

Paying for Green: Environmental Awareness and Price Premium Among Young Indonesian Consumers

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ABSTRACT

This study examines the influence of Environmental Awareness (EA) on Perceived Price Premium (PPP) toward environmentally friendly packaging of Pop Mie among young Indonesian consumers aged 17–23. While green product attributes are often associated with consumers' willingness to pay higher prices, this study investigates whether greater environmental awareness leads to stronger acceptance of price premiums in a low-cost fast-moving consumer goods (FMCG) category. Using a quantitative approach, data were collected from 100 students of Politeknik Negeri Ujung Pandang who had consumed Pop Mie. Respondents were selected through accidental sampling. Simple linear regression was employed to test the relationship between EA and PPP, supported by normality, heteroskedasticity, and linearity tests. The results indicate a statistically significant negative relationship between EA and PPP ($\beta = -0.248$, $p = 0.042$), suggesting that consumers with higher environmental awareness are less likely to perceive premium pricing as justified. This finding implies that pro-environmental attitudes do not necessarily translate into greater willingness to pay, particularly when sustainability claims are not supported by clear benefits or value. The model explains only 4.2% of the variance in PPP ($R^2 = 0.042$), indicating that other factors, such as brand image, perceived quality, and functional value, may have a stronger influence on price perceptions. These findings challenge the assumption that environmental concern consistently increases acceptance of green price premiums. The study contributes to the green consumer behavior literature by highlighting the importance of economic considerations in emerging markets and provides practical insights for marketers seeking to balance sustainability initiatives with consumer affordability expectations.

Keywords: Environmental Awareness; Perceived Price Premium ; Green Packaging;
Young Consumers; Sustainable Consumption

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1. INTRODUCTION

Environmental awareness has become a primary consideration in purchasing decisions, particularly among young consumers aged 17–23 who have grown up in an era of information and global sustainability movements (Naveed et al., 2020). In Indonesia, this trend is beginning to influence preferences for daily products, including the Fast-Moving Consumer Goods (FMCG) category such as instant noodles. Instant noodles are highly popular in Indonesian society; indeed, Indonesia ranks second globally in instant noodle consumption, following China and Hong Kong (World Instant Noodles Association [WINA], 2025). One brand responding to these demands is Pop Mie Brand, a cup instant noodle variant produced by PT Indofood Sukses Makmur, which has adopted eco-friendly packaging in several of its latest variants. While this change aligns with sustainability commitments, it often implies increased production costs and, ultimately, higher selling prices. This raises a crucial question: are young consumers still willing to pay a premium for environmental attributes on a product typically purchased based on affordability?

The relationship between Environmental Awareness and willingness to pay a premium has been extensively examined in sustainable marketing literature. The concept of Perceived Price Premium, defined as the perception that a product deserves a higher price due to specific added value, has been closely linked to green attributes such as ecological labels, sustainable packaging, or environmentally friendly supply chain practices (Kumar & Basu, 2023). Recent studies indicate that consumers with high levels of environmental awareness tend to associate sustainable products with superior quality, brand trust, and social identity expression, thereby increasing the perception that a premium price is justified (Wang et al., 2023). However, most of these findings originate from contexts involving high-value products (such as electronics, premium fashion, or organic food) or developed countries, where purchasing power is relatively high and environmental education infrastructure is established.

In developing countries like Indonesia, the dynamic between environmental awareness and price perception is far more complex, particularly for low-value products consumed routinely. Instant noodles, including brands like Pop Mie Brand, are typically purchased based on value-for-money considerations rather than symbolic or ethical attributes. Although the young Indonesian generation demonstrates concern for environmental issues (UNDP Indonesia, 2023), they remain highly rational regarding daily consumption expenditures (Herman et al., 2020). To date, few empirical studies have tested whether Environmental Awareness can enhance Perceived Price Premium for daily FMCG products like instant noodles with eco-friendly packaging, especially within the context of a specific brand like Pop Mie Brand, which has wide market penetration but operates in a price-sensitive segment.

This research fills that gap by specifically examining the influence of Environmental Awareness on Perceived Price Premium among young Indonesian consumers (aged 17–23) regarding Pop Mie Brand with eco-friendly packaging. Theoretically, this study expands the scope of green consumer behavior theory from the domain of high-value products to the low-involvement, high-frequency FMCG category within the context of a dominant local brand an exploration that remains rare in both international and domestic literature. Practically, the findings provide strategic insights for PT Indofood Sukses Makmur and similar industry players regarding the extent to which investment in sustainable packaging can be accepted by consumers

without compromising price competitiveness. Focusing on the young generation, as early adopters, active digital media users, and social norm setters, further strengthens the relevance of these findings in driving a transition toward realistic and sustainable consumption at the micro level. Thus, this research not only enriches the academic discussion on green pricing in emerging markets but also provides an empirical basis for developing contextual, measurable, and economically aligned green marketing strategies for young Indonesian consumers.

2. RESEARCH METHOD

This section outlines the procedural determination of the minimum representative sample size for a quantitative study conducted at Politeknik Negeri Ujung Pandang, Makassar. The target population comprises 5,482 active students, as documented in the PDDikti database (2022). Using Slovin's formula with a 10% margin of error ($e = 0.10$), the minimum sample size was calculated as follows:

Formula and Calculation

$$n = \frac{N}{1 + Ne^2} = \frac{5,482}{1 + (5,482 \times 0,10)^2} = 98,21$$

Where:

n = required sample size

N = total population size

e = margin of error (expressed as a decimal; e.g., 10% = 0.10)

The sample size for this study was determined using Slovin's formula with a 10% margin of error ($e = 0.10$) and a population of 5,482 active students at Politeknik Negeri Ujung Pandang (PDDikti, 2022). The calculation yielded a minimum requirement of 98.21 respondents, which was rounded upward to 100 respondents to ensure methodological conservatism and practical feasibility. This sample size satisfies the statistical threshold for descriptive survey research under simple random sampling assumptions and aligns with the minimum sample recommendation for partial least squares structural equation modeling (PLS-SEM) analysis (Hair et al., 2014), thereby supporting both descriptive and inferential analytical objectives. The students selected as samples were those who had consumed Cup Instant Noodles of the Pop Mie Brand produced by PT. Indofood Sukses Makmur. Sampling was conducted using accidental sampling in accordance with the established criteria. To ensure data quality, the reliability and validity of the measurement instruments were assessed following established guidelines in medical and social research (Ahmed & Ishtiaq, 2021).

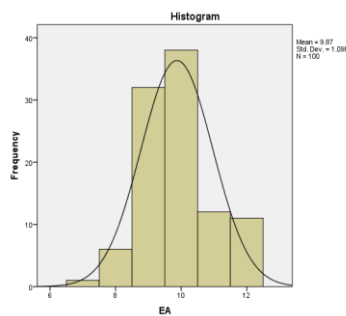
3. RESULT AND DISCUSSION

Prior to presenting the hypothesis testing results, classical assumption tests were conducted to ensure that the regression model used met the requirements for inferential statistics. The classical assumption tests in this study included normality, heteroscedasticity, and linearity tests, with Environmental Awareness (EA) as the independent variable and Perceived Price

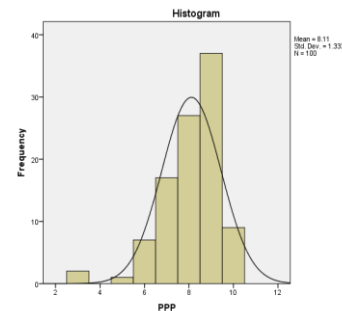
Premium (PPP) as the dependent variable. The results of each test are presented below as a basis for model validation before conducting simple regression analysis.

Normality Test

Before conducting regression analysis, it is essential to ensure that residual data is normally distributed, as the normality assumption is a primary requirement in parametric statistical testing. The normality test in this study was performed by examining the histogram of residual distributions for the Environmental Awareness (EA) and Perceived Price Premium (PPP) variables to assess the suitability of the data distribution against a normal curve.



Normality Test Histogram:
Environmental Awareness (EA)



Normality Test Histogram: Perceived
Price Premium (PPP)

Source: Processed data, 2026

Figure 1. Normality Test Histogram Results

Based on the histogram, both variables Environmental Awareness (EA) and Perceived Price Premium (PPP) showed a distribution that tended to be symmetric and approached a bell shape, without significant skewness or extreme outliers. EA had a mean of 9.87 (SD = 1.098), while PPP had a mean of 8.11 (SD = 1.333), both from 100 respondents. Visually, the normality assumption was well met, supporting the use of parametric analysis. However, for statistical certainty, it is recommended to verify with formal tests such as Shapiro-Wilk or Q-Q plots. If the $p\text{-value} > 0.05$, normality is accepted.

Heteroscedasticity Test

The heteroscedasticity test aims to examine whether there is an inequality of residual variance from one observation to another. In this study, the heteroscedasticity test was conducted by regressing the absolute residual values (Abs_RES) against the independent variable Environmental Awareness (EA). The results of this test indicate whether the regression model is free from heteroscedasticity issues, which is one of the important assumptions in classical linear regression.

Table 1. Heteroscedasticity Test

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.691	.798		2.120	.037
	EA	-.074	.080	-.093	-.920	.360

a. Dependent Variable: Abs_RES

Source: Processed data, 2026

Based on the heteroscedasticity test results using absolute residuals (Abs_RES) as the dependent variable and Environmental Awareness (EA) as the independent variable, a significance value (Sig.) of 0.360 was obtained. Since this value is greater than 0.05, there is insufficient evidence to state the presence of heteroscedasticity in the regression model between EA and Perceived Price Premium (PPP). In other words, the assumption of homoscedasticity constant residual variance is met in this model.

Linearity Test

The linearity test was conducted to ensure that the relationship between the independent variable (Environmental Awareness) and the dependent variable (Perceived Price Premium) is linear. This assumption is important because simple regression analysis is only valid if the pattern of the relationship between the two variables is indeed linear. In this study, the linearity test was performed through Analysis of Variance (ANOVA) by comparing the sum of squares from the linear components and the deviation from linearity.

Table 2. Linearity Test

ANOVA Table							
			Sum of Squares	df	Mean Square	F	Sig.
PPP * EA	Between Groups	(Combined)	29.810	5	5.962	3.839	.003
		Linearity	7.329	1	7.329	4.719	.032
		Deviation from Linearity	22.482	4	5.620	3.619	.009
	Within Groups		145.980	94	1.553		
	Total		175.790	99			

Source: Processed Data, 2026

Based on the linearity test results between Environmental Awareness (EA) and Perceived Price Premium (PPP), the deviation from linearity component showed a significance value of 0.009, which initially indicated a deviation from a linear relationship. However, because the calculated F-value (3.619) was lower than the F-table value (7.71) at a significance level of 0.05, it is concluded that the deviation is not significant enough to reject the linearity assumption. Thus, the relationship between EA and PPP can be considered linear and meets the linearity test assumption for regression analysis.

Simple Regression Analysis

After ensuring that the model met classical assumptions, a simple regression analysis was conducted to test the influence of Environmental Awareness (EA) on Perceived Price Premium (PPP). This analysis aims to determine the direction and significance of the independent variable's influence on the dependent variable, while also producing a regression equation that can be used to explain and predict the relationship between the two variables.

Table 3. Simple Regression Analysis

Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	
		B	Std. Error	Beta	t Sig.
1	(Constant)	10.556	1.192		8.856 .000
	Environmental awareness	-.248	.120	-.204	-2.065 .042

a. Dependent Variable: Perceived Price Premium

Source: Processed Data, 2026

The results of the simple regression analysis indicate that Environmental Awareness (EA) has a negative and significant influence on Perceived Price Premium (PPP). This is evidenced by a regression coefficient of -0.248 with a significance level of 0.042 ($p < 0.05$), meaning that for every one-unit increase in the consumer's level of environmental awareness, it is followed by a decrease in price premium perception. The regression equation is $PPP = 10.556 - 0.248 EA$. Although this influence is significant, its contribution to the variation in PPP is relatively small, at approximately 4.2% ($R^2 = 0.042$), while the remaining 95.8% is influenced by other factors outside this model.

The findings of this study indicate that Environmental Awareness (EA) has a negative and significant influence on Perceived Price Premium (PPP), with a regression coefficient of -0.248 ($p = 0.042$). This finding suggests that the higher the consumer's level of environmental awareness, the lower their perception of a product's price premium, particularly in the context of eco-friendly instant noodle products in Indonesia. Although the direction of this relationship may seem counterintuitive given the general assumption that environmentally conscious consumers are willing to pay more, this result aligns with several recent studies highlighting the psychological and economic complexities in green consumer behavior.

This finding is consistent with Khanal (2020), who found that although consumers express concern for the environment, they tend to be skeptical of green premium pricing claims, especially if not supported by information transparency or tangible evidence of the product's ecological benefits. In the Indonesian context, where price sensitivity remains high among young consumers (aged 17–23), the perception that eco-friendly products are priced higher without clear justification can trigger resistance to price premiums, as also found in emerging market contexts (Rehman et al., 2022).

Furthermore, Shao et al. (2022) emphasize that consumers often perceive eco-labeled products as having a mismatch between price and functional value, especially when ecological benefits are not directly visible or relevant to daily needs, such as in Fast-Moving Consumer Goods (FMCG) categories like instant noodles. This is reinforced by findings indicating that

green skepticism and value consciousness serve as important moderators in the relationship between environmental awareness and willingness to pay a premium (Sun & Yoon, 2022).

Interestingly, Kovacs and Keresztes (2022) reported similar patterns in sustainable food markets, where consumers tend to support sustainability issues normatively but are reluctant to pay more if there is no concrete evidence of positive environmental impact or if the price is perceived as unfair. In the context of this research, this is reflected in the low coefficient of determination ($R^2 = 0.042$), indicating that other variables, such as quality perception, brand image, or functional value, likely play a more dominant role in shaping PPP than environmental awareness alone.

This finding also aligns with recent research suggesting that without effective marketing communication integration, environmental claims can trigger price resistance, especially if consumers feel that green labels are used as tools for greenwashing (Hu et al., 2024). Furthermore, Shokoohi and Erfanifar (2025) emphasize the importance of understanding cultural context in assessing willingness to pay a premium: in collectivist societies like Indonesia, social and economic values are often prioritized over abstract ecological values, especially in low-cost product categories.

Additionally, García-Salirrosas et al. (2023) demonstrated through the application of the Theory of Planned Behavior in the Peruvian market that environmental awareness alone may not sufficiently predict willingness to pay for green products without considering mediating factors such as subjective norms and perceived behavioral control. Similarly, Wei et al. (2023) highlighted that both utilitarian and hedonic attributes influence willingness to pay green product premiums, suggesting that functional value perceptions may outweigh purely environmental motivations among young consumers.

Overall, the findings of this study underscore that environmental awareness alone is insufficient to drive perceived premium price. An integrative marketing strategy is required, including transparency regarding environmental claims, consumer education, and enhancement of holistic value perception, so that eco-friendly products can be accepted not only as an ethical choice but also as an economically rational choice. This is relevant to the green brand equity framework, where green brand image must be built through credibility, not merely claims (Kumar & Basu, 2023).

4. CONCLUSION

This study found that environmental awareness negatively influences perceived premium price for eco-friendly instant noodle products among young Indonesian consumers. This indicates that concern for the environment does not automatically drive acceptance of higher prices without support from credibility, transparency, and clear value perception. These findings suggest that green marketing strategies need to go beyond merely highlighting eco-friendly attributes; producers must build trust through transparent communication, relevant education, and an emphasis on holistic value that balances ecological benefits, functionality, and price. Further research is suggested to explore other factors that are more dominant in shaping perceived premium price, such as brand image or product quality, as well as considering local cultural and economic contexts in designing effective green marketing approaches.

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