The influence of perceived product risk on consumer trust in Pertamina's fuel products: The moderating role of media exposure

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ABSTRACT

This study investigates the effect of perceived product risk on consumer trust in Pertamina's fuel products, with media exposure serving as a moderating variable. Conducted in the context of the 2025 corruption scandal and concerns over fuel quality discrepancies, the study adopts a quantitative approach using data collected from 103 urban consumers in the Greater Jakarta (Jabodetabek) area. The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The findings demonstrate that perceived product risk exerts a significant negative effect on consumer trust, indicating that concerns regarding product quality and reliability substantially undermine public confidence. Media exposure significantly moderates this relationship, amplifying the influence of perceived risk on trust. The model explains a substantial proportion of the variance in consumer trust, highlighting the critical role of public information during periods of institutional crisis. These findings underscore the importance of integrating rigorous quality assurance with transparent and proactive communication strategies to restore consumer confidence. The study contributes to the literature on crisis management, consumer trust, and state-owned enterprises by demonstrating how media exposure shapes public responses to perceived product risk during organizational recovery.

Keywords: *Consumer Trust; Media Exposure; Perceived Risk; Petroleum Industry; Trust Recovery*

INTRODUCTION

In the contemporary landscape of the global energy sector, consumer trust represents a critical determinant of market success for petroleum companies, particularly in developing economies where fuel products constitute essential commodities that underpin economic functionality (Odoom et al., 2025). The present study investigates the intricate relationship between perceived product risk and consumer trust in the context of Pertamina, Indonesia's national oil company, while examining the moderating effect of media exposure on this dynamic. This research addresses a crucial gap in understanding how consumer perceptions of risk influence trust formation in the fuel industry, especially within the Indonesian market where Pertamina's market position has been significantly challenged by recent events.

The Indonesian petroleum retail landscape has undergone dramatic transformation in recent months, catalyzed by extensive media coverage of corruption scandals involving Pertamina executives (Isyfaiyah et al., 2025). As reported by Reuters in March 2025, five executives were arrested over alleged corruption related to oil imports between 2018 and 2023, resulting in approximately US$12 billion in state losses. This unprecedented scandal has precipitated a mass exodus of consumers to rival fuel brands, with Shell, BP, and Vivo experiencing notable increases in market share as Pertamina stations face unusually empty forecourts (Nangoy, 2025). The implications of this crisis extend beyond immediate market dynamics to raise fundamental questions about the relationship between perceived product risk, consumer trust, and the role of media exposure in shaping these perceptions.

Contemporary consumer behavior research consistently demonstrates the critical importance of risk perception in purchase decision-making processes, particularly for essential goods where quality and reliability carry significant implications for consumer welfare (Arning et al., 2023). In the context of fuel products, perceived risk encompasses multiple dimensions including performance risk, financial risk, and social risk. The revelation that lower-grade fuel with research octane number (RON) 90 or below had been sold as higher-priced RON 92 under the Pertamax brand represents a quintessential case of product performance risk, where consumers' expectations of product quality have been severely compromised.

Recent scholarship has increasingly recognized the pivotal role of media exposure in moderating the relationship between risk perception and consumer trust. Li (2023) demonstrates that social media advertising exposure frequency significantly influences consumer purchase intentions in the organic food sector, suggesting that media exposure can either amplify or attenuate risk perceptions depending on the nature and frequency of exposure. Similarly, Palomo-Vélez et al. (2024) identify media communication as a crucial moderator in shaping consumer perceptions of institutional integrity within the energy sector, highlighting the particular relevance of this mechanism in contexts where trust in corporate governance becomes paramount.

The theoretical foundation for this investigation draws from multiple streams of consumer behavior literature. Risk perception theory suggests that consumers' assessments of risk are shaped by both objective product characteristics and subjective interpretations influenced by external factors (Shrestha et al., 2023). Trust formation literature indicates that consumer trust is particularly vulnerable to negative information exposure, creating asymmetric effects where negative media coverage can substantially erode trust while positive exposure may have limited restorative capacity (Zhu et al., 2023). The integration of these perspectives provides a comprehensive framework for understanding the complex interplay between risk perception, trust, and media influence in the fuel retail sector.

Existing research has established robust connections between social media marketing exposure and consumer decision-making processes across various industries (Abdulraheem & Imouokhome, 2021; Sharma & Singh, 2022). However, the specific application of these insights to the petroleum industry, particularly in the aftermath of corporate scandals, remains underexplored. Yawen and Saludin (2024) emphasize the multifaceted nature of social media influence, highlighting the mediating effects of individual, social, and situational factors, while Vrontis et al. (2021) provide a comprehensive framework for understanding how different types of media exposure can impact consumer perceptions of product risk and subsequent trust formation.

The state-of-the-art in consumer trust research reveals several important considerations relevant to the current study. Kim and Yoon (2023) demonstrate that trust propensity varies significantly among different consumer segments, with individuals exhibiting lower baseline trust responding more positively to specific types of media endorsements. This finding suggests that the effectiveness of media exposure in moderating risk-trust relationships may be contingent on pre-existing consumer characteristics. Furthermore, Singh (2021) identifies the critical importance of perceived honesty and expertise in influencing consumer trust through social media channels, indicating that the source credibility of media exposure plays a crucial moderating role.

Notable research in adjacent fields provides valuable insights for the current investigation. Arning et al. (2023) examine acceptance of CO2-based aviation fuels and identify risk perceptions as crucial determinants of consumer trust, with media exposure playing a significant role in shaping these perceptions. Their finding that benefit perceptions outweigh risk concerns when effectively communicated suggests potential strategies for rebuilding consumer trust in Pertamina's products. Acuti et al. (2022) contribute by highlighting the importance of simple and honest communication in addressing consumer anxieties about product sustainability and quality, emphasizing the need for clear messaging in rebuilding trust.

The urgency of this research stems from both theoretical and practical imperatives. From a theoretical perspective, the intersection of perceived product risk, consumer trust, and media exposure in the context of corporate crises represents a critical yet underexplored area of inquiry. The recent Pertamina scandal provides a unique natural experiment for examining these relationships in real-time, offering insights that extend beyond the specific case to inform broader understanding of consumer behavior in trust-critical industries. From a practical standpoint, understanding these dynamics is essential for developing effective strategies to restore consumer confidence in Pertamina's products and preventing similar trust deficits in other state-owned enterprises.

Previous research has predominantly focused on the role of media exposure in initial trust formation, with limited attention to its influence in trust recovery scenarios. The present study addresses this gap by investigating how different types and frequencies of media exposure affect consumer perceptions of risk in the aftermath of major corporate misconduct. This focus on trust recovery, as distinct from trust formation, represents a significant contribution to the existing literature and provides practical insights for crisis management in the petroleum industry.

The investigation of Pertamina specifically offers unique advantages for understanding these dynamics. As Indonesia's national oil company controlling approximately 40% of the national fuel market, Pertamina's position creates particularly high stakes for consumer trust. The company's quasi-monopolistic status in many regions of Indonesia means that consumer switching behavior reflects deep-seated changes in trust perception rather than mere convenience-based decisions. This context provides an ideal setting for examining how perceived product risk influences trust in scenarios where alternatives may be limited but trust breaches are severe.

The moderating role of media exposure in this context presents several unexplored dimensions. While traditional research focuses on positive media exposure as a trust-building mechanism, the Pertamina case requires examination of how media exposure influences trust recovery in the presence of persistently negative information. Recent studies suggest that media exposure can either facilitate trust repair through transparent communication or exacerbate distrust through continued negative reinforcement (Chavda & Chauhan, 2024). Understanding these dynamics is crucial for developing effective communication strategies in crisis recovery scenarios.

To address the identified gaps, this research ultimately seeks to advance knowledge regarding the mechanisms through which multidimensional perceived product risk (specifically functional, financial, and social risks) influences consumer trust in essential services. Furthermore, the study aims to determine the moderating effects of varying media exposure on this risk-trust relationship. By examining these phenomena within the specific context of Indonesia's petroleum market, particularly following recent corporate misconduct and fuel quality concerns, this investigation provides a granular understanding of how consumer trust is either eroded or potentially restored in state-owned enterprises.

The findings offer significant theoretical and practical contributions to the literature. Theoretically, this study extends risk perception theory by applying it to crisis recovery scenarios and enriches trust formation literature by exploring the asymmetric, amplifying effects of negative media exposure on consumer behavior. Practically, the insights generated provide strategic guidance for Pertamina and other legacy energy retailers to develop transparent communication strategies and rigorous quality assurance protocols necessary for trust recovery. Ultimately, this research offers valuable lessons for policymakers and regulatory bodies in maintaining consumer confidence and institutional integrity amid rising accountability expectations in the global energy transition.

LITERATURE REVIEW, RESEARCH FRAMEWORK, AND HYPOTHESIS

Consumer Trust

Consumer trust is a central construct in marketing and consumer behavior literature, particularly in industries where products are high-involvement, high-risk, and essential to daily life (Khamitov et al., 2024). Trust is commonly defined as a consumer's confident expectation that a firm will act competently, honestly, and in the consumer's best interest (Morgan & Hunt, 1994). In the context of essential services such as fuel products, trust is not merely an attitudinal preference but a foundational requirement for continued usage and loyalty.

Scholars generally conceptualize consumer trust as a multidimensional construct encompassing cognitive, affective, and behavioral components. Cognitive trust refers to consumers' beliefs about a company's competence, reliability, and technical expertise (Ndubisi & Wah, 2005). Affective trust reflects emotional security and confidence arising from positive experiences and perceived benevolence (Johnson & Grayson, 2005). Behavioral trust, meanwhile, is manifested through willingness to maintain long-term relationships, repurchase intentions, and resistance to switching behaviors (Yoganathan et al., 2015).

In high-stakes industries such as energy and petroleum, consumer trust is particularly fragile due to the limited ability of consumers to directly evaluate product quality prior to consumption. Fuel quality, for instance, cannot be easily verified by consumers at the point of purchase, increasing reliance on institutional trust and brand reputation (Magueta et al., 2024). When trust is violated through corporate misconduct, misinformation, or quality inconsistencies, the negative effects on consumer confidence are often severe and long-lasting.

Prior empirical studies consistently demonstrate that trust plays a critical role in mitigating uncertainty and perceived risk. According to Pavlou (2003), trust functions as a risk-reducing mechanism that enables consumers to engage in transactions despite incomplete information. In crisis contexts, however, trust recovery becomes significantly more challenging. Negative information has been shown to exert asymmetric effects, where trust is destroyed more rapidly than it can be rebuilt (Kim et al., 2018). This asymmetry is particularly relevant for state-owned enterprises, where trust erosion may extend beyond the firm to perceptions of institutional integrity and governance (Palomo-Vélez et al., 2024).

Within the Pertamina context, consumer trust is closely tied to perceptions of fuel quality accuracy, pricing fairness, and corporate transparency. The exposure of corruption scandals and alleged fuel quality manipulation represents a fundamental breach of both cognitive and affective trust, thereby undermining consumers' willingness to remain loyal. Consequently, consumer trust serves as a critical dependent variable for understanding behavioral shifts in fuel consumption following corporate crises.

Product Risk

Perceived product risk refers to a consumer's subjective expectation of potential negative consequences arising from product usage (Bauer, 1960). Unlike objective risk, perceived risk is shaped by individual interpretation, prior experience, and external information, making it highly influential in consumer decision-making processes (Masoud, 2013). In markets characterized by information asymmetry, such as fuel retailing, perceived risk often outweighs objective product attributes in shaping consumer behavior.

The perceived risk construct is widely recognized as multidimensional. Jacoby and Kaplan (1972) identify several core dimensions, including functional (performance) risk, financial risk, social risk, psychological risk, and physical risk. Subsequent studies have adapted these dimensions across industries, emphasizing functional and financial risks in utilitarian product categories (Arning et al., 2023). In the petroleum industry, functional risk relates to concerns about fuel performance, engine compatibility, and efficiency, while financial risk reflects perceptions of price fairness and value for money. Social risk, meanwhile, arises from reputational concerns and the symbolic meaning of brand usage.

Empirical research consistently finds a negative relationship between perceived product risk and consumer trust. When consumers believe that a product may fail to perform as expected or cause financial loss, their confidence in the provider diminishes (Shrestha et al., 2023). This relationship is particularly pronounced for essential goods, where perceived failure can have immediate and costly consequences. In the context of fuel consumption, concerns regarding octane accuracy or contamination directly threaten vehicle performance and safety, thereby intensifying functional risk perceptions.

Recent studies within the energy sector reinforce the central role of perceived risk in trust formation. Arning et al. (2023) demonstrate that risk perceptions significantly reduce trust and acceptance of alternative fuels, especially when consumers lack transparent and credible information. Similarly, Sheng et al. (2024) highlight that perceived technological and quality risks act as major barriers to consumer confidence in energy transitions. These findings suggest that perceived risk functions as a primary antecedent of trust erosion during periods of uncertainty.

In the case of Pertamina, allegations that lower-grade fuel was marketed as premium fuel represent a salient form of perceived performance and financial risk. Such perceptions undermine consumers' belief in product integrity and corporate competence, leading to a direct decline in trust. Accordingly, perceived product risk is positioned as the key independent variable in this study, exerting a negative influence on consumer trust.

Media Exposure

Media exposure refers to the frequency and intensity with which individuals encounter information through mass media, digital platforms, and interpersonal communication channels (Rakhmat, 2009). In contemporary consumer environments, media exposure extends beyond traditional news outlets to include social media platforms, online discussions, and peer-to-peer communication, all of which play a critical role in shaping perceptions and attitudes toward brands.

The role of media exposure in consumer behavior is grounded in information processing and agenda-setting theories. Repeated exposure to specific issues increases their perceived importance and salience in consumers' cognitive evaluations (McCombs, 2014). In risk-related contexts, media exposure has been shown to amplify perceived severity and probability of negative outcomes, particularly when coverage is predominantly negative or crisis-oriented (Vrontis et al., 2021).

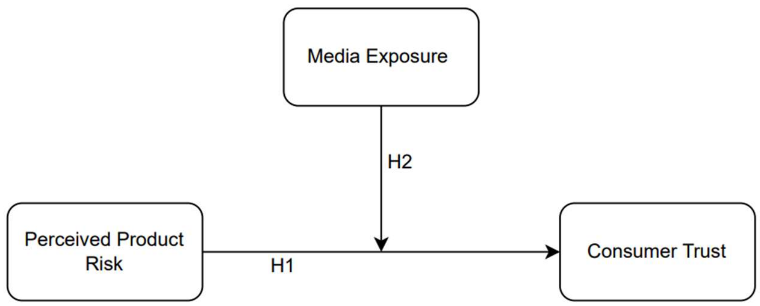
Empirical studies indicate that media exposure significantly influences risk perception and trust judgments. Li (2023) finds that high-frequency media exposure intensifies consumer sensitivity to product-related risks, thereby shaping purchase intentions. Similarly, Chavda and Chauhan (2024) argue that continuous negative media narratives can erode trust more effectively than direct personal experience, especially in industries where consumers rely heavily on mediated information.

Importantly, media exposure does not operate as a direct determinant of trust in isolation but rather functions as a contextual amplifier. In crisis situations, extensive media coverage can strengthen the negative impact of perceived risk on trust by reinforcing uncertainty and suspicion (Kim & Yoon, 2023). Conversely, transparent and credible media communication has the potential to attenuate risk perceptions and facilitate trust recovery, although such effects are often weaker and slower to materialize.

In the Pertamina case, widespread media reporting on corruption scandals and fuel quality issues has heightened public awareness and scrutiny. Consumers with high levels of media exposure are more likely to internalize negative information, thereby intensifying the adverse effect of perceived product risk on trust. Consequently, media exposure is conceptualized in this study as a moderating variable that alters the strength of the relationship between perceived product risk and consumer trust, rather than exerting a standalone direct effect.

Conceptual Framework

The conceptual framework illustrated in Figure 1 demonstrates the hypothesized relationships between perceived product risk and consumer trust in Pertamina's fuel products. The framework shows three essential components: Perceived Product Risk (X) as the independent variable, Consumer Trust (Y) as the dependent variable, and Media Exposure (Z) as the moderating variable. The model proposes two primary relationships: a direct negative effect of perceived risk on consumer trust, and a moderating effect of media exposure on this relationship.



Source: Authors' Own Work, 2025

Figure 1
Conceptual Framework

The framework recognizes that perceived product risk encompasses multiple dimensions, including quality concerns, performance issues, financial implications, and social ramifications. Media Exposure functions solely as a moderating variable, reflecting the influence of information accessibility and communication channels on how consumers process and respond to risk perceptions in their trust formation process.

Hypothesis

Based on the conceptual framework in Figure 1, this research tests two primary hypotheses:

H1: Perceived Product Risk has a negative significant effect on Consumer Trust in Pertamina's fuel products.

This hypothesis proposes that higher levels of perceived risk across various dimensions directly diminish consumer trust in Pertamina's offerings.

H2: Media Exposure moderates the relationship between Perceived Product Risk and Consumer Trust in Pertamina's fuel products.

This hypothesis examines how the extent and nature of media exposure influences the strength and direction of the risk-trust relationship.

METHOD

This study adopts a quantitative, cross-sectional approach to investigate the relationship between perceived product risk, media exposure, and consumer trust simultaneously at a single point in time (Sugiyono, 2022; Wang & Zhou, 2020). The research population comprises Indonesian consumers who regularly purchase fuel products. According to the 2024 Land Transportation Statistics report from Statistics Indonesia (BPS, 2025), the national volume of motorized vehicles reached approximately 166,465,914 units, which serves as the population base. The minimum representative sample size was determined using the Slovin formula with a 10% margin of error, calculated as

$$n = \frac{N}{1 + N(e)^2}$$

This calculation established a minimum requirement of 100 respondents, which is considered adequate for generating valid results while accounting for research constraints.

To draw the sample, the study utilized a combination of purposive and quota sampling techniques. The inclusion criteria specified respondents aged 18 years and above who had purchased Pertamina fuel products within the past six months. The sampling was primarily directed at the Greater Jakarta (Jabodetabek) area, as this urban demographic reflects a highly competitive market where consumers have direct access to rival brands and exhibit higher levels of media exposure regarding corporate issues.

Primary data were collected via a self-administered structured questionnaire distributed through Google Forms across various digital platforms. The instrument was designed following established psychological measurement principles to minimize response bias. It measured the respondents' perceptions regarding Perceived Product Risk, Consumer Trust, and Media Exposure utilizing a 5-point Likert scale, ranging from "strongly disagree" to "strongly agree" (Sugiyono, 2022; Kho, 2018).

Data analysis was conducted using the Partial Least Squares Structural Equation Modeling (PLS-SEM) method, facilitated by SmartPLS software, due to its robustness in handling complex prediction-oriented models (Wong, 2013). The analysis adhered to a rigorous two-stage process (Hair et al., 2021). First, the measurement model was evaluated to confirm construct reliability and convergent validity by examining outer loadings (> 0.70), Average Variance Extracted (> 0.50), Cronbach's Alpha (> 0.70), and Composite Reliability (> 0.70). Second, the structural model was evaluated to assess the hypothesized relationships through the coefficient of determination (R-squared) and path coefficients. A non-parametric bootstrapping procedure was employed to generate t-statistics and p-values, with a significance threshold of $p < 0.05$ determining the statistical support for the proposed paths (Bougie & Sekaran, 2019).

Operational Definitions

The research employs carefully constructed operational definitions to ensure precise measurement of each variable. Consumer Trust represents the confident expectation that Pertamina will deliver promised product quality and maintain corporate integrity. This construct encompasses three dimensions: cognitive trust, affective trust and behavioral trust (willingness to remain loyal) (Lahno, 2004).

Perceived Product Risk dimensions are operationalized through specific indicators (Jacoby & Kaplan, 1972; Stone & Grønhaug, 1993). Product Quality Risk measures concerns about fuel composition, octane accuracy, and consistency (Sweeney et al., 1999). Financial Risk encompasses pricing fairness, value perception, and economic impact concerns (Stone & Grønhaug, 1993). Social Risk includes reputational considerations, peer approval, and brand association effects. Performance Risk addresses functional reliability, vehicle compatibility, and efficiency concerns (Jacoby & Kaplan, 1972; Sweeney et al., 1999).

Media Exposure operationalizes both frequency and nature of media contact regarding Pertamina, including news consumption, social media engagement, and peer discussion participation (Stephen & Galak, 2012; Valkenburg et al., 2016). This variable captures both positive and negative media interactions, recognizing the bidirectional influence of media on consumer perceptions (Babić Rosario et al., 2016).

Table 1 presents comprehensive operational definitions with measurement indicators.

Table 1
Operational Definitions

Variable	Definition	Indicator	Measurement Item	Scale
Consumer Trust (CT)	The confident expectation that Pertamina will deliver promised product quality and maintain corporate integrity (Nguyen Hau & Viet Ngo, 2012); (Ndubisi & Wah, 2005); (Yoganathan et al., 2015).	Belief in competence	CT1: I believe Pertamina has the technical capability to provide high-quality fuel products	5-point Likert
		Emotional confidence	CT2: I feel confident using Pertamina's fuel products for my vehicle	5-point Likert
		Willingness to remain loyal	CT3: I am willing to continue purchasing Pertamina's fuel products	5-point Likert
		General confidence in brand	CT4: I trust Pertamina as a reliable fuel provider	5-point Likert
Perceived Product Risk (PPR)	The degree to which consumers perceive potential negative consequences from using Pertamina's fuel (Masoud, 2013)	Concerns about fuel composition, octane accuracy, and consistency	PPR1: I am concerned that Pertamina's fuel products may not meet the advertised quality standards	5-point Likert
		Functional reliability, vehicle compatibility, and efficiency concerns	PPR2: I worry that using Pertamina's fuel might negatively affect my vehicle's performance	5-point Likert
		Pricing fairness, value perception, and economic impact concerns	PPR3: I am concerned that I am not getting fair value for the price paid for Pertamina's products	5-point Likert
		Reputational considerations, peer approval, and brand association effects	PPR4: I am concerned about how others might perceive me for using Pertamina's products	5-point Likert
Media Exposure (ME)	The frequency and nature of media contact regarding Pertamina, capturing both positive and negative media interactions (Rakhmat, 2009)	Frequency of exposure to news about Pertamina in traditional media	ME1: I frequently encounter news about Pertamina through television, newspapers, or radio	5-point Likert
		Frequency of exposure to content about Pertamina on social media platforms	ME2: I regularly see posts, comments, or discussions about Pertamina on social media	5-point Likert
		Frequency of conversations	ME3: I often discuss Pertamina's products or	5-point Likert

Variable	Definition	Indicator	Measurement Item	Scale
		with peers about Pertamina	recent events involving the company with friends, family, or colleagues	

Source: Authors' Own Work, 2025

RESULTS AND DISCUSSION

Data Description

This subsection provides an analysis of the respondent profiles for the 103 individuals included in the final dataset; this figure was attained after seven respondents were omitted during the initial screening process for failing to meet research inclusion parameters. This final sample size (n=103) satisfies the minimum requirement of 100 respondents established by the Slovin formula.

The demographic composition is predominantly female (55.3%, n=57) and largely concentrated in the 18–23 age bracket (90.3%, n=93). This profile represents Generation Z consumers within the Jabodetabek urban market. These individuals are characterized by frequent digital engagement and significant media exposure regarding Pertamina's corporate governance and quality standards.

Analysis of purchase behavior indicates high brand engagement, with 50.5% (n=52) purchasing fuel 2–3 times per week and 12.6% (n=13) identified as daily users. Such routine usage patterns demonstrate that the majority of the sample consists of active, frequent consumers whose trust is vital for Pertamina's market recovery following perceived performance and financial risks.

Measurement Model Test (Outer Model)

Convergent Validity (Outer Loading)

Testing on convergent validity using the outer loading value is declared to have met the provisions if the outer loading value for each indicator has a value > 0.60 (Hair et al., 2021). This measurement ensures that the indicators adequately represent their corresponding latent variables. Table 2 presents the outer loading values, confirming that the measurement items adequately represent their corresponding latent variables.

Table 2
Outer Loading Test Results

	Consumer Trust	Media Exposure	Perceived Product Risk
CT1	0.661		
CT2	0.864		
CT3	0.801		
CT4	0.835		
ME1		0.800	
ME2		0.861	
ME3		0.726	
PPR1			0.808
PPR2			0.749
PPR3			0.881
PPR4			0.827

Source: Data Analyzed, 2025

The results of testing the outer loading values after being processed in Table 2 explain that each item or indicator for Consumer Trust, Media Exposure, and Perceived

Product Risk has an outer loading value > 0.60. From these results, the convergent validity test through the outer loading value is declared valid and suitable for use.

Average Variance Extracted (AVE)

Testing using the AVE value is declared valid if the value of each variable has an AVE value >0.50 (Hair et al., 2021). AVE testing is critical in ensuring that the constructs used in the research are valid and reliable. Further evaluation of convergent validity is provided in Table 3, which displays the Average Variance Extracted (AVE) values for each construct.

Table 3
Test Results of Average Variance Extracted Value

	Original sample (O)
Consumer Trust (Y)	0.630
Media Exposure (Moderasi)	0.636
Perceived Product Risk (X)	0.668

Source: Data Analyzed, 2025

The results presented in Table 3 indicate that the Average Variance Extracted values for each construct in the model exceed 0.50. This suggests that the indicators in this study meet the standards of convergent validity (Hair et al., 2021).

Reliability

a. Cronbach's Alpha

The Cronbach's Alpha test is carried out to test the reliability value of all indicators for each variable, where each variable must have a Cronbach's Alpha value > 0.70 (Hair et al., 2021). Table 4 shows the Cronbach's Alpha test results, confirming the internal consistency of the indicators.

Table 4
Cronbach's Alpha Value Test Results

	Original sample (O)
Consumer Trust (Y)	0.802
Media Exposure (Moderasi)	0.711
Perceived Product Risk (X)	0.834

Source: Data Analyzed, 2025

In Table 4, the results of the Cronbach's Alpha test show that the values for the variables are as follows: Consumer Trust is 0.802, Media Exposure is 0.711, and Perceived Product Risk is 0.834. Therefore, these three variables can be declared reliable as they have a Cronbach's Alpha value greater than 0.70.

b. Composite Reliability

To further validate the reliability of the constructs, the researchers employed the composite reliability test. The accepted threshold for reliable composite reliability is a value greater than 0.70 for each variable (Hair et al., 2021). Data summarized in Table 5 confirms the high reliability of all variables within the research model.

Table 5
Composite Reliability Value Test Results

	Composite reliability (rho_c)
Consumer Trust (Y)	0.871
Media Exposure (Moderasi)	0.839
Perceived Product Risk (X)	0.889

Source: Data Analyzed, 2025

As shown in Table 5, the Composite Reliability values for all variables exceed 0.70, specifically 0.871 for Consumer Trust, 0.839 for Media Exposure, and 0.889 for Perceived Product Risk. This indicates that the reliability of all the variables in this research model is high.

Structural Model Test (Inner Model)

R-square

The R^2 is a critical statistical metric that measures the proportion of variance in the dependent latent variable explained by independent latent variables. There are three categories used to interpret R^2 values: 0.19 indicates a weak level of explanation, 0.33 represents a moderate fit, and 0.67 signifies a substantial fit (Hair et al., 2021). Table 6 details the coefficient of determination, indicating the proportion of variance in Consumer Trust explained by the model.

Table 6
Test Results of R Square Value

	Original sample (O)
Consumer Trust (Y)	0.591

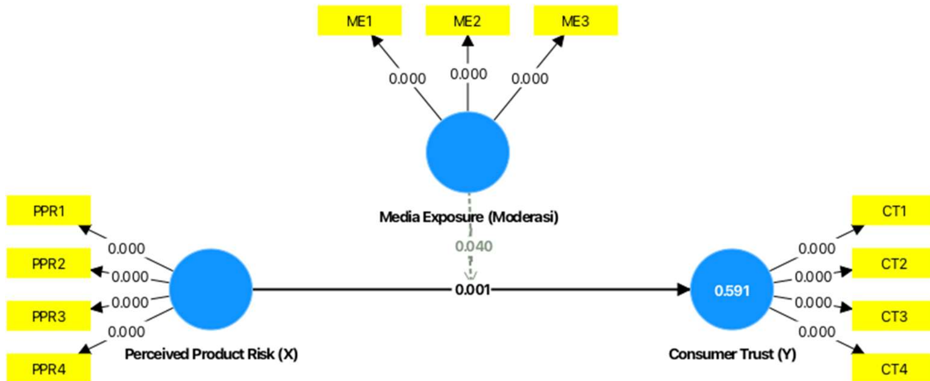
Source: Data Analyzed, 2025

Based on the results presented in Table 6, the R-squared value for the Consumer Trust variable is 0.591. This indicates that the variables of Perceived Product Risk and the moderating role of Media Exposure account for 59.1% of the variance in Consumer Trust, suggesting a moderate to substantial influence of the examined factors.

Path Coefficients

The path coefficient analysis was executed to determine the magnitude of the impact exerted by the independent variable as well as the interaction effect of the moderating variable on the dependent construct (Hair et al., 2021). This stage is fundamental for clarifying the structural links between Perceived Product Risk, Media Exposure, and Consumer Trust, utilizing the PLS-SEM algorithm alongside the bootstrapping method. As a non-parametric resampling approach, bootstrapping verifies the stability and significance of the path coefficients by creating multiple iterations of the raw data. This technique grants a more dependable estimation of the relationships between variables, ensuring a robust and precise interpretation of the structural dynamics (Hair et al., 2021).

By examining these path coefficients, the study achieves a precise understanding of the connections between the primary and moderating constructs. The empirical results, as visualized in Figure 2, present the significance values required to either confirm or reject the specific research hypotheses regarding variable interactions. Due to its capacity to improve estimate consistency, the bootstrapping approach ensures that the derived coefficients effectively illustrate the complex consumer dynamics at play following the Pertamina corporate crisis.



Source: Data Analyzed, 2025

Figure 2
Bootstrapping Results

Hypothesis Testing

Hypothesis testing in the structural model is conducted through bootstrapping to generate t-statistics and p-values. The minimum threshold for the T-statistic must be greater than 1.96, and the P-Value must be less than 0.05 with a 95% confidence level. If the p-value is below the 0.05 significance level, the hypothesized relationship is considered statistically significant (Bougie & Sekaran, 2019). An analysis of the path coefficients presented in Table 7 reveals the significance of the relationships between the latent variables.

Table 7
Test Results For T-Statistics And P-Values

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Results
H1	0.495	0.492	0.144	3.449	0.001	Accepted
H2	0.138	0.130	0.067	2.053	0.040	Accepted

Source: Data Analyzed, 2025

The results of the hypothesis testing in Table 7 indicate that the T-statistic value for the effect of Perceived Product Risk on Consumer Trust (H1) is 3.449, exceeding the threshold of 1.96 with a P-value of 0.001, thus the hypothesis is accepted23. Furthermore, the interaction between Perceived Product Risk and Media Exposure (H2) yielded a T-statistic of 2.053 and a P-value of 0.040, which confirms that Media Exposure significantly moderates the relationship between perceived risk and consumer trust. Consequently, all proposed structural paths are statistically supported by the empirical data (Bougie & Sekaran, 2019).

The Moderating Role of Media Exposure

The findings from the structural model analysis, as presented in Table 7, demonstrate that Perceived Product Risk exerts a significant influence on Consumer Trust (T=3.449, p=0.001). With a p-value below the 0.05 threshold, Hypothesis 1 (H1) is statistically supported. The original sample value of 0.496 indicates a substantial relationship between these constructs, confirming that heightened risk perceptions among consumers directly contribute to the erosion of brand trust.

This result aligns with the theoretical framework established by Arning et al. (2023), which posits that risk perceptions are primary determinants of consumer trust, especially in high-stakes energy sectors. In the specific case of Pertamina, the significant impact of perceived risk is largely driven by functional and performance concerns. The revelation that lower-grade fuel (RON 90) was potentially substituted and sold as higher-priced RON 92 represents a fundamental breach of product quality standards. Consequently, consumers perceive a high level of functional risk, which compromises their expectation of technical competence and corporate integrity. This lack of reliability in essential commodities leads to a "mass exodus" toward rival brands as consumers seek to mitigate their personal financial and performance risks.

The Impact of Perceived Product Risk on Consumer Trust

The analysis confirms that Media Exposure plays a critical moderating role in the relationship between Perceived Product Risk and Consumer Trust, supporting Hypothesis 2 (H2). The interaction term (PPR x ME) yielded a T-statistic of 2.053 and a p-value of 0.040, which is within the acceptable significance level ($p < 0.05$). This finding indicates that the strength of the impact of risk on trust is not static but is significantly altered by the intensity of information the consumer receives.

The acceptance of hypothesis two provides empirical weight to the arguments made by Li (2023), who suggests that the frequency of media exposure can amplify risk perceptions and subsequent consumer intentions. In the context of the recent Pertamina crisis, the extensive media coverage specifically reports by Reuters in March 2025 regarding the arrest of five executives over a $12 billion corruption scandal has served as a negative reinforcement mechanism.

For consumers with high levels of media exposure, the negative information regarding institutional corruption and fuel quality issues becomes more salient, thereby intensifying the trust deficit. Unlike traditional marketing where media is used to build trust, in this crisis recovery scenario, continued negative media reinforcement exacerbates public distrust. This underscores the asymmetric effect of information in the petroleum industry: while negative news rapidly erodes trust, the moderating effect of media exposure suggests that any trust recovery strategy must prioritize transparent and credible communication to mitigate the heightened risk perceptions fueled by public discourse.

CONCLUSION AND SUGGESTION

The research concludes that perceived product risk significantly undermines consumer trust in Pertamina's fuel products, particularly in the wake of corporate scandals and product quality concerns. The empirical results demonstrate that Hypothesis 1 is accepted, with perceived risk showing a substantial negative impact on trust. Furthermore, the study confirms that media exposure serves as a critical moderating variable, as the interaction between risk perception and media consumption significantly influences trust levels, thereby accepting Hypothesis 2. The research model exhibits strong explanatory power, with an R-squared value of 0.591, indicating that approximately 59.1% of the variance in consumer trust is explained by the integration of perceived product risk and media exposure.

The findings provide significant practical implications for Pertamina's crisis management and brand recovery strategies. Given the moderating effect of media exposure, the intense coverage of scandals acts as a catalyst that amplifies the erosion of trust among regular fuel consumers. To mitigate these negative effects, the company must prioritize transparent communication and implement rigorous quality assurance protocols to address perceived functional and financial risks. Rebuilding trust requires a proactive media strategy that focuses on institutional integrity and product reliability to counter the heightened sensitivity of urban consumers in the Jabodetabek region.

Despite these insights, this study is subject to certain limitations, notably its focus on a Generation Z demographic (aged 18–23) within the Greater Jakarta area. The final sample of 103 respondents, while statistically adequate according to the Slovin formula, may not fully represent the diverse socioeconomic landscape of fuel consumers across all Indonesian regions.

Future research should aim to expand the geographic scope beyond Jabodetabek and incorporate more diverse age groups to enhance the generalizability of the findings. Additionally, investigating further moderating factors, such as brand loyalty or government accountability perceptions, could provide a more comprehensive understanding of trust recovery dynamics in state-owned enterprises.

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