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THE INFLUENCE OF BRAND IMAGE, PRICE, PROMOTION, AND DISTRIBUTION CHANNELS ON PURCHASE DECISIONS OF DOMESTICALLY PRODUCED INDUSTRIAL LED LIGHTING

PENGARUH CITRA MEREK, HARGA, PROMOSI, DAN SALURAN DISTRIBUSI TERHADAP KEPUTUSAN PEMBELIAN PENCERAHAN LED INDUSTRIAL YANG DIPRODUKSI SECARA NASIONAL

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Abstract

This study explores the role of brand image, price, promotion, and distribution channels in shaping consumer purchasing decisions for domestically produced industrial LED lighting products. A quantitative research approach was employed using a survey method, with data analyzed through multiple linear regression. The findings indicate that the proposed model is statistically significant, demonstrating that all marketing mix elements jointly influence purchasing decisions. Each variable also shows a positive and significant individual effect, with distribution channels emerging as the most influential factor in driving consumer decisions. This suggests that ease of access, product availability, and effective distribution play a critical role in the adoption of industrial LED products. The novelty of this research lies in empirically integrating marketing mix factors within the context of domestically manufactured LED products, an area that has received limited scholarly attention. The study offers practical implications for manufacturers, emphasizing the importance of strengthening distribution strategies and aligning pricing and promotional efforts to enhance consumer purchasing decisions.

Keywords : Brand Image; Distribution Channels; Consumer Purchasing Decision; Domestically Manufactured LED Products; Price; Promotion.

Abstrak

Penelitian ini bertujuan untuk mengkaji pengaruh citra merek, harga, promosi, dan saluran distribusi terhadap keputusan pembelian konsumen individu pada produk lampu LED industri dalam negeri. Pendekatan kuantitatif digunakan dengan metode survei, sementara analisis data dilakukan melalui regresi linear berganda. Hasil penelitian menunjukkan bahwa keempat variabel pemasaran tersebut secara bersama-sama berperan dalam membentuk keputusan pembelian konsumen. Secara parsial, masing-masing variabel juga memberikan pengaruh positif dan signifikan, dengan saluran distribusi muncul sebagai faktor dominan. Temuan ini mengindikasikan bahwa kemudahan akses dan

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ketersediaan produk menjadi aspek krusial dalam mendorong adopsi produk LED industri. Kebaruan penelitian ini terletak pada penggabungan empiris faktor bauran pemasaran untuk produk lampu LED produksi dalam negeri, sebuah bidang yang masih minim perhatian akademik. Temuan ini menekankan pentingnya strategi distribusi yang kuat serta keselarasan harga dan promosi untuk mendorong keputusan pembelian konsumen.

Kata Kunci : Citra Merek; Harga; Promosi; Saluran Distribusi; Keputusan Pembelian; Produk LED Dalam Negeri.

1. INTRODUCTION

The transition of lighting systems from conventional technologies to Light Emitting Diode (LED) solutions reflects the growing demand for energy efficiency and sustainability, particularly as lighting remains one of the major contributors to electricity consumption. A national energy use survey conducted by the Center for Energy Conversion Technology of BPPT indicates that lighting energy consumption constitutes a significant component of commercial building energy use in Indonesia, ranking second after air conditioning systems in total building energy consumption (Center for Energy Conversion Technology BPPT, 2020). In response to this condition, the Indonesian government, through the Ministry of Energy and Mineral Resources, has introduced minimum energy performance standards and mandatory energy efficiency labeling for energy using equipment, including LED lamps, as stipulated in Ministerial Regulation No. 3 of 2020. These policy measures aim to promote energy efficiency, strengthen consumer protection, accelerate the adoption of LED lighting, raise public awareness of energy saving behavior, and intensify competition within the national lighting market.

In Indonesia, the lighting market, including the industrial LED segment, has experienced robust growth alongside national energy efficiency policies. According to a report by Ken Research (2024), the value of Indonesia's lighting market has exceeded USD 2.5 to 2.8 billion, with an estimated compound annual growth rate of approximately 8 to 10 percent, where industrial LED products represent one of the primary growth drivers. In parallel, the United Nations Development Programme (2024) reports that LED technology adoption has the potential to reduce lighting energy consumption by up to 50 to 60 percent compared to conventional lighting systems, while contributing to a cumulative reduction of more than three million tons of CO_2 emissions in the medium term. These findings underscore that the increasing demand for domestically produced industrial LED products is not only economically driven but also strategically aligned with Indonesia's sustainability objectives and energy transition agenda.

Despite the positive trend in energy efficient lighting adoption in buildings, much of the existing literature continues to focus predominantly on technical performance and building energy efficiency. Studies that examine market behavior and purchasing decisions related to LED products, particularly within the domestic industrial segment, remain relatively limited (Berawi et al., 2023). While several previous studies have explored consumer behavior toward

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LED lighting in Indonesia in general, such as the work of Risqiaputra and Octavia (2019), empirical investigations focusing specifically on domestically produced industrial LED products are still scarce. This gap highlights the need for research that integrates industrial LED market dynamics with a comprehensive marketing perspective.

From the standpoint of consumer behavior theory, purchasing decisions are understood as the outcome of consumers' evaluations of marketing stimuli. Kotler and Keller (2016) emphasize that marketing mix elements, namely brand image, price, promotion, and distribution channels, play a crucial role in shaping perceived value and purchasing decisions. Although the relationship between these elements and purchasing decisions has been extensively examined across various product categories, the simultaneous application of the marketing mix framework to domestically produced industrial LED products remains relatively uncommon. This situation points to a theoretical gap in understanding how interactions among marketing elements operate within industries characterized by more rational decision making and long-term performance considerations.

This issue becomes increasingly relevant for PT Pancaran Indonesia, a domestic industrial LED manufacturer operating in an increasingly competitive market. Despite its production capacity and status as a national producer, the company's sales performance has not yet fully reflected the substantial market potential available. Purchasing decisions related to PT Pancaran Indonesia's products are not determined solely by functional requirements but are also influenced by perceptions of brand image, price levels, promotional effectiveness, and product accessibility through distribution channels. This condition suggests a misalignment between the company's marketing strategy and consumer perceptions in shaping purchasing decisions.

Based on these phenomena and identified gaps, this study is designed to address the central question of how brand image, price, promotion, and distribution channels influence purchasing decisions for domestically produced industrial LED products. The novelty of this research lies in its empirical focus on national industrial LED products and the simultaneous examination of the four core marketing mix elements within an integrated analytical framework. Such an approach remains relatively rare in studies of the domestic lighting industry, particularly those involving national manufacturers, and therefore offers a fresh contribution to industrial marketing research. The objective of this study is to analyze both the partial and simultaneous effects of brand image, price, promotion, and distribution channels on purchasing decisions for domestically produced industrial LED products, with PT Pancaran Indonesia as the object of study. From an academic perspective, this research is expected to enrich the industrial marketing literature by providing empirical evidence based on nationally produced products.

a. Marketing Mix

The marketing mix represents a central conceptual framework in marketing that explains how firms combine controllable variables to create and deliver value to consumers. Kotler and Keller (2016) describe the marketing mix as a set of strategic elements consisting of product,

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price, promotion, and distribution, which are designed in an integrated manner to shape how consumers evaluate and respond to an offering. These elements do not operate independently but interact with one another to strengthen perceived value. In line with this view, Widyastuti et al. (2020) emphasize that purchasing decisions emerge from consumers' evaluations of the overall combination of marketing strategies rather than from a single factor. Under increasingly intense market competition, Kanetro et al. (2023) further argue that an integrated marketing mix functions as a crucial source of differentiation among firms. Therefore, examining the simultaneous influence of the marketing mix on purchasing decisions is necessary to capture consumer behavior in a more comprehensive and meaningful way.

H5: Brand image, price, promotion, and distribution channels simultaneously influence consumers' purchasing decisions of domestically produced industrial LED products.

b. Brand Image

Brand image reflects how consumers understand and interpret a brand based on usage experiences, exposure to marketing communications, and the symbols and messages associated with it. According to Aaker (1991), brand image is formed through a set of associations stored in consumers' memory and serves as a source of value creation for a product. This perspective aligns with Kotler and Keller (2016), who argue that brand image represents consumers' beliefs and evaluations, which ultimately shape their preferences and choices during the purchasing process. For products characterized by high involvement and long term use, brand image plays an important role in reducing perceived risk. Kotler et al. (2022), supported by the empirical findings of Hermiyenti and Wardi (2019), demonstrate that brand image contributes significantly to building consumer trust in product quality and reliability. Accordingly, a positively perceived brand image strengthens consumer confidence and increases the likelihood of purchasing decisions.

H1: The brand image of domestically produced industrial LED products influences consumers' purchasing decisions.

c. Price

Price represents the value that consumers must sacrifice and serves as an important reference in assessing product feasibility and quality prior to making a purchase decision. Price reflects the cost incurred by consumers to obtain product benefits and is often used as an initial indicator of quality during evaluation (Kotler & Keller, 2016). Price perception is inherently subjective, as it is shaped by brand image, previous experience, and comparisons with alternative products. Ali and Anwar (2021) provide empirical evidence that price significantly influences purchasing decisions because consumers evaluate the balance between perceived benefits and incurred costs. Hermiyenti and Wardi (2019) further argue that consumers do not necessarily choose the lowest price but rather the option that offers the best perceived value. Therefore, price perceptions that are considered fair and proportional to product benefits are likely to encourage purchasing decisions.

H2: The price of domestically produced industrial LED products influences consumers' purchasing decisions.

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d. Promotion

Promotion functions as a communication bridge between firms and consumers in conveying product meaning and advantages. Kotler and Keller (2016) define promotion as a planned set of activities aimed at building understanding, influencing attitudes, and maintaining consumer recall of a brand. Beyond information delivery, promotion also shapes perceptions and reinforces brand image, thereby strengthening consumer confidence and encouraging purchasing decisions (Hermiyenti & Wardi, 2019). Pickett-Baker and Ozaki (2008) emphasize that educational promotion is particularly relevant for products that highlight efficiency and sustainability attributes. Thus, appropriate promotional intensity and quality play an important role in strengthening consumers' motivation to make purchasing decisions.

H3: Promotion of domestically produced industrial LED products influences consumers' purchasing decisions.

e. Distribution Channels

Distribution channels play a key role in ensuring that products are accessible to consumers in a timely and efficient manner. Kotler and Keller (2016) explain that distribution involves managing the flow of products from producers to consumers by considering location, timing, and ease of access. The effectiveness of distribution channels determines the extent to which marketing strategies are translated into actual purchases. Ali and Anwar (2021) show that efficient distribution increases the likelihood of purchase by reducing access barriers. Arija et al. (2021) further confirm that integrated distribution systems strengthen the influence of other marketing elements. Consequently, the easier a product can be accessed through effective distribution channels, the greater the probability that consumers will make a purchasing decision.

H4: Distribution channels of domestically produced industrial LED products influence consumers' purchasing decisions.

f. Purchasing Decision

Purchasing decision represents the final outcome of consumers' evaluation processes toward various marketing stimuli they receive. Kotler et al. (2022) state that purchasing decisions reflect the integration of internal consumer factors and external influences derived from marketing mix elements, including brand image, price, promotion, and distribution channels. Ali and Anwar (2021) demonstrate that perceived value and price play dominant roles in shaping purchasing decisions, while Pickett-Baker and Ozaki (2008) highlight the importance of long-term benefits for energy efficient products. Wasik et al. (2023) further confirm that brand image strengthens consumer confidence in determining final choices. Therefore, purchasing decisions can be understood as the result of the simultaneous interaction of all marketing mix elements in shaping consumers' perceived value

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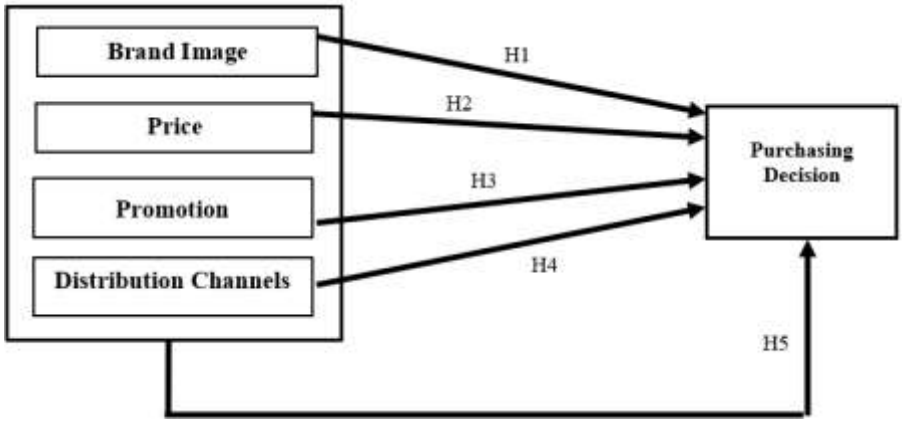

Figure 1: Conceptual Framework

2. RESEARCH METHOD

This study adopts a quantitative research design with a causal approach within a positivist paradigm to examine the effects of brand image, price, promotion, and distribution channels on purchasing decisions of domestically produced industrial LED products. A survey approach was selected as it enables the collection of standardized and measurable empirical data, allowing hypotheses to be tested objectively through inferential statistical analysis (Chatterjee & Hadi, 2015; Creswell & Creswell, 2018). The study employs a cross sectional design, with data collected over the period from August 2025 to January 2026.

The research population consists of consumers who have purchased domestically produced industrial LED lamps at least once within the past twelve months. A sample of 67 respondents was selected using purposive sampling, a size considered adequate for multiple linear regression analysis and causal relationship testing (Draper, 1998). Primary data were obtained through an online questionnaire using a five point Likert scale, distributed to customers of PT Pancaran Indonesia. Secondary data were drawn from academic literature and industry reports to provide a theoretical foundation for the study (Kotler & Keller, 2016; Belch & Belch, 2018).

The research instrument was developed based on variable indicators that have been validated in the marketing and consumer behavior literature, covering brand image, price, promotion, distribution channels, and purchasing decisions. Validity was assessed using item total correlation with a significance criterion of $p < 0.05$, while reliability was evaluated using Cronbach's Alpha with a minimum threshold of 0.70 (Chatterjee & Hadi, 2015). Data analysis was conducted using multiple linear regression with SPSS to examine both partial and simultaneous effects at a significance level of 0.05. The coefficient of determination (R^2) was used to assess the explanatory power of the model. Prior to hypothesis testing, classical assumption tests were performed to ensure that the regression estimates satisfied the requirements of statistical inference (Gujarati, 2021; Montgomery et al., 2021).

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3. RESULT AND DISCUSSION

Respondent characteristics provide the empirical basis for interpreting the results of the purchasing decision analysis. The data were obtained from 67 respondents who had purchased domestically produced industrial LED products, specifically those manufactured by PT Pancaran Indonesia. Respondent characteristics were examined based on gender and age in order to present a clear profile of the consumers involved in this study.

The gender distribution of respondents shows a relatively balanced composition, with female respondents accounting for 52.2 percent and male respondents representing 47.8 percent. This distribution indicates that the evaluation of the research variables is not dominated by a single gender group, allowing the findings to reflect proportional perspectives in purchasing behavior. In terms of age, the respondents are predominantly drawn from productive age groups. The largest proportion falls within the 31 to 35-year age group at 28.4 percent, followed by the 26 to 30 year and 36 to 40-year groups, each accounting for 23.9 percent. Respondents aged 41 to 45 years represent 14.9 percent, while those above 45 years constitute a smaller proportion. This pattern suggests that most respondents are at an economically active stage of life and possess the rational capacity to evaluate product quality, benefits, and long-term value, thereby supporting the suitability of the data for further analysis.

a. Descriptive Statistics

Descriptive statistics are used to illustrate the distribution of data for each variable through minimum and maximum values, mean, standard deviation, skewness, and kurtosis, as presented in Table 1. Variable scores were calculated as the average of items that had been confirmed as valid and reliable, allowing them to be treated as interval data for subsequent statistical analysis.

Table 1: Descriptive Statistics of Research Variables

Variable	Minimum	Maximum	Mean	Standard Deviation	Skewness	Kurtosis
Brand Image	1.40	5.\00	3.73	0.9588	-0.482	-0.797
Price	1.80	5.00	3.95	0.8687	-0.697	-0.255
Promotion	1.40	5.00	3.73	0.9115	-0.537	-0.363
Distribution Channel	1.40	4.80	3.51	0.7231	-0.425	-0.195
Purchase Decision	2.40	5.00	3.93	0.7446	-0.176	-0.892

Source: Data processed using SPSS software

The results of the descriptive statistical analysis indicate that all variables have mean values above the midpoint of the measurement scale. The price variable records the highest mean score of 3.95, followed by purchasing decision with a mean of 3.93, reflecting respondents' positive perceptions of price suitability and their inclination to purchase domestically produced industrial LED products. Brand image and promotion each achieve a mean score of 3.73, while distribution channels show a slightly lower mean of 3.51 but still reflect a favorable evaluation. All variables exhibit moderate standard deviations, with skewness and kurtosis values falling within the ±2 range. These results indicate that the data are normally distributed and suitable for further statistical analysis.

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b. Validity and Reliability Testing

Instrument validity was assessed using Pearson correlation between individual item scores and total variable scores at a significance level of 0.05, with a sample size of 67 respondents. The results demonstrate that all items measuring brand image, price, promotion, distribution channels, and purchasing decisions have positive correlation coefficients exceeding the critical r value of 0.244. Accordingly, all measurement items are considered valid. Instrument reliability was confirmed through Cronbach's Alpha values, all of which exceed the threshold of 0.70, indicating strong internal consistency in measuring the research constructs.

Table 2: Reliability Test Results

Variable	Cronbach's Alpha	N of Items
Brand Image	0.932	5
Price	0.910	5
Promotion	0.900	5
Distribution Channel	0.859	5
Purchase Decision	0.869	5

Source: Data processed using SPSS software

Based on Table 2, all variables demonstrate Cronbach's Alpha values above 0.70, indicating a strong level of instrument reliability. Consistent with the descriptive statistics and validity test results, these findings confirm that the data meet the methodological prerequisites required for analyzing relationships among variables and for testing the research hypotheses.

c. Classical Assumption Tests

Prior to estimating regression coefficients and testing hypotheses, the adequacy of the multiple linear regression model was verified through classical assumption testing. The results of residual normality tests using the Kolmogorov Smirnov and Shapiro Wilk procedures show that all models have significance values above 0.05, indicating that the residuals are normally distributed. Linearity testing using the Deviation from Linearity approach further reveals that the relationships between brand image, price, promotion, and distribution channels and purchasing decisions are linear, as reflected by significance values consistently exceeding 0.05.

Furthermore, heteroskedasticity testing using the Breusch Pagan method, supported by Spearman correlation analysis, indicates the absence of non constant variance patterns, confirming that the residuals are homoskedastic. Autocorrelation testing using the Durbin Watson statistic yields values within the range of 1.5 to 2.5, suggesting independence among residuals. With all assumptions satisfied, the regression model fulfills the criteria of the Best Linear Unbiased Estimator and is therefore appropriate for hypothesis testing.

d. Multicollinearity Test

Multicollinearity testing was conducted to ensure that relationships among independent variables do not overlap excessively, thereby maintaining the stability of coefficient estimates. As shown in Table 3, all variables exhibit Variance Inflation Factor values below 10 and tolerance values above 0.10, confirming the absence of multicollinearity in the model. These findings are consistent with the relatively low intercorrelations among variables, indicating that

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each independent variable contributes distinctly and meaningfully to explaining purchasing decisions.

Table 3: Multicollinearity Test Results

Variable	Tolerance	VIF	Multikolinearitas
Brand Image	0.985	1.015	No multicollinearity
Price	0.843	1.187	No multicollinearity
Promotion	0.839	1.191	No multicollinearity
Distribution Channel	0.876	1.142	No multicollinearity
Constant	–		–

Source: Data processed using SPSS software

The series of tests covering normality, linearity, heteroskedasticity, autocorrelation, and multicollinearity indicate that all assumptions required for multiple linear regression have been satisfied. With these assumptions fulfilled, the regression model is considered stable and reliable, and therefore appropriate as the basis for estimating regression coefficients and conducting subsequent hypothesis testing.

e. Coefficient of Determination (R^2 and Adjusted R^2) and Multiple Linear Regression Model

After confirming the regression assumptions, the analysis proceeds to model estimation to examine the direction, strength, and statistical significance of the effects of brand image, price, promotion, and distribution channels on purchasing decisions, both partially and simultaneously. Model performance is evaluated using the coefficient of determination (R^2) and Adjusted R^2 to assess the extent to which variations in purchasing decisions can be explained by the independent variables included in the regression model.

Table 4 summarizes the strength of relationships and the explanatory power of each factor influencing purchasing decisions. On a partial basis, brand image explains 14.1 percent of the variation in purchasing decisions, price accounts for 16.8 percent, promotion explains 5.8 percent, and distribution channels explain 34.7 percent, with distribution channels exhibiting the strongest contribution. When all variables are incorporated simultaneously into the multiple regression model, the Adjusted R Square reaches 0.598. This result indicates that 59.8 percent of the variation in purchasing decisions for domestically produced industrial LED products can be explained by the combined effects of brand image, price, promotion, and distribution channels, while the remaining 40.2 percent is attributable to other factors not included in the model.

Table 4: Multiple Regression Coefficient Test Results

Model / Factor	R	R Square	Adjusted R Square	Std. Error of Estimate
Brand Image – Purchase Decision	0.393	0.154	0.141	0.6900
Price – Purchase Decision	0.425	0.180	0.168	0.6793
Promotion – Purchase Decision	0.269	0.072	0.058	0.7227
Distribution Channel – Purchase Decision	0.598	0.357	0.347	0.6016

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Combined Factors – Purchase Decision	0.789	0.622	0.598	0.4720

Source: Data processed using SPSS software

Table 5 shows a regression constant of −0.722, which represents the level of purchasing decisions when brand image, price, promotion, and distribution channels are held at zero. This value illustrates the initial point of the regression model and serves as a baseline reference before the contributions of each independent variable are taken into account in shaping purchasing decisions.

Table 5. Multiple Linear Regression Results

Independent Variable	B	Std. Error	Beta	t	Sig.
Brand Image	0.241	0.061	0.310	3.945	0.000
Price	0.344	0.073	0.402	4.726	0.000
Promotion	0.231	0.070	0.283	3.318	0.002
Distribution Channel	0.438	0.086	0.425	5.102	0.000
Constant	-0.722	0.484		-1.493	0.141

Note: B represents unstandardized regression coefficients
Source: Data processed using SPSS software

The relationship between the marketing mix and consumers' purchasing decisions is summarized in the following regression equation:

f. Consumers' purchasing decision = −0.722 + 0.241 (Brand Image) + 0.344 (Price) + 0.231 (Promotion) + 0.438 (Distribution Channels) + ε.

The brand image variable has a coefficient of 0.241, indicating that stronger positive perceptions of the brand directly contribute to higher purchasing decisions. This finding confirms that clarity of brand identity and brand reputation play an important role in building consumer confidence toward domestically produced industrial LED products. Price records a coefficient of 0.344, reflecting that price perceptions considered fair and aligned with product benefits exert a stronger influence on purchasing decisions. Promotion shows a coefficient of 0.231, suggesting that well delivered promotional messages are able to encourage consumers to make purchasing decisions, both through information provision and interest reinforcement.

Among all variables, distribution channels exhibit the strongest influence with a coefficient of 0.438. This result indicates that ease of product availability, market accessibility, and the reliability of distribution systems constitute key considerations for consumers when determining their purchasing choices. The error term ε represents the influence of other factors not captured within the model.

g. Simultaneous Hypothesis Testing (F Test)

Simultaneous testing was conducted to examine the extent to which brand image, price, promotion, and distribution channels jointly influence consumers' purchasing decisions.

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Table 6: Simultaneous Hypothesis Testing Results (F-test)

Model		Sum of Squares	df	Mean Square	F	Sig.
Model 1 (Brand Image)	Regression	5.648	1	5.648	11.864	0.001
	Residual	30.943	65	0.476		
	Total	36.591	66			
Model 2 (Price)	Regression	6.595	1	6.595	14.291	0.000
	Residual	29.996	65	0.461		
	Total	36.591	66			
Model 3 (Promotion)	Regression	2.64	1	2.64	5.054	0.028
	Residual	33.951	65	0.522		
	Total	36.591	66			
Model 4 (Distribution Channel)	Regression	13.065	1	13.065	36.098	0.000
	Residual	23.526	65	0.362		
	Total	36.591	66			
Model 5 (All Factors Combined)	Regression	22.776	4	5.694	25.554	0.000
	Residual	13.815	62	0.223		
	Total	36.591	66			

Dependent Variable: Purchase Decision.
Model 1 predictor: Brand Image
Model 2 predictor: Price.
Model 3 predictor: Promotion
Model 4 predictor: Distribution Channel
Model 5 predictor: Brand Image, Price, Promotion, and Distribution Channel

Catatan: Dependent variable = Purchase Decision
Source: Data processed using SPSS software

Referring to Table 6, the calculated F value of 25.554 with a p value of 0.000, which is below the 0.05 threshold, indicates that the four variables jointly exert a statistically significant influence on purchasing decisions for domestically produced industrial LED products. Based on this result, H5 is accepted. These findings confirm that the regression model demonstrates a strong level of fit in explaining variations in purchasing decisions, while also illustrating that marketing effectiveness does not operate in isolation but emerges from the synergy among interrelated elements.

h. Partial Hypothesis Testing (t Test)

Partial testing was conducted to examine the individual contribution of each variable in shaping purchasing decisions.

Table 7: Partial Hypothesis Testing Results (t-test)

Independent Variable	B	Std. Error	Beta	t	Sig.
Brand Image	0.241	0.061	0.310	3.945	0.000
Price	0.344	0.073	0.402	4.726	0.000
Promotion	0.231	0.070	0.283	3.318	0.002

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Distribution Channel	0.438	0.086	0.425	5.102	0.000
Constant	-0.722	0.484		-1.493	0.141

Catatan: Dependent variable = Purchase Decision. B represents unstandardized regression coefficients
Source: Data processed using SPSS software

Based on the t test results presented in Table 7, brand image is shown to have a positive and statistically significant effect, with a t value of 3.945 and a p value of 0.000. The coefficient of 0.241 indicates that stronger consumer perceptions of brand image are associated with a higher tendency to make purchasing decisions, leading to the acceptance of H1. The price variable also demonstrates a strong influence, as reflected by a t value of 4.726, a p value of 0.000, and a coefficient of 0.344. This result indicates that price suitability in relation to product value and benefits represents a key consideration in purchasing decisions, thereby supporting the acceptance of H2.

Promotion exhibits a consistent pattern, with a t value of 3.318, a p value of 0.002, and a coefficient of 0.231. These findings suggest that effective promotional messages are capable of strengthening consumers' motivation to purchase, leading to the acceptance of H3. Among all variables, distribution channels emerge as the most dominant factor, with the highest t value of 5.102, a p value of 0.000, and a coefficient of 0.438. This result confirms that ease of access, product availability, and distribution reliability serve as primary determinants in purchasing decision making, resulting in the acceptance of H4

i. Discussion

The results of the multiple linear regression analysis indicate that brand image, price, promotion, and distribution channels consistently exert positive and statistically significant effects on individual consumers' purchasing decisions for domestically produced industrial LED products. Taken together, these findings reaffirm the relevance of the marketing mix framework proposed by Kotler and Keller (2016), which posits that purchasing decisions do not emerge from a single element but rather from consumers' integrated evaluations of the overall marketing strategy. This conclusion aligns with the findings of Ellitan (2021) and Hanaysha et al. (2021), who emphasize the collective role of the marketing mix in shaping perceived value, satisfaction, and purchasing decisions. Accordingly, the acceptance of hypothesis H5 reinforces the views of Widyastuti et al. (2020), Kanetro et al. (2023), and Patimah et al. (2023), who argue that marketing mix elements operate simultaneously in influencing purchasing decisions across different product categories.

Based on the standardized regression coefficients, distribution channels emerge as the variable with the strongest influence on purchasing decisions ($\beta = 0.438$), followed by price ($\beta = 0.344$), brand image ($\beta = 0.241$), and promotion ($\beta = 0.231$). The use of standardized beta values enables a clear interpretation of the relative contribution of each independent variable in shaping individual consumers' purchasing decisions. The dominant influence of distribution channels supports the arguments of Kotler and Keller (2016; 2022), who highlight that ease of access, product availability, and timely delivery constitute essential conditions for actual purchase behavior. This finding is consistent with studies by Ali and Anwar (2021), Arija et al. (2021), Wijaya (2024), and Saidani and Sudiarditha (2019), which demonstrate that

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effective distribution systems reduce purchase barriers and enhance the effectiveness of other marketing mix elements. In addition, the study by Thanabordeekij and Syers (2020) on utilitarian household products in Thailand confirms that distribution and the marketing mix play an important role in shaping consumer responses, which ultimately influence satisfaction and loyalty. For individual consumers, ease of access to LED lighting products becomes a critical factor, as it is directly associated with convenience, practicality, and certainty of product availability in the market.

Price ranks as the second strongest determinant of purchasing decisions, with a standardized beta value of 0.344. This finding reinforces the perspective of Kotler and Keller (2016) as well as Zeithaml's (1988) customer value concept, which interprets price as a reflection of the balance between perceived benefits and the sacrifices made by consumers. Rather than simply seeking the lowest price, consumers assess the fairness and proportionality of price in relation to product quality and benefits, as also demonstrated by Ali and Anwar (2021), Hermiyenti and Wardi (2019), and Patimah et al. (2023). Consequently, price serves as a primary rational foundation in the evaluation process prior to finalizing purchasing decisions.

Brand image is also shown to have a positive and significant influence on purchasing decisions, with a standardized beta value of 0.241. This result supports Aaker's (1991) view of brand image as a set of associations stored in consumers' memory that helps reduce perceived risk during decision making. In line with Hermiyenti and Wardi (2019), Wasik et al. (2023), Patimah et al. (2023), and Rihayana et al. (2022), a positive brand image strengthens trust in product quality, reliability, and credibility. However, the lower beta value compared to price and distribution channels suggests that for individual consumers, brand image functions more as a supporting factor rather than a primary determinant of purchasing decisions. This pattern is consistent with Helmi et al. (2022), who position brand image as a mediating variable, indicating that promotional efforts operate not only directly but also through the formation of brand image, which ultimately reinforces consumer confidence in making purchasing choices.

The promotion variable also exhibits a positive and significant effect, with a standardized beta value of 0.231, representing the smallest relative contribution among the independent variables. Nevertheless, this finding remains consistent with the promotional theories of Kotler and Keller (2016) and Ellitan (2021), which emphasize promotion as a vehicle for communicating value and strengthening consumer perceptions. The result also aligns with Hermiyenti and Wardi (2019) and Pickett-Baker and Ozaki (2008), who highlight the importance of educational promotion, particularly for environmentally friendly and energy efficient products. The relatively lower beta value indicates that promotion primarily acts as a reinforcing and supporting element in purchasing decisions rather than serving as the main trigger of consumer choice.

j. Managerial Implications for PT Pancaran Indonesia (PTPI)

Based on the regression analysis and standardized beta coefficients, the managerial implications for PT Pancaran Indonesia (PTPI) as a domestic manufacturer of industrial LED products should be directed toward strengthening a consumer-oriented marketing strategy in

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the B2C segment. The finding that distribution channels have the strongest influence on purchase decisions (β = 0.438) indicates that individual consumers are highly sensitive to ease of access and product availability. Therefore, PTPI needs to prioritize the expansion and reinforcement of its retail distribution network through physical stores, building material outlets, and accessible online sales channels. Consistent product availability across multiple points of sale will reduce purchase barriers and increase the likelihood of actual transactions.

The next implication relates to pricing strategy, which represents the second strongest determinant of purchase decisions (β = 0.344). PTPI should ensure that its LED pricing structure reflects a clear balance between product quality, long term benefits, and the purchasing power of individual consumers. Competitive pricing, supported by transparent communication of value such as energy efficiency and product durability, will strengthen perceptions of price fairness and encourage purchase decisions.

With regard to brand image (β = 0.241), PTPI needs to develop branding strategies that emphasize product reliability, domestic manufacturing quality, and long term usage benefits. Strengthening brand image serves as a trust building factor for individual consumers, particularly in a market characterized by intense competition from imported LED products. A strong and credible brand image will enhance consumer confidence in selecting PTPI products as dependable lighting solutions.

Promotion (β = 0.231), while showing the smallest relative contribution, should be designed with an informative and educational orientation rather than purely persuasive messaging. PTPI can optimize promotional efforts by highlighting energy efficiency, electricity cost savings, and product lifespan as key value propositions for individual consumers. Promotional activities that are well aligned with broad product availability across distribution channels will enhance marketing communication effectiveness and reinforce purchase decisions.

Overall, these managerial implications underline that PTPI's marketing strategy in the B2C segment should be developed in an integrated manner, with primary emphasis on distribution and pricing, supported by consistent brand image strengthening and targeted promotional activities. This approach aligns with the empirical findings of the study and provides a strategic foundation for PTPI to enhance the competitiveness of domestically produced industrial LED products in the individual consumer market.

4. CONCLUSION

The findings of this study demonstrate that brand image, price, promotion, and distribution channels consistently exert a positive and significant influence on individual consumers' purchasing decisions for domestically produced industrial LED lighting products. When examined individually, distribution channels emerge as the most dominant factor, followed by price, brand image, and promotion. This pattern highlights that ease of access, product availability, and distribution reliability serve as the primary triggers in the consumer

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decision-making process, while the remaining factors function as reinforcing elements that strengthen and legitimize consumer choices.

The regression model further indicates that improvements in perceptions of brand image, pricing, promotional activities, and distribution performance are systematically followed by stronger purchasing decisions. The constant (α) reflects the baseline level of purchase intention when all explanatory variables are at their minimum. The uniformly positive coefficients, supported by high R Square and Adjusted R Square values, confirm that a substantial proportion of the variation in purchasing decisions can be explained by these four variables, with the remaining variance attributed to factors beyond the scope of the model.

From a managerial perspective, these results suggest that domestic LED manufacturers should place strategic priority on building an efficient, reliable, and widely accessible distribution system as the main driver of consumer purchasing behavior. This effort should be complemented by fair and value-based pricing strategies, consistent brand image management to cultivate trust, and promotional activities that are both informative and persuasive. Such an integrated approach not only increases the likelihood of individual consumer purchases but also strengthens the competitive position of national industrial LED products within an increasingly dynamic and competitive market.

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