



ANALYSIS OF FACTORS INFLUENCING MEDICINE PURCHASE DECISIONS IN CILEGON

ANALISIS FAKTOR-FAKTOR YANG MEMPENGARUHI KEPUTUSAN PEMBELIAN OBAT DI CILEGON

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Abstract

This study examines the impact of four key marketing variables product quality, price, persuasive communication, and incentives on brand image and purchasing decisions among medical practitioners in Cilegon, Indonesia. Drawing on a sample of 225 physicians, dentists, and pharmacists, data were collected via an online Likert-scale questionnaire and analyzed using confirmatory factor analysis and structural equation modeling (SEM). Results indicate that product quality and incentives exert statistically significant positive effects on brand image ($\beta = 0.284$, $p = 0.011$; $\beta = 0.291$, $p = 0.003$, respectively), while price and persuasive communication do not achieve significance. Furthermore, incentives also demonstrate a significant positive influence on purchase decisions ($\beta = 0.206$, $p = 0.047$), whereas other independent variables, including brand image, fail to show a direct effect. Model fit indices (CMIN/DF = 1.122; GFI = 0.90; RMSEA = 0.016; $p = 0.061$) confirm an overall good fit. These findings underscore the critical role of maintaining high product standards and ethical incentive programs in strengthening brand perception and stimulating purchase behavior in a competitive pharmaceutical landscape. Theoretical contributions include the integration of marketing, consumer behavior, and brand management theories within a single SEM framework. Practically, pharmaceutical firms operating in emerging markets should prioritize consistent quality assurance and transparent incentive mechanisms to enhance both brand equity and sales performance.

Keywords: Product Quality; Incentives; Brand Image; Purchase Decision; Pharmaceutical Marketing.

1. INTRODUCTION

Established in 1993 by a multidisciplinary team, PT XY is a reputable Indonesian pharmaceutical manufacturer committed to high-quality products. To meet growing demand, the company opened a new 7-hectare facility in late 2015, enhancing its capacity for branded generics, unbranded generics, and OTC products. As a leading toll manufacturer for tablets and liquids, it has produced over 120 medicines across antibiotics, antifungals, antihistamines, and more (see Appendix 1). A 2000 restructuring boosted domestic sales and strengthened its



industry standing. Under the motto “Quality Is Our Concern,” PT XY adheres to Good Manufacturing Practices (GMP), holds ISO 9001:2015 certification, and conducts pharmacovigilance per BPOM regulations (No. 15/2022; No. 4/2021), enabling continuous safety monitoring and product improvement. Supported by over 1,000 skilled professionals, it serves domestic and international markets via a nationwide distribution network including major cities from Banda Aceh to Jayapura and partners with leading distributors (e.g., PT Milenium Pharmacon International, PT Penta Valent, PT Kallista Prima). Its medical representatives actively promote products to hospitals, clinics, and pharmacies across Indonesia.

Annually, PT XY convenes its Management Review Meeting (MRM) and “Good to Great” (GtG) forum to uphold quality management and drive continuous performance improvement. These strategic gatherings assemble all departments to evaluate yearly performance, present key performance indicators (KPIs), quality objectives, obstacles encountered, and propose corrective actions. Beyond reporting, MRM and GtG foster transparency, cross-functional collaboration, and a quality-and-efficiency-oriented culture, enabling top management to gain a comprehensive organizational overview, identify improvement areas, and set strategic policies aligned with the company’s vision to advance “from good to great” in the national and global pharmaceutical industry.

At the February 2025 review at the Citeureup plant, the Production Department reported 2024 production issues: a 13.95% rework rate predominantly GP-Blend coated tablets; raw-material hold-ups in Stromag Tablet production; and mixing errors in Nucoline batches. Customer complaints, though reduced to 0.32%, persist. Although all cases were closed, these findings highlight ongoing challenges in product quality and customer perception.

To ensure consistent machine performance and product conformance, PT XY implements process validation, routine calibration and maintenance, and strict control of critical parameters (speed, temperature, pressure, volume). In-process controls (e.g., weight, hardness, homogeneity) and real-time sensors, alongside Statistical Process Control (SPC), monitor stability. All activities adhere to Good Manufacturing Practices (GMP) with comprehensive documentation and regular audits. A holistic quality-control system also includes pharmacopeial laboratory testing, stakeholder surveys, complaint and return analyses, and GMP certification audits. This integrated approach not only reinforces product quality and consistency but also underpins marketing strategy by enhancing consumer trust, strengthening brand image, and boosting market competitiveness.

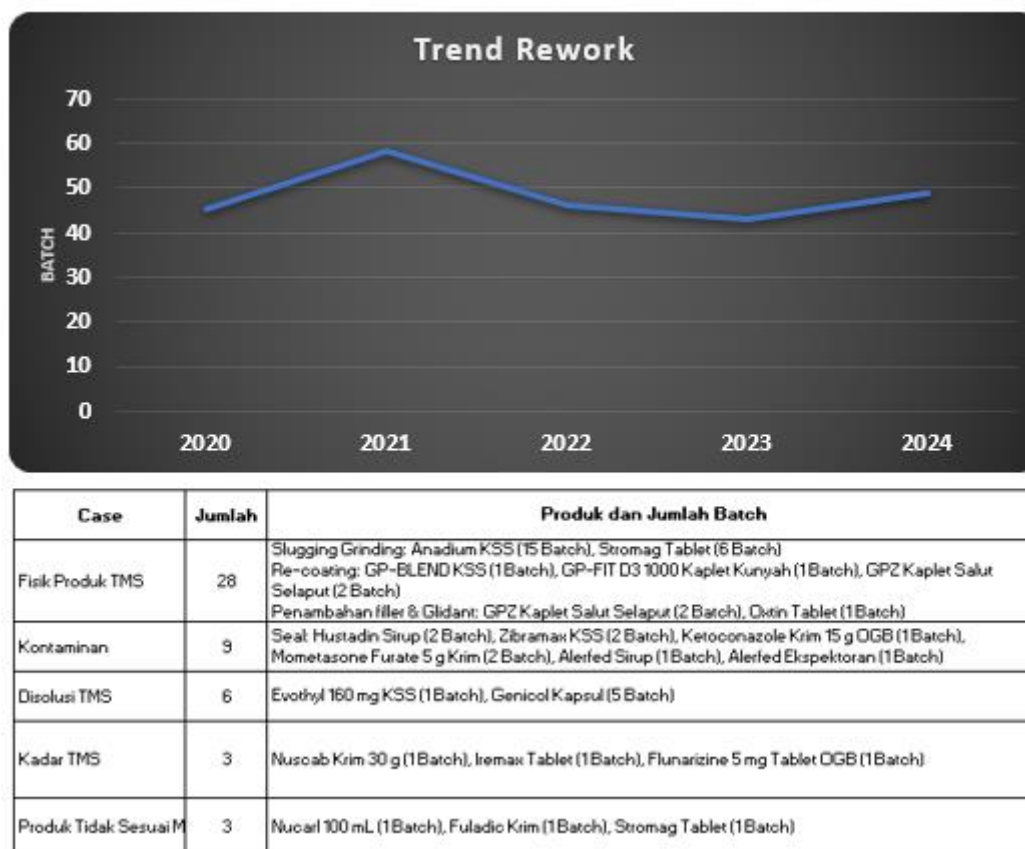
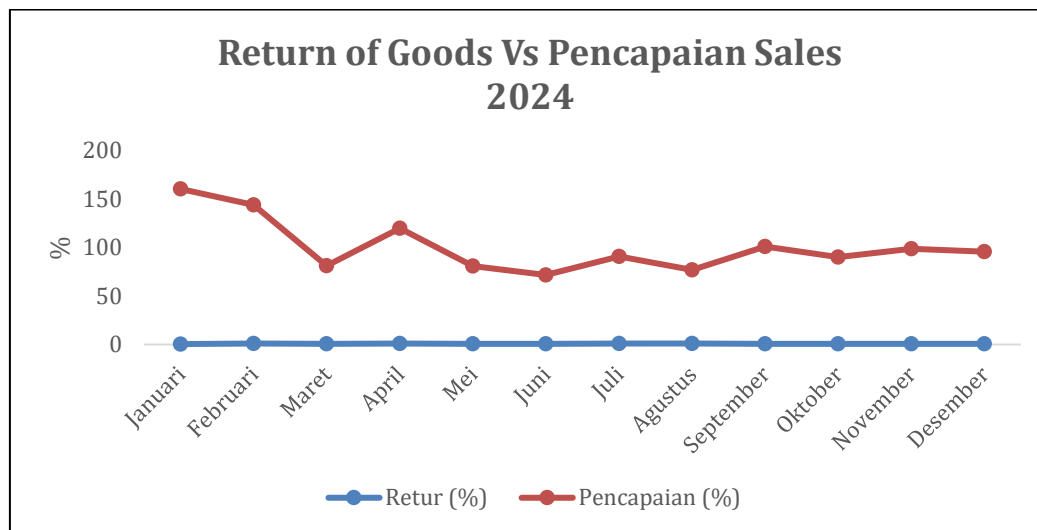


Figure 1. Chart of Rework Trends from 2020 to 2024

Source: RTM & FG TG PT XY 2025

Furthermore, as presented by the Marketing Department at the RTM and FG TG meetings, it was reported that the average rate of return of goods throughout 2024 reached 0.78%. On the other hand, the increase in sales figures was limited to only 10% compared to the previous year. This outcome indicates that the marketing and distribution strategies implemented have not yet been fully effective. Therefore, the marketing team emphasized the importance of adjusting product prices in response to increasingly competitive market dynamics. One of the main issues highlighted was concern over price competition with other pharmaceutical companies that already possess strong reputations and high levels of customer loyalty. The presence of these major brands presents a particular challenge in maintaining competitiveness, especially without sacrificing profit margins. In addition, efforts are needed to expand distribution coverage to regions with relatively low sales as part of a strategy to strengthen the market at the national level. This measure is crucial for promoting evenly distributed sales growth, rather than focusing solely on areas with already established markets.

**Figure 2. Sales Achievement Chart for 2024**

Source: RTM & FGTG PT XY 2025

In order to strengthen marketing strategies and product development, PT XY recently held a National Medical Representative Meeting in Sentul, Bogor, attended by the entire marketing team from various regions across Indonesia (Figure 4). This event served as a critical opportunity to enhance the knowledge and skills of medical representatives, enabling them to market pharmaceutical products more effectively. One of the main topics addressed during the meeting was the importance of persuasive communication as a key strategy in influencing the purchasing decisions of medical professionals, particularly in the face of increasing market competition. Recognizing the importance of expanding market reach especially in areas with untapped market potential the meeting also aimed to align strategies to increase penetration in these regions. This initiative is consistent with ongoing research examining the influence of persuasive communication and incentives on purchasing decisions, as well as their impact on brand image. Through this meeting, PT XY is expected to strengthen its brand image, enhance consumer awareness of high-quality products, and accelerate market penetration in under-served areas, ultimately contributing to the company's marketing success in Indonesia's pharmaceutical market (Satibi et al., 2024).

In addition to persuasive communication, incentives were a primary topic discussed at the meeting in response to field challenges. PT XY current incentive schemes face difficulty effectively engaging healthcare professionals such as physicians and pharmacists to encourage product recommendations. Internal reports indicate that offered incentives are often deemed irrelevant or less competitive than those of rival pharmaceutical firms, leading practitioners to favor alternative brands, particularly in low-sales regions where PT XY marketing and product penetration remain limited. In pharmaceutical marketing, Medical Representatives (Medreps) serve as the company's frontline in cultivating direct relationships with healthcare providers. Beyond disseminating product information and scientific education, Medreps possess critical insights into practitioners' preferences, needs, and behaviors across diverse markets including underexploited areas like Cilegon and thereby shape the efficacy of incentive strategies. This study confirms that Medreps' incentive practices constitute one of the most influential unethical subdimensions affecting physicians' prescribing behavior, as corroborated by



existing literature (e.g., Skandrani & Sghaier, 2016; Murshid et al., 2019). Consequently, active Medrep involvement in designing targeted, context-specific incentive programs is essential to enhance promotional effectiveness and foster practitioner loyalty. Given intensifying competition in the pharmaceutical industry, it is vital for PT XY to critically assess how measurable, ethical incentives influence healthcare professionals' preferences and ultimately consumer purchase decisions. This research aims to offer strategic guidance for formulating more effective, appealing, and sustainable incentive programs while preserving the integrity of company-practitioner relationships.

Beyond variables such as product quality, price, persuasive communication, and incentives, PT XY must also focus on brand image to deepen understanding and appreciation among healthcare providers and end consumers. This entails not only product awareness but the consistent embedding of corporate values, quality, and competitive advantages in stakeholders' perceptions. Brand awareness and positive perception of PT XY products remain areas for improvement, particularly to forge stronger emotional connections with medical professionals and the general public.



Figure 3. Rankings of Pharmaceutical Firms in Indonesia

Source: Indonesian Pharmaceuticals 2016

This study addresses critical gaps in understanding the determinants of pharmaceutical purchasing decisions and their impact on brand image within Indonesia's pharmaceutical sector, specifically focusing on medical representatives. Previous research on factors like product quality, pricing, and communication often lacks an integrated approach, particularly regarding the combined influence of persuasive communication and incentives. Furthermore, there is a dearth of targeted research within Cilegon, a strategically chosen region with low pharmaceutical sales penetration, offering substantial market expansion potential for pharmaceutical companies.

The research's novelty lies in its geographical focus on Cilegon, aiming to develop region-specific market penetration strategies. Its urgency stems from the need for a deeper understanding of purchasing drivers in underperforming markets amidst intense industry competition. By analyzing the integrated effects of product quality, price, persuasive communication, and incentives on purchasing decisions and brand image, this study seeks to provide actionable insights for more effective, locally-tailored marketing strategies, thereby contributing to national market expansion efforts for pharmaceutical firms like PT XY.



2. RESEARCH METHOD

Study Period and Location

This quantitative descriptive study will be conducted over three months, from May to July 2025. This timeframe is deemed optimal for effective data collection and comprehensive analysis, aligning with Creswell's (2014) emphasis on matching research duration to problem complexity and resource availability.

The research focuses on PT XY, a pharmaceutical company in Citeureup, Bogor, specializing in drug production with a broad domestic market presence. The company's selection is based on its relevance to the pharmaceutical industry and the researcher's direct access to necessary data. While PT XY is in Bogor, the research location is Cilegon. This decision considers Cilegon's potential for market growth despite currently suboptimal product penetration, its accessibility for data collection, and robust healthcare infrastructure (e.g., RSUD Cilegon, RS Krakatau Medika), providing representative data on pharmaceutical product usage. Communication technologies like mobile phones and email will facilitate effective coordination between locations, as supported by the increasing popularity of remote research since the 1990s (Martin et al., 2020).

Research Design

This study employs a quantitative descriptive research design. This approach facilitates the objective collection, analysis, and interpretation of numerical data to understand the investigated phenomena (Creswell, 2014). It provides a systematic overview of the relationships between variables, forming a basis for decision-making and strategic formulation. The research is designed to test pre-formulated hypotheses and analyze the impact of independent variables on dependent variables, aiming to establish empirical evidence of causal relationships.

Population and Sample

Population

The study's population comprises doctors in Cilegon, chosen to evaluate the influence of product quality, price, persuasive communication, and medical representative incentives on their purchasing decisions for PT XY products. This selection is crucial due to doctors' central role in pharmaceutical product decisions and the company's sub-optimal market penetration in Cilegon (Manchanda & Honka, 2013).

According to Indonesia's Central Statistics Agency (BPS) 2024, there are 183,648 doctors nationwide (Pristiandaru, 2024). Specifically in Cilegon, BPS data from 2023 indicates 464 doctors (Badan Pusat Statistik Cilegon, 2023), while the Indonesian Medical Association (IDI) Cilegon Branch reports 492 members (Ikatan Dokter Indonesia Wilayah Banten, 2025). These discrepancies may stem from variations in data collection periods, definitions, or methodologies between the agencies.

Sample



The sample will be drawn from the 492 doctors registered with IDI Cilegon. The sampling method aligns with Hair et al.'s (2016) recommendations for Structural Equation Modeling (SEM) to ensure accurate representation of doctors interacting with PT XY medical representatives. For SEM analysis, Hair et al. (2016) suggest a sample size range of 100–200 respondents, or 5-10 times the number of research indicators for validity and reliability.

Sample characteristics include: a. Members of IDI Cilegon. b. Working in a clinic or hospital. c. Possessing a valid practice license. d. Working within the Cilegon area. e. Having made at least one product purchase transaction from PT XY in the last year.

Simple random sampling will be employed (Sugiyono, 2017), where respondents are randomly selected from a list provided by the IDI Cilegon secretary via a lottery method until the required sample size is met. With 32 research indicators, based on Hair et al. (2016), the optimal sample size for this study is 160 to 320 doctors to ensure optimal validity and reliability.

Instrument Development

This study categorizes variables into two main types: dependent and independent.

- a. Dependent Variable: Purchase Decision (Y). This variable encompasses indicators adapted from previous studies.
- b. Independent Variables (X and Z): These directly influence the dependent variable. There are five independent variables: Product Quality (X1), Price (X2), Persuasive Communication (X3), Incentives (X4), and Brand Image (Z).

Independent variables are causes, while dependent variables are effects (Sugiyono, 2014). Additionally, mediating variables can alter the relationship between independent and dependent variables.

Indicators

The study's indicators are adapted from previous research on pharmaceutical products, ensuring relevance to the current study's needs.

- a. Product Quality (X1): Adapted from Lorinda and Amron (2023), this measures how well PT XY products meet customer needs and expectations, influencing purchase decisions, particularly for medical products. Key dimensions include performance, reliability, features, durability, adherence to standards, repairability, aesthetics, and perceived quality (Utami & Oktavia, 2024).
- b. Price (X2): Adapted from Han and Han (2023), this variable assesses consumer perception of PT XY product pricing, emphasizing reasonableness, value for money, and overall consumer benefit. While price differences in the highly competitive pharmaceutical market are often minimal and quality is prioritized, patient affordability remains a crucial consideration (Ferdous, 2014).
- c. Persuasive Communication (X3): Adapted from Nabilla and Afifi (2023), this measures the effectiveness of PT XY medical representatives in influencing doctors' attitudes, beliefs, and actions. It assesses how clear and comprehensive product information, presented persuasively, enhances knowledge and encourages product adoption, aligning with the AIDDA model (Attention, Interest, Desire, Decision, Action) (Effendy, 1990).



- d. Incentives (X4): Adapted from Siddiqui and Siddiqui (2024), this variable examines the influence of both intrinsic and extrinsic incentives on doctors' prescribing decisions. While ethical concerns regarding incentives exist (Hanin et al., 2023; Zaki, 2014), the study assesses how promotional gifts, sponsored meals, and conference support from PT XY medical representatives affect professional relationships and prescribing preferences.
- e. Brand Image (Z): Adapted from Handoyo et al. (2018) and Farrag & Elessamy (2025), this variable captures consumer perception and brand reputation of PT XY products. It assesses how factors like product utility, perceived quality, market reputation, safety, uniqueness, and medical recommendations influence brand recognition, recall, and ultimately, consumer choice. Strong brand image is particularly vital for healthcare products (Murshid & Mohaidin, 2017).
- f. Purchase Decision (Y): Adapted from Almrafee (2023) and Duh & Diniso (2020), this variable identifies factors influencing consumers' decisions to purchase PT XY products. It considers consumer satisfaction, the impact of medical professional recommendations, and ease of access to information and purchasing, recognizing that product quality, effective promotion, and professional endorsements significantly influence choices in the pharmaceutical sector (Valentina et al., 2019).

3. RESULTS AND DISCUSSION

Results

This section presents a comprehensive analysis of the study's findings on the determinants of physicians' purchasing decisions for PT XY pharmaceutical products in the Cilegon region. The results are organized into four subsections: (1) respondent characteristics, (2) measurement model assessment, (3) structural model evaluation, and (4) hypothesis testing.

Respondent Characteristics

A total of 225 physicians participated in the survey. Female respondents comprised 63.8% (n = 141), while males accounted for 36.2% (n = 84). The largest age cohorts were 30–34 years (35.1%, n = 79) and 35–39 years (35.6%, n = 80), indicating a predominantly mid-career sample. Professionally, general practitioners represented 48.0% (n = 108), followed by pharmacists (23.1%, n = 52) and dentists (21.3%, n = 48). In terms of tenure, 5–10 years of professional experience was most common (53.3%, n = 120). Frequency of exposure to PT XY product information varied, with 42.2% (n = 95) receiving information 1–3 times per month, while 28.9% (n = 65) both less than once per month and more than three times per month.

Measurement Model Assessment

Convergent Validity

Average Variance Extracted (AVE) values exceeded the recommended threshold of 0.50 for all latent constructs: product quality (AVE = 0.573), price (0.529), persuasive communication (0.513), incentive (0.504), brand image (0.526), and purchase decision (0.540). Standardized loadings for individual indicators ranged from 0.603 to 0.982 for product quality, 0.695–0.772 for price, 0.645–0.791 for persuasive communication, 0.622–0.803 for incentive, 0.558–0.841 for brand image, and 0.691–0.758 for purchase decision, all exceeding the 0.50 benchmark and confirming convergent validity.



Composite Reliability and Cronbach's Alpha

Composite Reliability (CR) values ranged from 0.764 (brand image) to 0.904 (persuasive communication), all above the 0.70 threshold. Cronbach's α values ranged from 0.704 (brand image) to 0.800 (persuasive communication), demonstrating satisfactory internal consistency across constructs.

Structural Model Evaluation

Model Fit

Goodness-of-fit indices indicated an acceptable measurement model: $\chi^2/df = 1.122 (\leq 3)$, GFI = 0.90 (≥ 0.90), AGFI = 0.88 (≥ 0.80), PGFI = 0.741 (≥ 0.50), RMSEA = 0.016 (≤ 0.05). The Probability ($p = 0.061 \geq 0.05$) supported model fit. Only NFI (0.77) fell below the 0.90 criterion, suggesting a need for minor model refinement.

Path Coefficients

Table 1 summarizes the standardized path estimates, critical ratios, and significance levels for the hypothesized relationships.

Table 1. Structural Path Estimates

Hypothesis	Path	Estimate	C.R.	P-value	Significance
H1:	PQ → BI	0.284	2.546	0.011	Significant
H2:	PR → BI	-0.093	-0.864	0.387	Not significant
H3:	PC → BI	0.121	1.139	0.255	Not significant
H4:	IN → BI	0.291	2.921	0.003	Significant
H5:	PQ → PD	-0.077	-0.686	0.493	Not significant
H6:	PR → PD	0.184	1.670	0.095	Not significant
H7:	PC → PD	0.009	0.083	0.934	Not significant
H8:	IN → PD	0.206	1.987	0.047	Significant
H9:	BI → PD	0.100	0.971	0.331	Not significant

Hypothesis Testing

- **H1:** Supported. Product quality exerts a positive, significant effect on brand image ($\beta = 0.284$, $p = 0.011$).
- **H2 & H3:** Not supported. Neither price nor persuasive communication significantly influences brand image ($p > 0.05$).
- **H4:** Supported. Incentive positively affects brand image ($\beta = 0.291$, $p = 0.003$).



- **H5–H7 & H9:** Not supported. Product quality, price, persuasive communication, and brand image do not significantly determine purchase decisions ($p > 0.05$).
- **H8:** Supported. Incentive has a significant positive impact on purchase decisions ($\beta = 0.206$, $p = 0.047$).

These findings indicate that incentive mechanisms and product quality are pivotal in shaping physicians' perceptions of the brand, whereas incentives alone drive actual prescribing behavior. Traditional marketing levers price adjustments and persuasive promotional messaging did not significantly sway either brand image or prescribing outcomes in this professional context. The absence of a significant link between brand image and purchase decision suggests that physicians' prescribing choices are more directly motivated by tangible professional benefits than by brand reputation alone.

Discussion

The Influence of Product Quality on Brand Image

The first hypothesis in this study states that Product Quality influences Brand Image. Based on the analysis results, this hypothesis is proven to be significant, with an estimated value of 0.284, a CR value of 2.546, and a p-value of 0.011. The p-value below the threshold of 0.05 indicates that there is a statistically significant positive influence between perceptions of product quality and brand image formation. Findings This in line with study Fatmaningrum et al. (2020) which states that quality product and brand image in a way simultaneous own influence positive and significant to decision purchase consumers. And research by Saraswati and Rahyuda (2017) who revealed that high product quality can improve brand image, which in turn strengthens purchasing decisions, as well as other research by Santika and Mandala (2019). This indicates that improvement quality products and management effective brand image can push consumer for choose product the compared to with competitors.

In the context of research on PT XY pharmaceutical products in the Cilegon region, where doctors were both respondents and primary consumers, these findings indicate that doctors' perceptions of product quality play a significant role in building the company's brand image. This quality includes drug effectiveness in treating disease, safety of use, quality of active ingredients, and compliance with pharmaceutical production standards.

As the parties responsible for prescribing and recommending medications, doctors play a crucial role in assessing and disseminating brand perceptions of pharmaceutical products. Therefore, the higher the product quality perceived by doctors, the stronger the brand image of PT XY will be in their minds, ultimately increasing trust and loyalty in product use. Thus, these results confirm that improving product quality directly has a positive impact on the formation of brand image among medical personnel, especially doctors, who are a strategic target in marketing pharmaceutical products in the Cilegon region.

The Influence of Price on Brand Image

The second hypothesis in this study states that price influences brand image. However, the results of the analysis show that this hypothesis is not significant, with an estimated value of -0.093, CR = -0.864, and p-value = 0.387, which is far above the significance threshold of 0.05. Thus, statistically, there is no significant influence between perceptions of product price and brand image formation.



PT XY pharmaceutical products in the Cilegon region, these results indicate that physicians, both users and recommenders of pharmaceuticals, do not place significant weight on price when shaping brand image perceptions. This is understandable, given that physicians place greater emphasis on clinical effectiveness, safety, and pharmaceutical quality when selecting a product, rather than considering whether the product is priced high or low.

Furthermore, in Indonesia's healthcare system, particularly in facilities such as hospitals or clinics, doctors are not always directly involved in the financing or pricing of medications for patients. Consequently, price perception is a less dominant factor in influencing their assessment of a drug's brand image.

The results of this study indicate that the price variable (Price/PR) does not significantly influence brand image (BI). This finding aligns with a study conducted by Ahn and Hwang (2024), which stated that in the context of pharmaceutical products, consumers, including medical personnel, tend not to consider price as a primary factor in shaping their perceptions of brand image. This finding is reinforced by research by Ahmed et al. (2021), which shows that the decisions of professionals, such as doctors, in assessing pharmaceutical products are more influenced by scientific evidence and clinical effectiveness, rather than by price perceptions. Therefore, price is not always the primary determinant in building brand image in the pharmaceutical sector, particularly in business-to-professional relationships, such as between medical representatives and medical personnel. Thus, it can be concluded that the pricing strategy of PT XY does not directly affect the brand image in the eyes of doctors, and to improve the brand image, the company needs to focus more on improving product quality and other factors that are more clinically relevant among medical personnel.

The Influence of Persuasive Communication on Brand Image

The third hypothesis in this study states that persuasive communication has an influence on brand image. However, based on the results of data analysis of doctors as respondents who use PT XY drug products in the Cilegon area, this hypothesis was not proven significant. The estimated effect value was 0.121, with CR = 1.139 and p-value = 0.255, which exceeds the significance threshold of 0.05. This finding indicates that the company's persuasive communication strategy has not been effective enough in shaping brand perception (brand image) among medical personnel. This indicates the need for a more relevant communication approach based on the scientific information needs of health professionals.

PT XY drug products in the Cilegon region, where doctors are the target of communication from medical representatives (medreps), these results indicate that persuasive communication efforts are not strong enough or have not been optimally received by doctors to form a positive perception of the company's brand. Although persuasive communication is an important strategy in the pharmaceutical industry, especially through an interpersonal approach by medrep, its effectiveness is highly dependent on the quality of the message, the credibility of the communicator, and the relevance of the information to the doctor's clinical needs.

This insignificance may also reflect that doctors as professionals tend to rely on scientific evidence, clinical experience, and product quality in forming perceptions of the brand, rather than simply being influenced by persuasive promotional communications.

The results of this study indicate that persuasive communication (PC) does not significantly impact brand image (BI). This finding aligns with research by Ali et al. (2022),



which states that direct communication through medical representatives does not consistently improve brand perceptions due to systemic challenges such as regulatory differences and skeptical attitudes of medical professionals. The study explains that the influence of promotional communication often does not immediately change healthcare professionals' perceptions of product brands, as they prioritize scientific evidence and clinical effectiveness. This is also supported by findings reported by Ilyas, Z., & Siddiqi, MA (2024), who emphasized that this study shows that the effectiveness of persuasive communication by medical representatives only impacts through improving physicians' attitudes, not directly improving brand image. This means that without this mediating mechanism, persuasive communication alone is not strong enough to influence physicians' brand image.

Thus, these results reinforce the understanding that in the pharmaceutical realm, persuasive communication requires a more strategic and evidence-based approach to effectively influence brand image. Thus, while persuasive communication remains a crucial element in PT XY drug marketing strategy, this study demonstrates that efforts to improve brand image among physicians will be more effective when accompanied by an evidence-based communication approach and enhanced professional interactions between the company's medical representatives and healthcare professionals. This indicates that physicians tend to value scientifically relevant and clinically relevant information more than purely persuasive promotional messages.

The Influence of Incentives on Brand Image

The fourth hypothesis in this study states that incentives influence brand image. The results of the analysis show that this relationship is statistically significant, with an estimated value of 0.291. $CR = 2.921$, and $p\text{-value} = 0.003$, which is well below the significance threshold of 0.05. These findings indicate that PT XY incentives for doctors in the Cilegon region can strengthen positive perceptions of the drug brands offered. This means that incentive strategies are an important factor in building a strong brand image among medical personnel. Although studies that are direct research connection between incentives and brand image still limited, findings This in harmony with study Purnamasari and Murwatiningsih (2015) who revealed that brand image can play a role as a mediator in influence promotion to decision purchase. That is, the image brand is track important in strengthen the influence of marketing strategies to decision consumers. Findings similar research is also supported by Hendrayani et al. (2022), which shows that promotion own influence significant to decision purchase, good in a way direct and no direct through mediation brand image.

In the context of marketing pharmaceutical products from PT XY in the Cilegon region, incentives provided to doctors, whether in the form of material, educational support, sponsorship of scientific activities, or other forms of appreciation, have been shown to play a significant role in building the company's brand image. These findings indicate that providing incentives can increase emotional closeness and professional relationships between pharmaceutical companies and medical personnel, which in turn strengthens doctors' positive perceptions of the product brands offered.

Although physicians, as healthcare professionals, are required to be objective, ethically and compliantly provided incentives can still serve as a means of appreciation for their cooperation and support for their medical practice. This can increase loyalty and trust in the pharmaceutical company in question. Thus, PT XY can consider incentives as an effective



relational communication strategy in forming a positive brand image among doctors, while still paying attention to ethical, transparency, and regulatory aspects in pharmaceutical product promotion practices.

The Influence of Product Quality on Purchasing Decisions

The fifth hypothesis in this study states that product quality influences purchasing decisions. However, the test results show that this relationship is not statistically significant, with an estimated value of -0.077, CR = -0.686, and p-value = 0.493. The p-value exceeding the threshold of 0.05 indicates that product quality has not been able to provide a real direct influence on respondents' purchasing decisions. This finding indicates that in the context of purchasing medicinal products by doctors in the Cilegon area, the product quality factor from PT XY has not been a primary consideration, possibly because it is influenced by other intermediary variables such as brand image, incentives, or institutional policies.

In the context of PT XY pharmaceutical products in the Cilegon region, these results are quite interesting because they contradict the common assumption that product quality is a major factor influencing purchasing decisions. However, it is important to understand that the physicians respondents in this study did not always make purchasing decisions directly, but rather played a role in providing recommendations or prescriptions to patients. While the final purchasing decision could be influenced by other factors such as availability in pharmacies, price, or hospital and distributor policies.

In addition, another possibility is that doctors' perceptions of the quality of PT XY products are generally at a relatively uniform level or are considered adequate, so that variations in quality perceptions are not sufficient to influence differences in purchasing decisions.

These findings align with a study by Al Thabbah (2022), which found that physicians' perceptions of pharmaceutical product quality do not always directly impact their prescribing decisions, especially when other factors such as price, availability, and relationships with distributors are more dominant in the decision-making process. A similar finding was also found in a study conducted in the Philippines published in Ganther et al. (2019), which stated that although product quality is important, it is not the sole consideration in medical personnel's drug purchasing decisions. The study revealed that in practice, purchasing decisions are more influenced by a combination of factors, including promotions, incentives, and healthcare institution policies, so product quality alone is not sufficient to determine prescribing decisions. Therefore, these results indicate that in the context of PT XY pharmaceutical products, improving product quality needs to be accompanied by a more comprehensive distribution strategy and approach to significantly drive purchasing decisions.

Thus, although product quality is a crucial aspect in the pharmaceutical industry, the results of this study indicate that the quality of PT XY drug products does not necessarily have a direct influence on doctors' purchasing decisions. This is likely due to intermediary factors, such as perceptions of brand image or internal policies of healthcare institutions, which tend to be more dominant in influencing the decision-making process of medical personnel.

The Influence of Price on Purchasing Decisions

The sixth hypothesis in this study examines the effect of price on purchasing decisions. The analysis results show that this relationship is not statistically significant, with an estimated



value of 0.184 , CR = 1.670 , and p-value = 0.095 . Although the estimated coefficient indicates a positive relationship, the p-value is above the significance threshold of 0.05 indicating that the effect of price on purchasing decisions is not strong enough to be categorized as significant.

In the context of drug products from PT XY in the Cilegon area, this indicates that price considerations are not a major factor in purchasing decisions by doctors, and it is likely that other factors such as product credibility, incentives, or institutional preferences are more dominant in influencing these decisions.

In the context of PT XY pharmaceutical products in the Cilegon region, where doctors act as recommenders or prescribers, these results indicate that price is not a dominant factor influencing their decisions to use or recommend a drug product. This may occur because doctors prioritize aspects such as clinical effectiveness, safety, and previous experience when making decisions related to pharmaceutical product selection.

Furthermore, in many cases, physicians are not directly involved in purchasing transactions, as the purchasing process is typically handled by the hospital's procurement department, the pharmacy, or the patient themselves. Consequently, price becomes a less relevant variable or has an indirect influence on purchasing decisions from the physician's perspective.

These findings align with recent international studies. For example, research in the Philippines showed that drug prices do not always influence physicians' prescribing decisions, especially when patients do not directly pay for the drug. Instead, interpreting prices in the context of insurance drives physicians' drug selection decisions based on availability, company incentives , and their personal relationships with salespeople or distributors (Magno, C., & Guzman, RRS, 2019).

Similar results were also reported in a study in Jordan (Al Thabbah et al., 2022), which found that although pharmaceutical pricing strategies had an influence, factors such as drug availability in the formulary, scientific evidence support, and pharmaceutical distribution capacity were the main drivers of physician prescribing behavior.

Thus, although price is an important element in marketing strategy, the results of this study indicate that price has not been able to significantly drive purchasing decisions among doctors, so other approaches such as strengthening brand image, scientific communication, and product quality may be more effective in increasing product adoption in this segment.

The Influence of Persuasive Communication on Purchasing Decisions

The seventh hypothesis in this study tested the effect of persuasive communication on purchasing decisions. However, based on the analysis results, the relationship was not significant , with an estimated value of 0.009, CR = 0.083, and p-value = 0.934. This very high p-value indicates that persuasive communication does not provide a statistically significant contribution to purchasing decisions by respondents. In the context of PT XY drug products in the Cilegon region, this finding indicates that although persuasive communication is implemented, its impact on doctors' decisions to prescribe or choose products has not been felt strongly, possibly because the communication has not fully met the expectations of professionalism or clinical information needs of medical personnel.

In the context of PT XY pharmaceutical products in the Cilegon region, these results indicate that persuasive communication efforts, such as product presentations by medical representatives (medreps), promotional materials, or other verbal approaches, have not been



effective enough in influencing physicians' purchasing decisions. This may be due to several factors, such as a communication approach that is too commercially promotional, a lack of scientific evidence presented, or low relevance of the content to the physicians' clinical needs.

As professionals, doctors are generally more responsive to information based on scientific data, clinical trial results, and real-world experience than to persuasive communication or purely verbal promotions. Therefore, one-way communication or overemphasizing a product's benefits may not be strong enough to influence their decisions about using or recommending a drug.

These findings indicate that although communication strategies through medical representatives have been implemented, this approach has not been effective enough in influencing prescribing decisions by medical personnel. These results align with research by Gonul et al. (2001), which states that promotional and communication activities by pharmaceutical companies do not always result in increased purchasing decisions, as doctors tend to prioritize evidence-based information and clinical experience over persuasive promotional messages. Therefore, in the context of PT XY products, a shift in communication approaches is needed from mere persuasion to a more educational and evidence-based approach in order to more effectively influence purchasing decisions.

Thus, although persuasive communication still has strategic value in pharmaceutical marketing, the results of this study indicate that to influence physicians' purchasing decisions, the communication approach needs to be directed towards a more educational, objective, and clinically evidence-based form, to better suit the characteristics and expectations of medical professionals.

Incentives for Purchasing Decisions

The eighth hypothesis in this study tests the relationship between incentives and purchasing decisions. The results of the analysis show that the relationship is statistically significant, with an estimated value of 0.206, CR = 1.987, and p-value = 0.047. Although the p-value is close to the significance limit of 0.05, these results still indicate a positive and significant influence between the incentives provided and purchasing decisions. In the context of PT XY drug product distribution in the Cilegon area, these findings indicate that the strategy of providing incentives to doctors contributes to influencing their decisions to choose or prescribe the products offered by the company.

In the context of PT XY pharmaceutical products in the Cilegon region, these results indicate that providing incentives to doctors can influence their decisions to use or recommend certain pharmaceutical products. These incentives can include support for scientific activities, educational facilities, access to more comprehensive product information, or other forms of recognition provided professionally and in accordance with regulations.

These findings reflect the reality of pharmaceutical marketing, where relationships between pharmaceutical companies and healthcare professionals are often built through a relational approach, and incentives can be a means to strengthen these relationships. However, it is important to emphasize that the incentives provided must be ethical, proportionate, and not interfere with the physician's professional independence in decision-making. Thus, it can be concluded that properly managed incentives can be a supporting factor in encouraging doctors' purchasing decisions of PT XY products, especially when combined with accurate information and high-quality products.



Brand Image on Purchasing Decisions

The ninth hypothesis in this study examines the influence of brand image on purchasing decisions. However, based on the analysis results, this relationship is not statistically significant, with an estimated value of 0.100, CR = 0.971, and p-value = 0.331. The p-value is quite far above the significance threshold of 0.05 indicating that brand image has not made a significant contribution to purchasing decisions by respondents. In the context of drug products from PT XY In the Cilegon area, this suggests that although brand image is important in marketing theory, doctors as purchasing decision makers are more likely to be influenced by other factors such as incentives, institutional policies, or scientific evidence of the product than by perceptions of the brand image itself.

In the context of PT XY pharmaceutical products in the Cilegon region, these results indicate that although brand image may be well-formed in the minds of physicians, it is not yet strong enough to directly influence their decisions in selecting or recommending pharmaceutical products. Physicians, as medical professionals, generally place more emphasis on clinical aspects and scientific evidence than simply reputation or brand perception in determining which products to use in their practice.

These results may also indicate that brand image plays more of a supporting or indirect role in the purchasing decision-making process, and its effects may be more pronounced when influenced by other factors such as product quality, professional relationships, or scientific support.

These findings indicate that brand image, while important in building positive product perceptions, is not yet a primary factor in determining prescribing decisions by medical personnel. These results align with the findings of Zahra Ladha (2007), who revealed that in the pharmaceutical context, particularly in clinical decision-making by physicians, brand image has limited influence because decisions are based more on scientific evidence, drug effectiveness, and healthcare institution policies. A similar finding was also conveyed by Gonul et al. (2001), who stated that physicians tend not to be entirely influenced by brands in determining drug choices, but rather consider clinical aspects and professional ethics. Therefore, in the context of PT XY, strengthening brand image should be integrated with a science-based strategy and a stronger professional approach to have a more significant impact on purchasing decisions. Thus, although brand image remains important as a strategic element in building market trust, the results of this study underline that strengthening brand image alone is not enough to drive purchasing decisions by doctors, and needs to be supported by other factors that are more clinically and professionally relevant.

4. CONCLUSION

This study examined the factors influencing physicians' purchasing decisions for pharmaceutical products from PT XY in the Cilegon region. The findings demonstrate that product quality and incentives significantly influence brand image, while price and persuasive communication do not show significant effects. Regarding purchasing decisions, only incentives demonstrated a significant positive impact, whereas product quality, price, persuasive communication, and brand image did not significantly influence physicians' purchasing behavior. These results indicate that healthcare professionals prioritize evidence-



based considerations and professional incentives over traditional marketing approaches when making prescribing decisions. The study reveals that physicians' decision-making processes in pharmaceutical selection are primarily driven by clinical effectiveness and professional benefits rather than promotional messaging or brand perception. Future research should incorporate additional variables such as clinical evidence, institutional policies, and physician experience to provide a more comprehensive understanding of prescribing behavior in healthcare settings. These findings suggest that pharmaceutical companies should focus on evidence-based communication strategies and ethically designed incentive programs to effectively engage with medical professionals.

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