and Business, University of Pekalongan, Pekalongan, 51111, Indonesia

Corresponding Author – Email Address : elsyefayu12@yahoo.com

---

## ABSTRACT

This study aims to analyze the influence of environmental literacy and product innovation on consumer decisions in purchasing eco-friendly batik, with product image as an intervening variable. Eco-friendly batik, which is made using natural materials such as vegetable dyes and sustainable production processes, is becoming a new trend in the fashion industry that supports the green economy. The research method used is a quantitative approach by distributing questionnaires to 50 respondents who have purchased natural batik. Data analysis used SEM-PLS. The results showed that environmental literacy and product innovation have a positive effect on product image and purchasing decisions. Product image is proven to significantly mediate the influence of both independent variables on purchasing decisions for eco-friendly batik.

---

## ARTICLE INFO

Keywords:  
Environmental literacy,  
Product innovation,  
Product image,  
Purchasing decisions,  
Eco-friendly batik,  
Green economy

---

## 1. Introduction

Batik is one of Indonesia's cultural heritages that has received world recognition through UNESCO's determination as an intangible cultural heritage in 2009 (Yogyakarta DIK, 2021). In addition to having high cultural value, batik also plays an important role in the local economy, especially in production centers such as Pekalongan, Yogyakarta, Solo, and Cirebon. The batik industry is not only a source of livelihood for thousands of craftsmen, but is also included in the creative economy sector that has the potential to be developed sustainably.

However, the conventional batik production process causes quite serious environmental problems. Most producers still use synthetic chemical dyes that produce toxic liquid waste (Supenah, 2015). This waste often pollutes rivers and soil around the production site, as happened in Pekalongan as reported by kumparan.com, which is known for its polluted rivers due to batik waste. In fact, local people have a saying that if the river is clean, it means the batik industry is sluggish, conversely, if the river is dark in color, it is considered a sign that the batik industry is running

smoothly. This shows that pollution has been considered a "normal" part of the production process, even though it is dangerous for the environment and public health.

Pekalongan City, as a national center of the batik industry, faces significant challenges in managing environmentally friendly batik production waste. Every day, the batik industry in this city produces approximately 5 million liters of liquid waste, yet only 27–30% of it can be treated by the four available communal wastewater treatment plants (WWTPs) (DLH Pekalongan, 2023). Out of a total of 13,550 household-scale batik businesses, only 61 units have wastewater treatment plants (WWTPs), indicating a low level of awareness and capacity for independent waste management (Rahma, 2023).

On the other hand, although innovative efforts such as the use of natural dyes and eco-friendly production processes have been made, their implementation has not been optimal in shaping a positive image in the eyes of consumers. A national survey shows that only 38% of consumers understand the concept of eco-friendly batik, and just 22% have ever purchased such products (Ridwinawati, 2023). This phenomenon indicates a gap between the innovation and environmental education efforts made by batik producers and the perceptions and purchasing decisions of consumers. The low level of environmental literacy and the weakly established product image remain major challenges in promoting the consumption of environmentally friendly batik.

As a solution to these problems, environmentally friendly batik has been developed using natural dyes from plants, production techniques that minimize waste, and a more ethical approach to the environment. However, the adoption of environmentally friendly batik still faces various challenges, especially from the consumer side. Some of these include low environmental literacy, lack of innovation in design and production techniques, and the lack of a strong product image in the minds of consumers.

Environmental literacy is an important factor because it reflects consumers' awareness and understanding of environmental issues and the impacts of their consumption. Consumers with high environmental literacy tend to care more about sustainability and choose environmentally friendly products (Kustina, 2024). On the other hand, product innovation in terms of design, raw materials, and production processes also plays a strategic role in attracting interest and increasing the competitiveness of environmentally friendly batik products.

However, environmental literacy and product innovation do not always have a direct effect on purchasing decisions. One factor that can bridge this influence is product image, namely consumer perception of product quality, value, and uniqueness. A positive product image can strengthen consumer confidence to buy, not only because of aesthetic factors but also because of the ethical and sustainable values contained therein (Ramadhani, 2021).

Therefore, this study is important to be conducted to examine how environmental literacy and product innovation influence consumer purchasing decisions towards eco-friendly batik, with product image as an intervening variable. The results of this study are expected to provide theoretical contributions to the development of consumer behavior and green marketing literature, as well as practical implications for batik industry players and policy makers in encouraging sustainable consumption and production patterns.

**Tabel 1. Research Gap**

Variable	Author	Research Result
Environmental Literacy on Consumer Decisions	Saputra & Fitriani (2023), dan Justin & Handoyo (2023)	Positive Significant
	Hardianti & Murtadlo (2025)	Negative Significant
Product Innovation on Consumer Decisions	Mahendra et al. (2024), Sukri et al. (2024)	Positive Significant
	Ma'ruf et al. (2024)	Negative Significant
Environmental Literacy on Product Image	Tulhuda & Purnama (2023)	Positive Significant
	Syarifudin (2024)	Negative Significant
Product Innovation towards Product Image	Maheswari & Pudjoprastyono (2022)	Positive Significant
	Alisa & Djemly (2021)	Negative Significant
Product Image on Consumer Decisions	Nazara & Saputra (2024), Nasution et al. (2022)	Positive Significant
	Yane Putri et al. (2025)	Positive Not Significant
Environmental Literacy on Consumer Decisions through Product Image	Febriatmoko & Prananta (2024)	Product Image Mediates the Influence of Environmental Literacy on Consumer Decisions
	Hilmi (2025)	Product Image Does Not Mediate the Influence of Environmental Literacy on Consumer Decisions
Product Innovation on Consumer Decisions through Product Image	Aini & Yulistiyono (2024)	Product Image Mediates the Influence of Product Innovation on Consumer Decisions
	Astuti (2023)	Product Image Does Not Mediate the Effect of Product Innovation on Consumer Decisions

### Research Questions

Based on the background above, the formulation of the research problem is as follows:

1. Does environmental literacy influence the decision to purchase environmentally friendly batik?
2. Does product innovation affect the decision to purchase eco-friendly batik?
3. Does environmental literacy affect the image of eco-friendly batik products?
4. Does product innovation affect the image of eco-friendly batik products?
5. Does product image affect the decision to purchase eco-friendly batik?
6. Do environmental literacy and product innovation have a direct effect on purchasing decisions?
7. Does product image mediate the influence of environmental literacy and product innovation on purchasing decisions?

Based on the formulation of the problem above, this study aims to analyze the influence of environmental literacy and product innovation on consumer decisions in purchasing environmentally friendly batik, with product image as an intervening variable. Specifically, this study examines how environmental literacy and product innovation influence purchasing decisions both directly and through the role of product image.

The benefits of this study include three aspects, namely: 1) for batik producers, the results of the study can be the basis for designing marketing strategies based on environmental values; 2) for consumers, it can increase awareness of the importance of sustainable consumption; and 3) for academics, this study is expected to enrich the literature in the field of green marketing and environmentally friendly economic development.

## **2. Literature Review**

### **Environmental Literacy**

Environmental literacy refers to an individual's capacity to understand, evaluate, and act in response to environmental issues. It encompasses not only knowledge about environmental challenges but also a proactive and solution-oriented mindset in addressing them (Kusumaningrum, 2018). This concept integrates four key dimensions: (1) awareness of environmental conditions, (2) understanding of ecological principles, (3) attitudes that reflect environmental concern, and (4) decision making skills that support sustainability.

In a consumer behavior context, environmental literacy influences how individuals assess and choose eco-friendly products. Environmentally literate consumers tend to value sustainability and are often willing to pay a premium for products that align with their environmental values (Ardiansah, 2018; Price et al., 2024).

### **Product Innovation**

Product innovation is the creation or refinement of products to better meet market needs, incorporating both functionality and sustainability considerations (Almira Amelia & Sutanto, 2018). In the case of green products, innovation extends beyond aesthetic or technical features to include environmentally responsible production methods.

Within the scope of green marketing, innovation enhances the perceived value of a product and strengthens its appeal to conscious consumers. The use of natural materials, reduction of waste, and implementation of energy-efficient processes are examples of innovations that contribute positively to consumer trust and purchasing interest (Prameswari & Meliana, 2025).

### **Product Image**

Product image refers to consumers' overall perceptions and evaluations of a product, influenced by their past experiences, knowledge, and information from external sources (Miati, 2020). It includes associations with product quality, functional and emotional benefits, along with values such as social and environmental responsibility.

For environmentally friendly products, such as batik made with natural dyes, a positive product image reflects commitment to sustainability and cultural preservation. A favorable image can significantly influence consumer behavior, increasing both purchasing interest and long-term loyalty (Chairudin & Sari, 2021). Furthermore, product image often mediates the relationship between product attributes (such as innovation) and consumers' buying intentions (Rahmadina & Sutarso, 2024).

### **Purchase Decision**

A purchase decision is the result of a series of cognitive and emotional processes that consumers undergo before selecting and buying a product (Imanulah et al., 2022). These stages typically include recognizing a need, gathering information, comparing alternatives, making the decision, and evaluating the outcome after purchase.

Multiple factors shape this decision-making process, including psychological (motivation, perception, attitude), social (family, peer groups), and personal aspects such as prior experience and

environmental concern (Kartikasari et al., 2013). In the realm of eco-friendly consumption, purchasing decisions are often influenced by consumers' environmental values and their perception of a product's innovation, ethics, and quality (Kustina et al., 2024).

## **Hypothesis Development**

### **The Influence of Environmental Literacy on Purchasing Decisions**

According to Kusumaningrum (2018), environmental literacy is an individual's ability to understand environmental systems, recognize environmental problems, and act responsibly in preserving nature. Individuals who have high environmental literacy will tend to consider the ecological impact of each of their consumption actions, including choosing environmentally friendly products.

Environmental literacy also reflects consumer awareness of the importance of wise consumer behavior and choosing products that support environmental sustainability. When consumers understand the benefits of using environmentally conscious products, they will be more motivated to make purchasing decisions that are in line with those values.

Research conducted by Saputra & Fitriani (2023), and Justin & Handoyo (2023) shows that environmental literacy has a positive and significant influence on purchasing decisions for environmentally friendly products. Consumers with high ecological knowledge and awareness show a greater tendency to choose products that do not damage the environment, including batik with natural materials.

H1: Environmental literacy has a positive influence on consumer decisions to purchase environmentally friendly batik.

### **The Influence of Product Innovation on Purchasing Decisions**

Product innovation is a company's effort to develop or create new, better products, both in terms of design, function, and sustainability (Amelia & Sutanto, 2018). In the context of environmentally friendly batik, innovation can be in the form of using natural materials, non-chemical coloring techniques, or designs that creatively combine traditional and modern elements.

Innovative batik products will provide added value for consumers, especially those who care about the environment. This innovation also creates market differentiation that can attract consumer interest and increase product competitiveness. The higher the level of innovation offered, the greater the possibility of consumers making purchases because they feel they get more benefits.

Several studies, such as those conducted by Santoso & Samboro (2017), Berlentina Permatasari (2021), Almira Amelia & JE Sutanto (2018), Mahendra et al. (2024) and Sukri et al. (2024), show that product innovation has a significant influence on purchasing decisions. Innovative products tend to be considered more attractive, relevant to current needs, and reflect corporate social responsibility.

H2: Product innovation has a positive influence on consumer decisions to purchase environmentally friendly batik.

### **The Influence of Environmental Literacy on Product Image**

Product image is formed from consumer perceptions of the attributes and values of a product. Consumers with high levels of environmental literacy tend to have positive assessments of products that are considered environmentally friendly, because these products are in line with the values they adhere to. (Kustina et al., 2024). Thus, environmental understanding and awareness also influence how consumers view the image of a product.

Research states Tulhuda & Purnama (2023) that consumers who have adequate environmental knowledge will tend to form a positive image of sustainable products. This strengthens the belief that environmental literacy can form a more positive product image in the minds of consumers.

H3: Environmental literacy has a positive influence on the image of environmentally friendly batik products.

#### **The Influence of Product Innovation on Product Image**

Innovation in products not only creates functional value but also shapes perceptions of product quality and credibility. In this case, batik innovation that emphasizes environmentally friendly and aesthetic aspects will build a product image as a product that is not only beautiful but also responsible for nature and culture. Innovation that is carried out consistently can increase consumer perceptions of the uniqueness, quality, and superiority of the product, thus contributing to the formation of a strong product image. Research by Laksono & Magnadi (2019), Chandra (2023), Ribut Muji Wahono & Ely Masykuroh (2022), and Maheswari & Pudjoprastyono (2022) shows that product innovation has a positive relationship with product image, especially in local products based on culture and the environment.

H4: Product innovation has a positive effect on the image of environmentally friendly batik products.

#### **The Influence of Product Image on Purchasing Decisions**

A good product image reflects consumers' positive perceptions of the quality, benefits, and values carried by the product. Batik products that are associated as environmentally friendly, innovative, and high-quality will increase consumer trust and purchasing interest. Product image plays an important role in influencing consumer perceptions and attitudes in the decision-making process. This is reinforced by findings from Anggraeni & Soliha (2020), Dharma & Sukaatmadja (2015), Yohana Dian Puspita & Ginanjar Rahmawan (2021), Nazara & Saputra (2024) dan Nasution et al. (2022), which show that product image has a significant positive influence on purchasing decisions.

H5: Product image has a positive influence on consumer decisions to purchase environmentally friendly batik.

#### **The Influence of Environmental Literacy on Purchasing Decisions Through Product Image**

Product image acts as a mediating variable that bridges the relationship between environmental literacy and product innovation on purchasing decisions. When consumers have environmental literacy and find innovative products, their positive perception of product image will increase, and this will drive purchasing decisions.

Research by Febriatmoko & Prananta (2024) shows that product image can mediate the influence of external factors such as consumer knowledge and product innovation on purchasing behavior. Therefore, product image becomes an important element in explaining how consumers decide to buy environmentally friendly products.

H6: Product image mediates the influence of environmental literacy on purchasing decisions for environmentally friendly batik.

**The Influence of Product Innovation on Purchasing Decisions Through Product Image** According to Kotler & Keller (2021), product innovation is one of the company's strategies to create sustainable competitive advantage in the market. The innovations carried out can be in the form of updating features, designs, packaging, and product functions that provide added value to consumers. When a company is able to present relevant and valuable product innovations, consumer perception of the product image will increase. A positive product image will foster consumer trust, pride, and loyalty to the product, which will ultimately drive purchasing decisions.

Research by Maheswari and Pudjoprastyono (2022) and Aini & Yulistiyono (2024) proves that product innovation has a positive influence on product image and purchasing decisions. In addition, research by Febriatmoko et al. (2024) shows that product image can be an effective mediating variable in bridging the relationship between corporate strategy and consumer behavior. This research is supported by Hilmi (2025), who emphasizes that product image acts as an emotional bridge between product characteristics and consumer decisions in making purchases.

Thus, it can be concluded that product innovation carried out by companies not only has a direct influence on purchasing decisions, but also indirectly through the formation of product image in the minds of consumers.

H7: Product image mediates the influence of product innovation on purchasing decisions for environmentally friendly batik.

### 3. Method, Data, and Analysis

This study uses a quantitative approach with an explanatory research type. This type of research can be categorized as correlational research that tests the differences in characteristics of two or more variables due to the relationship between these variables in a particular group (Sugiyono, 2019). The population in this study consists of all consumers who have ever been aware of, purchased, or used environmentally friendly batik in the Pekalongan area. This region was selected because it is a center of batik production with a high potential for developing ecologically conscious products.

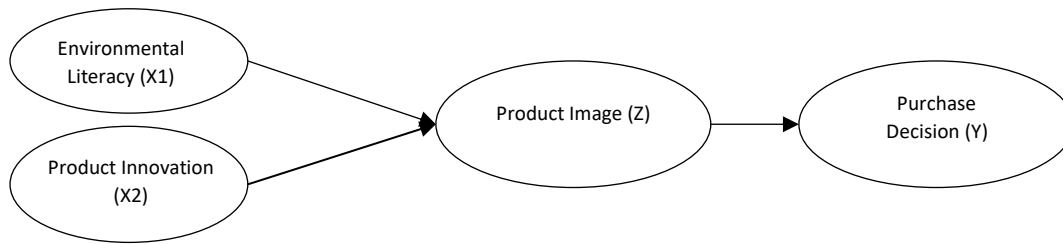
The sample in this study was taken as many as 50 respondents using the accidental sampling technique. The criteria for respondents who were sampled were those who had known or bought environmentally friendly batik, which was produced using sustainable materials and processes. Data were collected through questionnaires.google form which was distributed directly to respondents. The questionnaire was designed in the form of a scale Liked 5 points (Sugiyono, 2019). The data analysis technique used is SEM PLS with SmartPLS 4.0.

**Table 2.** Definisi Operational Variable Define

Variable	Dimension	Indicator
Environmental Literacy (X1)	Knowledge, Attitude, Action	Understanding of natural materials, Environmental awareness, Green product participation
Product Innovation (X2)	Design, Process, Added Value	Unique batik designs, Use of natural dyes, Function and aesthetics
Purchase Decision (Y)	Evaluation, Purchase intention, Actual purchases	Willingness to buy, Satisfaction, Recommendation
Product Image (Z)	Quality, Differentiation, Reputation	Perceived quality, Brand identity, Positive impression

## Research Model

Figure 1. Research model



## 4. Result and Discussion

### Reliability and Validity Test Result

Table 3. Reliability and Validity Test Result

Variable	Cronbach's Alpha	Composite Reliability (rho_A)	Composite Reliability (rho_C)	Average Variance Extracted (AVE)
Environmental Literacy (X1)	0.885	0.893	0.916	0.685
Product Innovation (X2)	0.892	0.903	0.921	0.702
Purchase Decision (Y)	0.905	0.909	0.929	0.725
Product Image (Z)	0.905	0.907	0.934	0.778

Source: Output SmartPLS processed by researchers, 2025

Based on the results of the reliability and construct validity tests presented in Table 1, it can be concluded that all variables in this study have met the criteria for good reliability and validity. Value Cronbach's Alpha for all variables, namely Product Image (0.905), Product Innovation (0.892), Consumer Decision (0.905), and Environmental Literacy (0.885), are above the minimum threshold of 0.70, indicating that the research instrument has high internal consistency. This is reinforced by the composite reliability values (rho\_A and rho\_C) which are also above 0.70 for all variables, indicating that each construct has very good composite reliability.

In addition, convergent validity has also been met, which is indicated by the value Average Variance Extracted (AVE) for all constructs above 0.50. The highest AVE value is found in the Product Image variable (0.778), followed by Consumer Decision (0.725), Product Innovation (0.702), and Environmental Literacy (0.685). This shows that most of the variance of the indicators can be explained by their respective latent constructs, so it can be concluded that the instrument used in this study is not only reliable, but also valid in measuring the intended construct. Thus, the data has met the requirements for use in further analysis.

### Outer Model Analysis

#### Goodness Of Fit Test Result

Table 4. R-Square Value

Variable	R-Square	R-Square Adjusted
Product Image (Z)	0.819	0.812
Purchase Decision (Y)	0.735	0.717

Source: Output SmartPLS processed by researchers, 2025

Based on Table 1, R-Square used to see the magnitude of the influence of the independent variable on the dependent variable. The value R-Square of 0.819 or 81.9% indicates that the independent variables in the model have a strong influence on the Product Image variable (Z). Meanwhile, the R-Square value of 0.735 or 73.5% indicates that the independent variables also have a strong influence on the Consumer Decision variable (Y). Thus, it can be concluded that the relationship between the independent variables and Product Image and Consumer Decisions is relatively strong.

## Hypothesis Testing

### Indirect Effect

**Table 5.** Path Coefisien (Direct Effect)

Relationship Between Variables	Original Sample (O)	T-Statistic	P-Value	Description
Environmental Literacy (X1) → Purchase Decision (Y)	0.286	3.154	0.002	Positive Significant
Product Innovation (X2) → Purchase Decision (Y)	0.579	3.471	0.001	Positive Significant
Environmental Literacy (X1) → Product Image (Z)	0.405	3.326	0.001	Positive Significant
Product Innovation (X2) → Product Image (Z)	0.551	4.996	0.000	Positive Significant
Product Image (Z) → Purchase Decision (Y)	0.315	3.952	0.000	Positive Significant

Source: Output SmartPLS processed by researchers, 2025

Based on the table above, the interpretation is as follows:

1. The first hypothesis shows that Environmental Literacy has a positive and significant effect on Consumer Purchasing Decisions. This is because the t-statistic value is 3.154 with an influence of 0.286 and p-value of 0.002. Because the t-statistic value > 1.96 and p value < 0.05, the first hypothesis is accepted.
2. The second hypothesis shows that Product Innovation has a positive and significant effect on Consumer Purchasing Decisions. This is because the t-statistic value is 3.471 with an influence of 0.579 and p-value of 0.001. Because the t-statistic value > 1.96 and p value < 0.05, the second hypothesis is accepted.
3. The third hypothesis shows that Environmental Literacy has a positive and significant effect on Product Image. This is because the t-statistic value is 3.326 with an effect of 0.405 and p-value of 0.001. Because the t-statistic > 1.96 and p-value < 0.05, then the third hypothesis is accepted.
4. The fourth hypothesis shows that Product Innovation has a positive and significant effect on Product Image. This is because the t-statistic value is 4.996 with an influence of 0.551 and a p-value of 0.000. Because the t-statistic value > 1.96 and p-value < 0.05, the fourth hypothesis is accepted.
5. The fifth hypothesis shows that Product Image has a positive and significant effect on Consumer Purchasing Decisions. This is because the t-statistic value is 3.952 with an influence of 0.315 and a p-value of 0.000. Because the t-statistic value > 1.96 and p-value < 0.05, then the fifth hypothesis is accepted.

## Indirect Effect

**Table 6.** Indirect Effect Result

Mediation Path	Original Sample (O)	T Statistics	P Values	Description
Environmental Literacy (X1) → Product Image (Z) → Purchase Decision (Y)	0.148	2.017	0.044	Significant
Product Innovation (X2) → Environmental Literacy (Z) → Purchase Decision (Y)	0.162	2.104	0.036	Significant

Source: Output SmartPLS processed by researchers, 2025

Based on the table above, the results obtained are that:

1. The sixth hypothesis shows that Product Image is able to mediate the relationship between Environmental Literacy and Consumer Purchasing Decisions. This is because the value t statistic of  $2.017 > 1.96$  and the value p-value of  $0.044 < 0.05$ . So it can be concluded that the relationship between Environmental Literacy and Consumer Purchasing Decisions can be mediated by Product Image. Thus, the sixth hypothesis is accepted.
2. The seventh hypothesis shows that Product Image is able to mediate the relationship between Product Innovation and Consumer Purchasing Decisions. This is because the value t-statistic of  $2.104 > 1.96$  and the value p-value of  $0.036 < 0.05$ . So it can be concluded that the relationship between Product Innovation and Consumer Purchasing Decisions can be mediated by Product Image. Thus, the seventh hypothesis is accepted.

## Discussion

### The Influence of Environmental Literacy

#### Direct Influence on Consumer Purchasing Decisions

The analysis results show that environmental literacy has a positive and significant effect on consumer purchasing decisions, as indicated by a t-statistic of 3.154 and a p-value of 0.002, with an effect coefficient of 0.286. This suggests that consumers with higher environmental awareness tend to choose products that align with sustainability principles and social responsibility. These findings are consistent with previous studies by Saputra & Fitriani (2023) and Justin & Handoyo (2023), which also identified a positive relationship between environmental literacy and consumer purchasing behavior.

#### Influence on Product Image

Environmental literacy also shows a significant positive influence on product image, as evidenced by a t-statistic of 3.326 and a p-value of 0.001, with a coefficient of 0.405. This means that consumers who better understand environmental issues are more likely to form a favorable perception of environmentally friendly products. This supports the findings of Tulhuda & Purnama (2023), who argue that environmental awareness shapes how consumers interpret product attributes and sustainability efforts.

#### Indirect Influence on Consumer Decisions through Product Image

The mediation analysis reveals a significant indirect effect of environmental literacy on consumer decisions via product image, with a p-value of 0.044 and a t-statistic of 2.017. This indicates that product image serves as a mediating variable that links environmental knowledge with purchase decisions. Consumers with high environmental literacy are likely to evaluate eco-friendly products more positively, which in turn influences their willingness to purchase. This is aligned with

Ottman's (2011) perspective that environmentally literate consumers are more selective and tend to favor products with sustainable characteristics. These findings are also supported by Febriatmoko & Prananta (2024).

## **The Influence of Product Innovation**

### **Direct Influence on Consumer Purchasing Decisions**

Product innovation has a strong positive and significant effect on consumer decisions, with a t-statistic of 3.471 and a p-value of 0.001, supported by an influence coefficient of 0.579. This suggests that consumers are more likely to purchase products that offer innovation in design, function, or sustainability. The results support studies by Mahendra et al. (2024) and Sukri et al. (2024), which also confirmed the importance of innovation in shaping consumer behavior.

### **Influence on Product Image**

In addition, product innovation significantly affects product image, with a t-statistic of 4.996 and a p-value of 0.000, and an influence coefficient of 0.551. Innovations such as new features, modern designs, and eco-conscious production methods enhance the way consumers perceive a product. This result supports the findings of Maheswari & Pudjoprastyono (2022), who highlighted innovation's role in building a brand image that resonates with quality and sustainability.

### **Indirect Influence on Consumer Decisions through Product Image**

The mediation test also confirms a significant indirect influence of product innovation on consumer decisions through product image, indicated by a p-value of 0.036 and a t-statistic of 2.104. This finding suggests that product image acts as a bridge that amplifies the impact of innovation on purchasing behavior. Kotler and Keller (2016) also stated that innovation strengthens brand perception, which positively affects consumers' willingness to buy. Aini & Yulistiyono (2024) similarly demonstrated that product image mediates the relationship between innovation and purchase intention.

### **The Influence of Product Image on Consumer Purchasing Decisions**

Product image has a direct and significant impact on purchasing decisions, as shown by a t-statistic of 3.952 and a p-value of 0.000, with an influence coefficient of 0.315. This confirms that a well-established product image reflecting quality, values, and sustainability encourages consumers to make purchasing decisions. This supports the view that brand perception plays a critical role in influencing consumer trust and loyalty. The findings are consistent with Nazara & Saputra (2024) and Nasution et al. (2022), who found that positive product images correlate strongly with higher consumer purchase intentions.

## **5. Conclusion and Suggestion**

### **Conclusion**

This study aims to examine the influence of Environmental Literacy, Product Innovation, and Product Image on Consumer Decisions, both directly and indirectly through mediation channels. Based on the results of path analysis (path analysis) and t-test, it was found that all independent variables in this research model have a positive and significant influence on Consumer Purchasing Decisions. In more detail, Environmental Literacy has a significant influence on Consumer Purchasing Decisions and Product Image. Product Innovation has also been shown to have a positive and significant influence on Consumer Purchasing Decisions and Product Image. Product Image itself plays an important role in influencing purchasing decisions directly. In addition to the direct influence, this study also proves that Product Image significantly mediates the relationship between

Environmental Literacy and Product Innovation on Consumer Purchasing Decisions, which shows that perceptions of product image are an important bridge in the indirect influence on consumer behavior.

This study successfully supports previous theories and findings stating that innovation, environmental awareness, and product image are important determinants in shaping consumer decisions. However, this study has several limitations, including the object of research which was only conducted on one particular consumer group, and did not take into account other variables that may also influence consumer decisions, such as price, promotion, and brand preference. In addition, the approach used is entirely quantitative, so it has not been able to explore in depth the subjective perceptions of consumers towards each variable.

### **Suggestion**

Based on the findings and limitations of the research, the author makes several suggestions as follows:

1. For business actors or companies

It is recommended to continuously improve product innovation aspects to remain relevant to market needs. In addition, product image must be managed strategically through strong branding, consistent product quality, and effective communication. Companies also need to consider aspects of sustainability and environmental education to consumers as added value that can strengthen loyalty and purchasing decisions.

2. For further researchers

It is recommended to expand the scope of research to consumers in other sectors or regions so that the results are more generalizable. The addition of variables such as price, promotion, product quality, or consumer loyalty can also provide a more comprehensive understanding of the factors that influence purchasing decisions.

3. For the development of academic literature

This study contributes to the study of consumer behavior based on the environment and product innovation. In the future, a mixed methods approach or qualitative study is recommended to dig deeper into how consumers interpret innovation and sustainability in their decision making.

## **6. Reference**

- Aini, N., Kurriwati, N., & Yulistiyono, H. (2024). Pengaruh Inovasi Produk dan Citra Perusahaan terhadap Keputusan Pembelian pada Koperasi Simpan Pinjam di Kabupaten Sumenep. *MSEJ*, 5(2). <https://doi.org/10.37385/msej.v5i2.6522>
- Alisa, A., Tumbel, A. L., & Djemly, W. (2021). Pengaruh Kualitas Produk, Inovasi Produk dan Citra Merek terhadap Keputusan Pembelian mobil Nissan Grand Livina. *Jurnal EMBA*, 9(1), <https://doi.org/10.35794/emba.v9i1.32681>
- Almira Amelia, & JE Sutanto. (2018). Pengaruh Inovasi Produk Dan Kualitas Produk Terhadap Keputusan Pembelian Maison Nob. *PERFORMA: Jurnal Manajemen Dan Start-Up Bisnis*, 3(2), 250–259.
- Anggraeni, A. R., & Soliha, E. . (2020). Kualitas produk, citra merek dan persepsi harga terhadap keputusan pembelian (Studi pada konsumen Kopi Lain Hati Lamper Kota Semarang). *Al Tijarah*, 6(3), 96. <https://doi.org/10.21111/tijarah.v6i3.5612>
- Ardiansah, A. Z. (2018). *ANALISIS KEPUASAN PELANGGAN AYAM GEPREK MBOK MORO DENGAN METODE IMPORTANCE PERFORMANCE ANALYSIS (IPA) DAN CUSTOMER SATISFACTION INDEX (CSI) (Studi Kasus Pada Warung Makan Ayam Geprek Mbok Moro di Jl.Bantul Yogyakarta)*. 16.
- Berlintina Permatasari, S. M. (2021). PENGARUH PROMOSI DAN INOVASI PRODUK TERHADAP

- KEPUTUSAN PEMBELIAN (STUDI KASUS PADA GERAJ BARU ES TEH INDONESIA DI BANDAR LAMPUNG). *TECHNOBIZ: International Journal of Bussiness*, Vol. 4 No. <https://doi.org/10.33365/tb.v4i2.1335>
- Chairudin, A., & Sari, S. R. (2021). Model Hubungan Citra Merek dan Minat Beli Ulang : Peran Kepuasan Pelanggan dan Kesetiaan Pelanggan. *Oikonomia: Jurnal Manajemen*, 17(2), 112. <https://doi.org/10.47313/oikonomia.v17i2.1259>
- Chandra, D. S. (2023). Pengaruh Kualitas produk, Inovasi dan Interaksi Pelanggan terhadap Brand Image. *Balance : Jurnal Akuntansi Dan Manajemen*, 2(2), 73–79. <https://doi.org/10.59086/jam.v2i2.328>
- Dharma, N. P., & Sukaatmadja, I. P. G. (2015). 255281-Pengaruh-Citra-Merek-Kesadaran-Merek-Dan-5Ca8F555. 4(10), 3228–3255.
- Fania Rahmadina, & Sutarso, Y. (2024). Peran Kampanye Media Sosial, Isu Lingkungan, Dan Persepsi Efektivitas Konsumen Terhadap Niat Beli Produk Pengganti Kemasan Sekali Pakai. *Modus*, 36(1), 75–93. <https://doi.org/10.24002/modus.v36i1.8329>
- Febriatmoko, B., Wicaksari, E. A., & Prananta, W. (2024). Peran Mediasi Citra Merek Hijau dalam Meningkatkan Keputusan Pembelian Produk Ramah Lingkungan (Studi pada konsumen N'Pure Toner di Semarang). *Jurnal Ilmu Manajemen dan Bisnis*, 15(2)
- Hardianti, S., & Murtadlo, K. (2025). Pengaruh Literasi Digital dan User Interface terhadap Keputusan Pembelian. *MES Management Journal*, 2(3)
- Hilmi, M. F. (2025). Pemasaran Hijau dan Keputusan Pembelian: Peran Mediasi Citra Perusahaan. *Ekonomis: Journal of Economics and Business*, 9(1), 522-527
- Imanulah, R., Andriyani, I., & Melvani, F. N. (2022). Pengaruh Citra Toko, Varian produk, dan Lokasi terhadap Keputusan Pembelian pada Restoran Pancious SOMA Palembang. *EKOMBIS REVIEW: Jurnal Ilmiah Ekonomi Dan Bisnis*, 10(1), 285–295. <https://doi.org/10.37676/ekombis.v10i1.1743>
- Justin, & Handoyo, E. (2023). Pengaruh Orientasi Kewirausahaan, Literasi Digital, Jiwa Kepemimpinan, Dan Lingkungan Terhadap Keputusan Berwirausaha. *Jurnal Manajerial dan Kewirausahaan*, 05(02), 297 – 306.
- Kartikasari, D., Arifin, Z., & Hidayat, K. (2013). PENGARUH PERILAKU KONSUMEN TERHADAP KEPUTUSAN PEMBELIAN (Penelitian Pada Mahasiswa Administrasi Bisnis Angkatan 2012/2013 Fakultas Ilmu Administrasi Universitas Brawijaya Yang Mengonsumsi Produk Mie Instan Merek Indomie). *Jurnal Administrasi Bisnis S1 Universitas Brawijaya*, 3(2), 74110.
- Kustina KT, Kurniawan IMAA, Utari IGAD. (2024). Pengaruh Literasi Keuangan dan Sikap Peduli Lingkungan Terhadap Keputusan Investasi Hijau Generasi Z. *WACANA Ekon (Jurnal Ekon Bisnis dan Akuntansi)*. 23(1):25-35. <https://doi.org/10.22225/we.23.1.2024.25-35>
- Kustina, K. T., Kurniawan, I. M. A. A., & Utari, I. G. A. D. (2024). Pengaruh Literasi Keuangan dan Sikap Peduli Lingkungan Terhadap Keputusan Investasi Hijau Generasi Z. *WACANA EKONOMI (Jurnal Ekonomi, Bisnis Dan Akuntansi)*, 23(1), 25–35. <https://doi.org/10.22225/we.23.1.2024.25-35>
- Kusumaningrum, D. (2018). Literasi Lingkungan Dalam Kurikulum 2013 Dan Pembelajaran Ipa Di Sd. *Indonesian Journal of Natural Science Education (IJNSE)*, 1(2), 57–64. <https://doi.org/10.31002/nse.v1i2.255>
- Laksono, E. B., & Magnadi, R. H. (2019). Analisis Pengaruh Promosi, Inovasi Produk, Dan Saluran Distribusi Terhadap Citra Merek Sepatu Olahraga Adidas Di Kota Semarang. *Diponegoro Journal of Management*, 8(4), 60–73.
- Ma'ruf, N., Alfalisyanto, A., Purwidianti, W., & Randikaparsa, I. (2024). Pengaruh Kualitas Produk, Inovasi Produk, Citra Merek dan Digital Marketing terhadap Keputusan Pembelian. *Jurnal Ilmiah Manajemen, Ekonomi, & Akuntansi (MEA)*, 8(2), 1314–1330. <https://doi.org/10.31955/mea.v8i2.4106>
- Mahendra, R. I., Lestari, B., & Murtiyanto, R. K. (2024). Pengaruh Inovasi Produk dan Gaya Hidup Terhadap Keputusan Pembelian pada Konsumen Grands Coffee Blitar. *Jurnal Aplikasi Bisnis*, 10(2), 387–392. <https://doi.org/10.33795/jab.v10i2.4245>

- Maheswari, I., & Pudjoprastyono, H. (2022). *Pengaruh Citra Merek dan Inovasi Produk terhadap Minat Beli Ulang Produk Roma di Kabupaten Sidoarjo*. *Jurnal Ilmiah Universitas Batanghari Jambi*, 24(3), <https://doi.org/10.33087/jiubj.v24i3.5726>
- Miati, I. (2020). Pengaruh Citra Merek (Brand Image) Terhadap Keputusan Pembelian Kerudung Deenay (Studi pada Konsumen Gea Fashion Banjar). *Abiwara : Jurnal Vokasi Administrasi Bisnis*, 1(2), 71–83. <https://doi.org/10.31334/abiwara.v1i2.795>
- Nasution, H. H., Syarif, N., & Supriadi, Y. N. (2022). Pengaruh Strategi Promosi Media Sosial Instagram, Citra Merek, dan Gaya Hidup terhadap Keputusan Pembelian Produk Hito Coffee Bekasi. *Indonesian Journal of Business and Management*, 2(1), 260–272.
- Nazara, I., & Saputra, A. (2024). Pengaruh Kualitas Produk, Citra Merek dan Nilai Pelanggan terhadap Keputusan Pembelian Konsumen di E-Commerce Lazada Kota Batam. *Arus Jurnal Sosial dan Humaniora*, 4(2), 637–649.
- Prameswari, A., & Meliana, V. (2025). *Pengaruh Desain Produk dan Persepsi Harga Terhadap Keputusan Pembelian di Toko Global Batik*. 4(1).
- Price, G., Sikap, D. A. N., Pembelian, P., & Novianti, R. (2024). *Pengaruh pengetahuan lingkungan, green price dan sikap pada pembelian sedotan ramah lingkungan*.
- Putri, Y. P., Annisa, S., Al-Ambari, F., Putra, A. E., Fernando, N., & Lusiana. (2025). Pengaruh Kualitas Produk dan Citra Merek terhadap Keputusan Pembelian dengan Keunggulan Bersaing sebagai Variabel Intervening pada Vespa Piaggio – Padang. *MSEJ*, 6(2), 1187–1197.
- Ramadhani FS, Sinring B, Ajmal, Prihatin E. (2021). Pengaruh Citra Merek dan Kualitas Produk Terhadap Keputusan Pembelian Alat Musik. *Cent Econ Students J*, 4(4):415-422. <https://doi.org/10.56750/csej.v4i4.514>
- Ribut Muji Wahono, & Ely Masykuroh. (2022). Pengaruh Inovasi Produk Dan Kualitas Pelayanan Terhadap Daya Saing Dengan Brand Image Sebagai Variabel Intervening Pada Bank Syariah Indonesia Kantor Cabang Nganjuk Yos Sudarso. *Falahiya: Journal of Islamic Banking and Finance*, 1(2), 156–172. <https://doi.org/10.21154/falahiya.v1i2.952>
- Santoso, E. B., & Samboro, J. (2017). Pengaruh Promosi Penjualan Dan Inovasi Produk Terhadap Keputusan Pembelian Dan Dampaknya Terhadap Loyalitas Pelanggan. *Adbis: Jurnal Administrasi Dan Bisnis*, 11(1), 1. <https://doi.org/10.33795/j-adbis.v11i1.9>
- Saputra, D. S., & Fitriani, F. (2023). Analisis Pengaruh Karakteristik Konsumen dan Faktor Sosial terhadap Keputusan Pembelian Produk Ramah Lingkungan (Studi Kasus Masyarakat Kota Metro). *Jurnal Manajemen Diversifikasi*, 3(1), 94–103.
- Sugiyono. (2019). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Alfabeta.
- Sukri, S. A., Prihastuti, A. H., & Miran, I. (2024). Analisis Pengaruh Promosi, Inovasi Produk dan Gaya Hidup Terhadap Keputusan Pembelian Produk Mixue. *Journal of Tax and Business*, 5(2), 463–472. <https://doi.org/10.55336/jpb.v5i2.240>
- Supenah P, Widiastuti E, Priyono RE. (2015). Kajian Kualitas Air Sungai Condong yang terkena Buangan Limbah Cair Industri Batik Trusmi Cirebon. *Biosfera*. 32(2):110. <https://doi.org/10.20884/1.mib.2015.32.2.302>
- Tulhuda, B. ., Trihantana, R. ., & Purnama , B. (2023). Analysis Of Sharia Business Management The Influence Of Digital Business Literacy On Product Image In The Shopee Application During Covid 19 (Samsung Official Shop Study). *Sahid Business Journal : Sharia Business Management Research Journal: Sharia Business Management Study Program*, 3(1), 31–40. <https://doi.org/10.56406/sahidbusinessjournal.v3i1.129>
- Yogyakarta DIK, Daerah P. (2021). *Estimasi Beban Pencemaran Parameter Phenol Dan Minyak Lemak Dari Industri Batik Islam Indonesia Phenol Dan Minyak Lemak Dari Industri Batik Di Kota Yogyakarta , Provinsi Daerah*. Published online 2021.
- Yohana Dian Puspita, & Ginanjar Rahmawan. (2021). Pengaruh Harga, Kualitas Produk dan Citra Merek terhadap Keputusan Pembelian Produk Garnier. *Jurnal Sinar Manajemen*, 8(2), 98–104. <https://doi.org/10.56338/jsm.v8i2.1644>