



## **Exploring the Determinants of Customer Loyalty in OTC Drugs: Evidence from PT Phapros Tbk, Banten**

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### **Abstract**

*This study explores the determinants of customer loyalty in the over-the-counter (OTC) pharmaceutical industry by examining the roles of brand image, price perception, and product quality, with customer trust as a mediating variable. The research focuses on customers of PT Phapros Tbk operating in the Banten region, where competition in the OTC market is intense and consumer trust is critical due to the health-related nature of the products. A quantitative approach was employed using survey data collected from pharmacy and drugstore owners, which were analyzed using Partial Least Squares–Structural Equation Modeling (PLS-SEM). The results reveal that brand image, price perception, and product quality have significant positive effects on customer trust and customer loyalty. Furthermore, customer trust is found to significantly influence customer loyalty and to mediate the relationships between brand image, price perception, product quality, and customer loyalty. These findings indicate that customer loyalty in the OTC pharmaceutical sector is shaped not only by functional and economic considerations but also by trust-based evaluations developed through consistent and credible firm behavior. This study contributes to the literature by reinforcing trust-based loyalty models in the pharmaceutical context and offers practical implications for pharmaceutical firms seeking to strengthen long-term customer relationships through trust-oriented strategies.*

### **Abstrak**

Penelitian ini bertujuan untuk menganalisis determinan loyalitas pelanggan pada industri obat bebas (over-the-counter/OTC) dengan menelaah peran citra merek, persepsi harga, dan kualitas produk melalui kepercayaan pelanggan sebagai variabel mediasi. Penelitian difokuskan pada pelanggan PT Phapros Tbk di wilayah Banten, di mana tingkat persaingan pasar OTC relatif tinggi dan aspek kepercayaan menjadi krusial karena karakteristik produk yang berkaitan langsung dengan kesehatan konsumen. Pendekatan kuantitatif digunakan dengan pengumpulan data melalui survei terhadap pemilik apotek dan toko obat, yang selanjutnya dianalisis menggunakan Partial Least Squares–Structural Equation Modeling (PLS-SEM). Hasil penelitian menunjukkan bahwa citra merek, persepsi harga, dan kualitas produk berpengaruh positif dan signifikan terhadap kepercayaan pelanggan serta loyalitas pelanggan. Selain itu, kepercayaan pelanggan terbukti memiliki

pengaruh positif terhadap loyalitas pelanggan dan berperan signifikan dalam memediasi hubungan antara citra merek, persepsi harga, dan kualitas produk terhadap loyalitas pelanggan. Temuan ini mengindikasikan bahwa loyalitas pelanggan dalam industri farmasi OTC tidak hanya dibentuk oleh pertimbangan fungsional dan ekonomi, tetapi juga oleh proses evaluasi berbasis kepercayaan yang berkembang melalui konsistensi kualitas, kewajaran harga, dan kredibilitas merek. Penelitian ini memberikan kontribusi teoretis dalam memperkuat model loyalitas berbasis kepercayaan serta implikasi praktis bagi perusahaan farmasi dalam merancang strategi pemasaran yang berorientasi pada pembangunan hubungan jangka panjang dengan pelanggan.

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**Cara mengutip:**

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## INTRODUCTION

The pharmaceutical industry plays an essential role in improving public health while simultaneously supporting national economic growth. In recent years, the over-the-counter (OTC) drug market in Indonesia has experienced rapid expansion, driven by the increasing tendency of consumers to engage in self-medication for minor ailments. This behavioral shift reflects growing consumer awareness and accessibility but also intensifies competition among pharmaceutical companies in terms of brand positioning, pricing strategies, and product quality assurance. In such a highly competitive and transparent environment, customer loyalty has become one of the most critical assets for sustaining long-term business success (Oliver, 1999). Loyal customers not only repurchase products but also recommend them to others, thereby creating a stable and cost-efficient marketing advantage.

PT Phapros Tbk, one of Indonesia's leading pharmaceutical manufacturers, faces similar challenges in maintaining customer loyalty within its OTC drug segment. Despite a strong brand reputation and extensive distribution network, several internal sales reports indicate fluctuations in purchasing frequency among retailers in Banten Province. Data from the Marketing Division of the Banten Regional Office (2022–2023) show that several OTC products—including cough syrup, paracetamol, and vitamin supplements—experienced an average decline of 12–15 percent in monthly distribution volume over the last fiscal year. This situation suggests that some retailers have shifted to competing brands, implying that customer loyalty and trust have not yet reached an optimal level.

A preliminary survey conducted among 30 OTC drug retailers in Banten revealed that the mean value of customer loyalty (2.67) and customer trust (2.88) fell within the “moderate” category. Respondents identified three major concerns: limited promotional support, inflexible pricing and payment terms, and outdated product packaging. The lowest evaluation scores were found in price flexibility (mean 2.59) and product design (mean 2.72). These findings confirm that customer trust plays a vital mediating role between marketing attributes such as brand image, price, and product quality in shaping long-term loyalty.

From a marketing perspective, brand image represents the set of perceptions and associations that differentiate one brand from another and create favorable attitudes toward purchase (Keller, 2013). A strong brand image enhances confidence and positively influences consumer choice (Aaker, 1996). Price serves not only as a monetary indicator but also as a reflection of perceived fairness and value (Kotler & Keller, 2016). When customers perceive that a brand's pricing is fair, transparent, and competitive, they tend to trust the company's integrity. Product quality, meanwhile, is the product's ability to meet or exceed customer expectations regarding safety, reliability, and performance (Garvin, 1984). In the OTC context, quality directly affects credibility, since consumers relate a drug's effectiveness and safety to their personal well-being.

However, even when these three factors perform well, loyalty does not automatically follow. Scholars argue that customer trust acts as a crucial psychological bridge linking marketing perceptions to loyalty (Basu, 1997; Morgan & Hunt, 1994). Trust reflects a consumer's belief in a brand's reliability, competence, and consistency in delivering promises. It minimizes perceived risk, fosters emotional attachment, and ultimately leads to repeat purchase and advocacy (Chaudhuri & Holbrook, 2001). In the pharmaceutical sector, where ethical standards and credibility are paramount, trust serves as both an emotional and behavioral determinant of customer retention.

According to Basu's (1997) Trust–Loyalty Model, trust develops through consistent and credible marketing experiences involving brand image, price fairness, and product quality. These antecedents interact to generate confidence that eventually transforms into loyalty. Customers who trust a brand are more inclined to remain loyal even when confronted with competitive alternatives or minor price differences. This model is particularly relevant for PT Phapros Tbk, which operates in a market that demands high ethical standards and product reliability.

Operationally, the variables in this study are defined as follows: brand image ( $X_1$ ) refers to customers' perceptions of the reputation, reliability, and credibility of PT Phapros's OTC products; price ( $X_2$ ) denotes perceived fairness and competitiveness in relation to similar brands; product quality ( $X_3$ ) represents product reliability, safety, and packaging appeal;

customer trust (Z) is defined as belief in the company's honesty, consistency, and product integrity; and customer loyalty (Y) reflects the intention to repurchase, long-term commitment, and willingness to recommend PT Phapros's products.

Although numerous studies have examined the relationships among these variables, significant research gaps remain, particularly within Indonesia's OTC pharmaceutical market. Most prior research has been conducted in non-pharmaceutical contexts such as aviation (Aristana et al., 2022) and the automotive sector (Santoso, 2021), making their findings less transferable to the OTC environment, where safety and credibility are primary concerns. Moreover, while several recent studies have investigated the influence of brand image and brand trust on loyalty (Wardani, 2023), few have included product quality and price fairness within a unified model. Research by Afiftama (2024) explored brand experience and trust in the service sector but did not address product-based trust formation, which is central to pharmaceuticals. In addition, price perception—a crucial determinant identified in PT Phapros's pre-survey—has been underrepresented in recent marketing research in Indonesia's drug industry (Tarigan, 2024). Therefore, this study seeks to fill these gaps by: (1) focusing on the Indonesian OTC pharmaceutical sector through the case of PT Phapros Tbk in Banten; (2) integrating brand image, perceived price fairness, and product quality as antecedents; (3) positioning customer trust as a mediating variable; and (4) targeting OTC retailers rather than end-consumers to produce contextual and applicable insights.

The purpose of this research is to analyze the direct and indirect effects of brand image, price, and product quality on customer loyalty through customer trust. Theoretically, this study contributes to the development of trust-based loyalty models in the pharmaceutical context, while practically, it provides valuable recommendations for PT Phapros Tbk to enhance brand credibility, pricing strategies, and quality consistency in building retailer trust and loyalty.

Based on the background and objectives above, the research problems can be formulated as follows:

- 1) Does *brand image* significantly affect *customer trust*?
- 2) Does *price* significantly affect *customer trust*?
- 3) Does *product quality* significantly affect *customer trust*?
- 4) Does *customer trust* significantly affect *customer loyalty*?
- 5) Does *customer trust* mediate the relationship between *brand image*, *price*, and *product quality* toward *customer loyalty*?

The importance of this study is twofold. Theoretically, it strengthens Basu's (1997) framework by providing empirical validation in Indonesia's OTC pharmaceutical industry, where customer trust functions as a behavioral bridge linking marketing variables to loyalty. Practically, it offers actionable insights for PT Phapros Tbk and similar companies in formulating integrated marketing strategies that harmonize brand communication, fair pricing, and product quality control with trust-building efforts. By combining empirical company data, pre-survey insights, and relevant theories, this study provides a comprehensive understanding of the determinants of customer loyalty in OTC drugs—knowledge that is essential for maintaining competitive advantage in Indonesia's evolving pharmaceutical landscape.

## **THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT**

### **Customer Loyalty in the OTC Pharmaceutical Context**

Customer loyalty is commonly defined as a deeply held commitment to repurchase or continue using a preferred product or service consistently in the future, despite situational influences and marketing efforts by competitors (Oliver, 1999). Loyalty encompasses both behavioral aspects, such as repeat purchase, and attitudinal aspects, including positive word of mouth and resistance to switching (Griffin, 2005). In the OTC pharmaceutical market, loyalty is particularly critical because customers, such as pharmacies and drugstores, serve not only as buyers but also as intermediaries who recommend products to end consumers.

In health-related industries, purchasing decisions are characterized by high perceived risk due to concerns regarding product safety, efficacy, and regulatory compliance. As argued by Morgan and Hunt (1994), long-term relational outcomes such as loyalty are unlikely to emerge without trust. This is consistent with the context of PT Phapros Tbk in Banten, where trust is emphasized as a prerequisite for sustaining customer relationships and loyalty in OTC

product distribution.

### **Customer Trust as a Mediating Mechanism**

Customer trust refers to the willingness of customers to rely on a firm based on the expectation that the firm will perform its obligations competently, honestly, and benevolently (Mayer, Davis, & Schoorman, 1995). In relationship marketing literature, trust is positioned as a foundational mechanism that enables long-term exchanges by mitigating perceived risk and information asymmetry (Moorman, Deshpandé, & Zaltman, 1993; Morgan & Hunt, 1994).

Trust is multidimensional in nature, encompassing perceptions of competence (the ability of the firm to deliver promised performance), integrity (adherence to acceptable principles and ethical standards), and benevolence (the firm's concern for customer welfare) (Mayer et al., 1995). In pharmaceutical markets, these dimensions become especially salient, as customers expect consistent product quality, transparent pricing practices, and ethical conduct from suppliers. When trust is established, customers are more likely to commit to long-term relationships and exhibit loyalty behaviors such as repeated purchasing and positive word of mouth (Garbarino & Johnson, 1999). Accordingly, this study conceptualizes customer trust as a mediating variable through which brand image, price, and product quality influence customer loyalty.

### **Brand Image and Customer Trust**

Brand image reflects the overall perception of a brand as formed by customers through past experiences, marketing communications, and symbolic associations (Keller, 1993). In markets characterized by information asymmetry, such as pharmaceuticals, brand image functions as an extrinsic cue that helps customers infer unobservable product attributes, including safety and effectiveness. Aaker (1997) emphasizes that strong brands convey credibility and reliability, thereby reducing perceived risk and enhancing customer confidence.

Erdem and Swait (1998) further argue that brands serve as credibility signals that lower information costs and perceived uncertainty, particularly in high-involvement product categories. In the OTC pharmaceutical context, customers are often unable to fully assess product quality prior to use, making brand image a critical determinant of trust formation. A favorable brand image signals that the firm adheres to regulatory standards, maintains consistent quality, and possesses a reputable track record. Consequently, customers are more inclined to trust brands with positive reputations and strong market recognition.

From a relational perspective, trust emerges when customers believe that a brand consistently delivers on its promises and aligns with their expectations over time (Morgan & Hunt, 1994). Therefore, brand image is expected to exert a significant positive influence on customer trust in OTC products.

**H1: Brand image has a positive effect on customer trust in OTC products of PT Phapros Tbk in Banten.**

### **Price and Customer Trust**

Price plays a dual role in customer evaluations, functioning both as a monetary sacrifice and as a signal of value and fairness (Zeithaml, 1988). Customers assess price not merely in absolute terms but relative to perceived benefits, reference prices, and competitive alternatives. When prices are perceived as fair and consistent with product quality, customers are more likely to interpret the exchange relationship as equitable.

The concept of price fairness highlights that customers evaluate pricing practices based on perceived justice and transparency (Xia, Monroe, & Cox, 2004). Unfair or opportunistic pricing can erode trust and damage long-term relationships, whereas reasonable and competitive pricing reinforces perceptions of integrity and reliability (Bolton, Warlop, & Alba, 2003). In the OTC pharmaceutical market, where price sensitivity is heightened due to competition and limited price regulation, customers closely monitor price consistency and value alignment.

Furthermore, relationship marketing theory suggests that trust develops when customers believe the firm does not exploit its position for short-term gain (Morgan & Hunt, 1994). Fair pricing practices thus signal ethical behavior and customer orientation, strengthening trust in the supplier. Accordingly, price perception is expected to positively influence customer trust in



OTC products.

**H2: Price perception has a positive effect on customer trust in OTC products of PT Phapros Tbk in Banten.**

### **Product Quality and Customer Trust**

Product quality refers to the extent to which a product meets customer expectations in terms of performance, reliability, and safety (Garvin, 1987). In the expectation–confirmation paradigm, trust develops when customers experience consistent confirmation of expectations across repeated interactions (Oliver, 1980). In pharmaceutical products, quality is not only a functional attribute but also a moral and regulatory requirement, as poor quality may result in serious health consequences.

Erdem and Swait (1998) argue that consistent product quality acts as an assurance mechanism that reduces perceived risk and reinforces customer confidence in the brand. When customers repeatedly encounter high-quality products, they infer that the firm possesses the competence and capability to deliver reliable outcomes. Over time, these positive experiences accumulate and form the basis of trust.

From a relational exchange perspective, product quality serves as tangible evidence of the firm's commitment to fulfilling its promises (Morgan & Hunt, 1994). Therefore, higher perceived product quality is expected to enhance customer trust, particularly in the OTC pharmaceutical context, where safety and efficacy are paramount.

**H3: Product quality has a positive effect on customer trust in OTC products of PT Phapros Tbk in Banten.**

### **Customer Trust and Customer Loyalty**

Trust is widely acknowledged as a key antecedent of customer loyalty in relationship marketing literature. Morgan and Hunt (1994) propose that trust leads to relationship commitment, which in turn drives long-term cooperative behaviors such as repeat purchasing and retention. Chaudhuri and Holbrook (2001) empirically demonstrate that trust significantly enhances both attitudinal loyalty (emotional attachment) and behavioral loyalty (repeat purchase).

In high-risk industries such as pharmaceuticals, trust reduces customers' perceived vulnerability and encourages them to maintain stable relationships with trusted suppliers. Customers who trust a firm are less likely to search for alternatives and more willing to recommend the firm to others (Garbarino & Johnson, 1999). Consequently, trust is expected to directly and positively influence customer loyalty toward OTC products.

**H4: Customer trust has a positive effect on customer loyalty toward OTC products of PT Phapros Tbk in Banten.**

### **The Mediating Effect of Customer Trust on Customer Loyalty**

Customer trust is posited as a central mediating mechanism through which brand image, price perception, and product quality exert their influence on customer loyalty, because a strong brand image functions as a credibility signal that reduces information asymmetry and perceived uncertainty while reinforcing perceptions of reliability and reputation (Keller, 1993; Erdem & Swait, 1998), fair and reasonable price perceptions reflect integrity and ethical conduct in exchange relationships and signal that the firm does not behave opportunistically toward customers (Xia, Monroe, & Cox, 2004), and consistent product quality confirms customer expectations and strengthens perceptions of firm competence and dependability (Oliver, 1980; Garvin, 1987), all of which collectively enhance customer trust and, once such trust is established, foster deeper relational commitment, repeated purchasing behavior, positive word of mouth, and long-term customer loyalty (Morgan & Hunt, 1994; Chaudhuri & Holbrook, 2001).

**H5: Customer trust mediates the relationship between brand image and customer loyalty.**

**H6: Customer trust mediates the relationship between price perception and customer loyalty.**

**H7: Customer trust mediates the relationship between product quality and customer loyalty.**

## **METHODS**

### **Research Design**

This study employed a quantitative research design with an explanatory approach to examine causal relationships among brand image, price perception, product quality, customer trust, and customer loyalty. Quantitative explanatory research is appropriate when the objective is to test theoretically derived hypotheses and to measure the strength and direction of relationships between variables using statistical techniques (Creswell, 2014). A cross-sectional survey design was adopted, as data were collected at a single point in time to capture customers' perceptions and relational evaluations of OTC products (Malhotra, 2010).

### **Unit of Analysis**

The research was conducted in Banten Province, Indonesia, encompassing four regencies (Tangerang, Serang, Pandeglang, and Lebak) and four cities (South Tangerang, Tangerang City, Serang City, and Cilegon City). Banten was selected due to its high prevalence of self-medication behavior and its strategic role in the OTC pharmaceutical distribution network, making it a relevant context for examining customer loyalty dynamics in OTC drugs (Kotler & Keller, 2016).

The unit of analysis was retail customers, specifically pharmacies and drugstores that routinely purchase and resell OTC products distributed by PT Phapros Tbk during the 2021–2023 period. Retailers were chosen as the unit of analysis because they function as both buyers and intermediaries who directly influence product availability and recommendation to end consumers, particularly in the pharmaceutical sector (Anderson & Narus, 1990).

### **Population and Sampling**

The population of this study consisted of all pharmacies and drugstores that are active customers of PT Phapros Tbk's OTC products in Banten Province. Given the wide geographical distribution of customers, a two-stage sampling technique was applied. In the first stage, cluster sampling was used to group respondents based on administrative regions. In the second stage, proportional cluster sampling was employed to determine the number of respondents from each region proportionally, ensuring adequate representation across clusters (Sekaran & Bougie, 2016).

This sampling strategy is commonly recommended for survey research involving geographically dispersed populations, as it improves sampling efficiency while maintaining representativeness (Hair, Black, Babin, & Anderson, 2019).

### **Data Collection Method**

Primary data were collected using a structured questionnaire administered directly to retailer respondents. Survey questionnaires are widely used in marketing and relationship research because they allow standardized measurement of perceptions, attitudes, and behavioral intentions (Malhotra, 2010). Prior to the main survey, a pre-survey involving 50 respondents was conducted to obtain preliminary insights into customer loyalty, price perception, and trust, as well as to refine questionnaire items. All questionnaire items were measured using a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Likert scales are considered appropriate for capturing subjective evaluations and latent constructs such as trust and loyalty (Hair et al., 2019).

### **Measurement of Variables**

The measurement of variables in this study was designed to ensure conceptual clarity and empirical consistency with established theories in marketing and relationship management. Customer loyalty was conceptualized as a multidimensional construct encompassing both behavioral and attitudinal components. Following the framework proposed by Oliver (1999) and Griffin (2005), customer loyalty was measured using three key dimensions: repeat purchase, which captures customers' intention to continue purchasing the same OTC products; recommendation, which reflects customers' willingness to advocate and recommend the products to others; and retention, which represents customers' resistance to switching to competing brands despite alternative offers. These dimensions collectively

provide a comprehensive representation of long-term loyalty behavior in the OTC pharmaceutical context.

Brand image was measured based on customers' overall perceptions and mental associations toward PT Phapros Tbk's OTC products. Consistent with Keller's (1993) conceptualization, brand image reflects a set of brand-related associations stored in customers' memory, including brand reputation, brand recognition, and the overall image attached to the brand. In this study, these indicators were used to capture the extent to which customers perceive the brand as reputable, recognizable, and positively differentiated from competitors, particularly in terms of reliability and credibility within the pharmaceutical market.

Price perception was operationalized as customers' subjective evaluations of the fairness and value of the prices applied to OTC products. Drawing on perceived value theory (Zeithaml, 1988) and price fairness literature (Xia, Monroe, & Cox, 2004), price perception was measured through four dimensions: price affordability, reflecting customers' assessment of whether prices are financially accessible; price–quality fit, indicating the degree to which prices are perceived as consistent with product quality; price–benefit fit, capturing the alignment between price and the benefits obtained from the product; and price competitiveness, which reflects customers' comparisons of prices relative to competing OTC products. These dimensions collectively capture customers' holistic evaluations of pricing practices in a competitive OTC environment.

Product quality was measured as customers' perceptions of the ability of OTC products to deliver consistent, safe, and effective performance. In line with Garvin's (1987) multidimensional view of quality, product quality was assessed through indicators related to packaging quality, product safety, effectiveness, and performance consistency. These indicators are particularly relevant in the pharmaceutical sector, where quality perceptions are closely associated with risk reduction and confidence in product outcomes.

Finally, customer trust was operationalized as a multidimensional construct reflecting customers' confidence in PT Phapros Tbk as a reliable and ethical supplier of OTC products. Consistent with the trust framework proposed by Mayer, Davis, and Schoorman (1995), customer trust was measured using three dimensions: competence, representing customers' beliefs about the firm's ability to deliver high-quality and reliable products; integrity, capturing perceptions of honesty, transparency, and adherence to ethical standards; and benevolence, reflecting customers' perceptions that the firm genuinely cares about customer welfare and long-term relationships. These dimensions together provide a robust representation of trust as a key relational mechanism linking marketing attributes to customer loyalty.

## **Data Analysis**

Data were analyzed using Structural Equation Modeling (SEM), which enables simultaneous estimation of multiple relationships among latent variables and allows for testing both direct and indirect (mediating) effects within a single model (Hair et al., 2019). SEM is particularly suitable for studies involving mediation analysis, as it provides more accurate estimation of indirect effects compared to traditional regression approaches (Preacher & Hayes, 2008).

The analysis followed a two-step procedure: evaluation of the measurement model to assess construct reliability and validity, followed by assessment of the structural model to test the proposed hypotheses (Anderson & Gerbing, 1988). The mediating role of customer trust was examined by analyzing indirect path coefficients linking brand image, price perception, and product quality to customer loyalty.

## **RESULTS AND DISCUSSION**

### **Descriptive Statistics**

This study involved 303 respondents, all of whom were retail customers (pharmacies and drugstores) operating in Banten Province, Indonesia. In terms of gender, the respondents were predominantly male, totaling 176 individuals (58.09%), while 127 respondents (41.91%) were female. This distribution indicates that decision-making roles in OTC retail businesses within the study context are more frequently held by male operators, although female



participation remains substantial.

Regarding age, respondents ranged from 25 to 66 years old, with a mean age of 46.97 years ( $SD = 6.09$ ) and a median age of 48 years. When classified into age groups, the majority of respondents were within the 46–55 year category, accounting for 180 respondents (59.41%), followed by those aged 36–45 years with 103 respondents (33.99%). Smaller proportions were observed among respondents aged 56 years and above (15 respondents; 4.95%) and those aged 35 years and below (5 respondents; 1.65%). This pattern suggests that most respondents are in a mature and productive phase of business management.

In terms of educational background, the largest proportion of respondents had completed senior high school (SMA), totaling 125 respondents (41.25%), followed by those holding a bachelor's degree (S1) with 112 respondents (36.96%). Respondents with a diploma (D3) accounted for 60 individuals (19.80%), while only 6 respondents (1.98%) held a master's degree (S2). This distribution indicates that OTC retail businesses in Banten are largely managed by individuals with secondary and undergraduate education levels.

Based on geographical location, the highest proportion of respondents were located in Tangerang Regency (71 respondents; 23.43%) and Tangerang City (66 respondents; 21.78%). These were followed by South Tangerang City (48 respondents; 15.84%), Serang City (38 respondents; 12.54%), Cilegon City (23 respondents; 7.59%), Pandeglang Regency (21 respondents; 6.93%), Serang Regency (20 respondents; 6.60%), and Lebak Regency (16 respondents; 5.28%). This spatial distribution confirms that the sample adequately represents major OTC retail areas across Banten Province, with a concentration in the Tangerang region.

With respect to the number of pharmacy/drugstore outlets managed, the vast majority of respondents operated a single outlet, amounting to 289 respondents (95.38%). A smaller proportion managed multiple outlets, including 9 respondents (2.97%) with two outlets, 2 respondents (0.66%) with three outlets, and one respondent each (0.33%) managing four, five, and eight outlets. This finding indicates that the sample primarily represents small- to medium-scale retail businesses.

Finally, in terms of business experience, respondents reported operating their businesses for 1 to 31 years, with a mean duration of 14.39 years ( $SD = 6.54$ ) and a median of 15 years. Similarly, the length of subscription/partnership with the supplier ranged from 1 to 30 years, with a mean of 13.90 years ( $SD = 6.22$ ) and a median of 15 years. These figures suggest that most respondents have maintained relatively long-term relationships with their supplier, providing a strong empirical basis for examining the effects of brand image, price perception, and product quality on customer trust and its implications for customer loyalty.

## Validity Test

During the evaluation of the measurement model using Partial Least Squares Structural Equation Modeling (PLS-SEM), several indicator refinement procedures were conducted to ensure adequate convergent validity. Convergent validity was assessed by examining the outer loading values of each indicator, following the commonly accepted threshold that indicators should exhibit loading values of at least 0.70 to be considered reliable representations of their respective latent constructs. Indicators with loading values below this threshold were iteratively removed to improve the overall quality and robustness of the measurement model.

In the first stage of the outer loading assessment, a number of indicators failed to meet the minimum loading criterion and were therefore excluded from further analysis. These indicators included Brand\_Image1 and Brand\_Image2 for the brand image construct; Customer\_Trust10, Customer\_Trust11, and Customer\_Trust18 for the customer trust construct; Price7 for the price perception construct; and several indicators related to product quality, namely Product\_Qual10, Product\_Qual17, Product\_Qual2, Product\_Qual3, Product\_Qual4, and Product\_Qual7. The removal of these indicators was necessary to eliminate weak items that did not sufficiently capture the underlying constructs.

Following the initial refinement, a second stage of outer loading evaluation was conducted on the revised measurement model. The results indicated that additional indicators still exhibited loading values below the acceptable threshold. Consequently, Brand\_Image4

from the brand image construct, as well as Product\_Qual2, Product\_Qual22, and Product\_Qual3 from the product quality construct, were removed to further enhance construct reliability and validity.

A third and final evaluation stage was subsequently performed to confirm the adequacy of the remaining indicators. At this stage, Product\_Qual4 was identified as having an insufficient outer loading and was therefore excluded from the model. After this final refinement, all retained indicators demonstrated satisfactory loading values, indicating strong convergent validity and reliable measurement of their respective latent constructs.

Overall, the three-stage indicator purification process ensured that only indicators with strong explanatory power and construct representation were retained in the final measurement model. This iterative refinement approach is consistent with best practices in PLS-SEM and strengthens the validity and reliability of the constructs used to test the proposed structural relationships in this study.

### Outer Model Evaluation

In the outer model evaluation, discriminant validity was examined to confirm that each construct captures unique conceptual meaning and does not overlap excessively with other constructs in the measurement model.

**Table 1. Discriminant Validity**

Fornell-Larcker Criterion

	Brand Image	Customer Loyalty _	Customer Trust	Price	Product Quality
Brand Image	0,7879				
Customer Loyalty _	0,7228	0,7983			
Customer Trust	0,6250	0,8652	0,7736		
Price	0,6677	0,7173	0,6222	0,7914	
Product Quality	0,5584	0,6935	0,5943	0,4943	0,8027

**Table 2. Construct Reliability and Validity**

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Brand Image	0,9527	0,9566	0,9581	0,6208
Customer Loyalty _	0,9662	0,9670	0,9692	0,6372
Customer Trust	0,9579	0,9588	0,9620	0,5985
Price	0,9647	0,9661	0,9678	0,6264
Product Quality	0,9535	0,9558	0,9591	0,6443

The evaluation of the outer measurement model was conducted to assess both discriminant validity and construct reliability and validity, ensuring that the latent variables were measured accurately and consistently. Discriminant validity was examined using the Fornell–Larcker criterion, which requires that the square root of the Average Variance Extracted (AVE) of each construct be greater than its correlations with other constructs. As shown in Table 1, all constructs satisfy this criterion. The diagonal values representing the square root of AVE for Brand Image (0.7879), Customer Loyalty (0.7983), Customer Trust (0.7736), Price (0.7914), and Product Quality (0.8027) exceed their respective inter-construct correlations, indicating that each construct is empirically distinct and captures a unique conceptual domain.

Furthermore, Table 2 presents the results of construct reliability and convergent validity. The Cronbach's alpha values for all constructs range from 0.9527 to 0.9662, exceeding the recommended threshold of 0.70, which confirms strong internal consistency. Similarly, rho\_A values (0.9558–0.9670) and composite reliability values (0.9581–0.9692) further demonstrate excellent construct reliability. Convergent validity is also established, as all AVE values exceed the minimum threshold of 0.50, ranging from 0.5985 to 0.6443. Overall, these findings confirm that the measurement model demonstrates satisfactory reliability and validity, allowing the

analysis to proceed to the structural model evaluation with confidence.

### Inner Model Evaluation

In the inner model evaluation, R Square and F Square was analyzed to determine the extent to which the exogenous variables explain the variance of the endogenous constructs in the structural model.

**Table 3. R Square**

	R Square	R Square Adjusted
<b>Customer Loyalty _</b>	0,8337	0,8320
<b>Customer Trust</b>	0,5270	0,5223

**Table 4. F Square**

	Brand Image	Customer Loyalty _	Customer Trust	Price	Product Quality
Brand Image			0,0659		
Customer Loyalty _					
Customer Trust		1,0052			
Price		0,2131	0,1036		
Product Quality		0,1977	0,1283		

The inner model evaluation indicates strong explanatory power of the structural model. As shown in Table 3, the R Square value for Customer Loyalty is 0.8337 (adjusted R Square = 0.8320), indicating that brand image, price, product quality, and customer trust jointly explain 83.37% of the variance in customer loyalty. This reflects a substantial level of predictive accuracy. Meanwhile, the R Square value for Customer Trust is 0.5270 (adjusted R Square = 0.5223), suggesting that brand image, price, and product quality account for 52.70% of the variance in customer trust, which can be classified as moderate explanatory power.

Furthermore, the effect size ( $f^2$ ) analysis in Table 4 shows that Customer Trust has a very large effect on Customer Loyalty ( $f^2 = 1.0052$ ). In contrast, Price ( $f^2 = 0.2131$ ) and Product Quality ( $f^2 = 0.1977$ ) exhibit medium effects on customer loyalty. With respect to customer trust, Price ( $f^2 = 0.1036$ ) and Product Quality ( $f^2 = 0.1283$ ) demonstrate small-to-medium effects, while Brand Image shows a small effect ( $f^2 = 0.0659$ ). Overall, these results confirm the robustness of the structural model.

### Hypothesis Testing

**Table 5. Hypothesis Testing**

Path Coefficients

Mean, STDEV, T-Values, P-Values

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Values
Brand Image -> Customer Trust	0,2534	0,2552	0,0586	4,3258	0,0000
Customer Trust -> Customer Loyalty _	0,5759	0,5750	0,0348	16,5575	0,0000
Price -> Customer Loyalty _	0,2453	0,2467	0,0345	7,1024	0,0000
Price -> Customer Trust	0,3032	0,3024	0,0579	5,2347	0,0000
Product Quality -> Customer Loyalty _	0,2300	0,2294	0,0356	6,4530	0,0000
Product Quality -> Customer Trust	0,3029	0,3026	0,0508	5,9639	0,0000

Based on Table 5, the results of hypothesis testing for each structural relationship can be explained as follows:

1. Brand image has a positive and significant effect on customer trust, as indicated by a path

coefficient of 0.2534, a T-statistic of 4.3258 (greater than 1.96), and a p-value of 0.000 (less than 0.05). This finding suggests that a strong and favorable brand image enhances customers' trust in OTC products distributed by PT Phapros Tbk.

2. Customer trust exerts a positive and significant influence on customer loyalty, with a path coefficient of 0.5759, a T-statistic of 16.5575, and a p-value of 0.000. This result indicates that trust plays a critical role in fostering long-term customer loyalty in the OTC pharmaceutical sector.
3. Price has a positive and significant effect on customer loyalty, as reflected by a path coefficient of 0.2453, a T-statistic of 7.1024, and a p-value of 0.000. This finding implies that fair and competitive pricing perceptions contribute to higher levels of customer loyalty.
4. Price also shows a positive and significant effect on customer trust, with a path coefficient of 0.3032, a T-statistic of 5.2347, and a p-value of 0.000. This suggests that pricing policies perceived as reasonable and transparent strengthen customers' trust in the company.
5. Product quality has a positive and significant influence on customer loyalty, as indicated by a path coefficient of 0.2300, a T-statistic of 6.4530, and a p-value of 0.000. This result demonstrates that consistent and reliable product quality encourages customers to remain loyal.
6. Product quality also has a positive and significant effect on customer trust, with a path coefficient of 0.3029, a T-statistic of 5.9639, and a p-value of 0.000. This finding confirms that high product quality is a fundamental determinant in building customer trust toward OTC products.

**Table 6. Intervening Test Results**

Specific Indirect Effects

Mean, STDEV, T-Values, P-Values

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Brand Image -> Customer Trust -> Customer Loyalty	0,1459	0,1471	0,0361	4,0409	0,0001
Price -> Customer Trust -> Customer Loyalty	0,1746	0,1736	0,0337	5,1873	0,0000
Product Quality -> Customer Trust -> Customer Loyalty	0,1744	0,1740	0,0311	5,6029	0,0000

Based on Table 6, the results of the intervening (mediation) effect analysis for each indirect relationship can be explained as follows:

1. Customer trust significantly mediates the relationship between brand image and customer loyalty, as indicated by an indirect effect coefficient of 0.1459, a T-statistic of 4.0409, and a p-value of 0.0001, confirming that a strong brand image enhances customer loyalty through the development of trust.
2. Customer trust also significantly mediates the relationship between price and customer loyalty, with an indirect effect coefficient of 0.1746, a T-statistic of 5.1873, and a p-value of 0.0000, indicating that fair and transparent pricing strengthens customer trust, which subsequently leads to higher customer loyalty.
3. Customer trust significantly mediates the relationship between product quality and customer loyalty, as reflected by an indirect effect coefficient of 0.1744, a T-statistic of 5.6029, and a p-value of 0.0000, demonstrating that consistent and reliable product quality builds customer trust and ultimately fosters customer loyalty.

## Discussion

The results of this study provide a nuanced understanding of how customer loyalty toward OTC pharmaceutical products is formed through a combination of brand-related, economic, and quality-based factors, with customer trust playing a pivotal mediating role. In the context of PT Phapros Tbk, where products are closely associated with consumer health and safety, loyalty does not emerge merely from transactional satisfaction but from deeper psychological evaluations of credibility, fairness, and reliability.

The significant influence of brand image on customer trust highlights the strategic role of branding in reducing uncertainty within the OTC pharmaceutical market. Unlike fast-moving consumer goods, pharmaceutical products involve higher perceived risk, as consumers often

lack the technical expertise to evaluate product efficacy and safety directly. In such conditions, brand image functions as a symbolic cue that conveys assurance and professional legitimacy. This finding resonates strongly with Keller (1993), who conceptualizes brand image as a set of associations stored in consumer memory that guide judgment under uncertainty. When a brand is consistently associated with reliability and professionalism, customers are more inclined to trust not only the product but also the firm behind it.

The positive relationship between price perception and customer trust further emphasizes that price is interpreted beyond its monetary dimension. Customers perceive price as a moral and relational signal that reflects how a company values its customers. In the pharmaceutical context, excessively low prices may raise suspicion regarding product quality, while excessively high prices may be perceived as exploitative. This balance explains why perceived price fairness significantly enhances trust. As argued by Zeithaml (1988), value perception is rooted in the trade-off between what is given and what is received. Xia, Monroe, and Cox (2004) further reinforce this view by explaining that fair pricing strengthens relational trust by signaling ethical behavior and transparency. The findings of this study confirm that customers of PT Phapros Tbk respond positively when pricing aligns with perceived benefits and industry norms.

Product quality emerges as another fundamental driver of trust and loyalty. In pharmaceutical consumption, quality is inseparable from safety, effectiveness, and consistency. Customers may forgive minor inconveniences in other product categories, but in healthcare-related products, quality failures directly undermine trust. The strong effect of product quality on customer trust aligns with Garvin's (1987) multidimensional quality framework, which emphasizes performance consistency and conformance to standards as essential quality attributes. Moreover, Oliver's (1980) expectation–confirmation theory provides a clear explanation: when repeated consumption confirms initial expectations, trust accumulates gradually and stabilizes customer relationships over time.

Customer trust itself proves to be a decisive factor in shaping customer loyalty. The strong and significant relationship between trust and loyalty supports the foundational argument of Morgan and Hunt's (1994) Commitment–Trust Theory, which positions trust as a prerequisite for long-term relational exchange. In the OTC pharmaceutical market, trust reduces perceived vulnerability and reassures customers that the firm will act in their best interest. This reassurance encourages repeat purchases, long-term retention, and positive word-of-mouth—key indicators of loyalty. Chaudhuri and Holbrook (2001) similarly emphasize that trust strengthens both attitudinal and behavioral dimensions of loyalty, a finding that is clearly reflected in this study.

Most importantly, this research confirms the mediating role of customer trust in linking brand image, price perception, and product quality to customer loyalty. The mediation results suggest that these antecedent variables do not translate directly into loyalty unless they are internalized by customers as trustworthy signals. This insight aligns with relationship marketing perspectives that view trust as a psychological bridge between firm actions and customer responses (Basu, 1997). A strong brand image builds initial confidence, fair pricing reinforces ethical perceptions, and consistent product quality validates competence—yet it is trust that transforms these perceptions into sustained loyalty.

From a contextual standpoint, these findings are particularly relevant for PT Phapros Tbk, operating in a competitive OTC market with relatively low switching barriers. Customers have numerous alternatives, but trust acts as a relational anchor that discourages switching even when competitors offer similar products. This study also extends prior empirical research in Indonesia, which has often examined loyalty determinants in retail or service industries but has paid limited attention to the pharmaceutical sector and the integrative role of trust (Santoso, 2021; Wardani, 2023).

In summary, the findings suggest that customer loyalty in the OTC pharmaceutical industry is not the result of isolated marketing efforts, but rather the outcome of a coherent trust-building process. Firms that consistently align their brand positioning, pricing strategies, and quality assurance practices with trust-oriented values are more likely to achieve durable customer loyalty and long-term competitive advantage.



## CONCLUSION

This study provides meaningful insights into the determinants of customer loyalty in the OTC pharmaceutical industry by empirically examining the roles of brand image, price perception, and product quality, with customer trust positioned as a key mediating variable. Using evidence from PT Phapros Tbk in Banten, the findings demonstrate that customer loyalty is not formed solely through functional product attributes or competitive pricing, but through a trust-based evaluation process that develops over repeated interactions.

The results indicate that brand image, price perception, and product quality each play an important role in shaping customer trust. A strong and credible brand image helps reduce uncertainty in pharmaceutical consumption, while fair and transparent pricing reinforces perceptions of integrity. Consistent product quality further strengthens customers' confidence in the firm's competence and reliability. These trust-building factors collectively contribute to higher levels of customer loyalty, reflected in repeat purchasing behavior, long-term retention, and positive recommendations. Importantly, this study confirms that customer trust acts as a crucial psychological mechanism that translates marketing attributes into sustained loyalty. Without trust, the positive effects of brand image, price, and product quality on loyalty would be significantly weaker. This finding underscores the central role of trust in industries where product risk and consumer vulnerability are high, such as the pharmaceutical sector.

From a managerial perspective, the findings suggest that pharmaceutical companies should adopt an integrated strategy that prioritizes trust alongside traditional marketing efforts. Strengthening brand credibility, ensuring price fairness, and maintaining consistent product quality must be supported by transparent communication and ethical business practices. By embedding trust into their marketing and operational strategies, firms like PT Phapros Tbk can foster long-term customer loyalty and secure sustainable competitive advantage in an increasingly competitive OTC market.

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