

## **The Influence of Personal Selling, Packaging, and Product Quality on Purchase Interest of Pusri Diesel Exhaust Fluid (Pusri DEF) for Euro 4 Standard Vehicles in Indonesia**

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**ABSTRACT:** This study aims to find empirical evidence by analyzing the influence of personal selling, packaging and product quality on purchasing interest in Pusri Diesel Exhaust Fluid (Pusri DEF) for Euro 4 standard vehicles in Indonesia. The population in this study were all companies engaged in transportation, heavy equipment and energy industries that use heavy duty vehicles with Euro 4 standards that have purchased or know and have the potential to purchase Pusri DEF products, namely 36 companies. Samples were taken as many as 3 respondents from each company so that a total of 108 respondents were obtained. The analysis technique used in this study was multiple linear regression using SPSS through the F test and t test. Based on the test, it was found that the variables of personal selling, packaging and product quality had a positive and significant effect on the purchase interest of Pusri Diesel Exhaust Fluid (Pusri DEF) for Euro 4 standard vehicles in Indonesia. The R value of 0.792 indicates that there is a close relationship between the variables of personal selling, packaging and product quality on the purchase interest of Pusri Diesel Exhaust Fluid (Pusri DEF) for Euro 4 standard vehicles in Indonesia. The R square ( $R^2$ ) value of 0.628 or 62.8% shows the proportion of variation in purchasing interest that can be explained by the variables of personal selling, packaging, and product quality towards Pusri Diesel Exhaust Fluid (Pusri DEF) in vehicles with Euro 4 regulatory standards in Indonesia.

**KEYWORDS:** Personal Selling, Packaging, Product Quality, Purchase Interest

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### **INTRODUCTION**

Diesel Exhaust Fluid (DEF) is a urea-based liquid that reacts with exhaust gases for Euro 4 standard vehicles with SCR (selective catalytic reduction) technology, thus supporting the government's net zero emission program. By reducing COx and NOx emissions, DEF can help achieve several environmental goals that contribute to air pollution and climate change, as well as help improve air quality and reduce negative impacts on the environment and human health. DEF can be one component in a net zero emissions strategy for the transportation sector, especially for diesel vehicles. In an effort to increase interest in purchasing Pusri Diesel Exhaust Fluid (Pusri DEF) for Euro 4 standard vehicles in Indonesia, the strategy that can be implemented is through personal selling by increasing direct interaction with customers through trained and experienced sales staff in explaining the benefits and advantages of Pusri DEF products. Developing more practical, efficient, and environmentally friendly packaging to facilitate use and storage and developing product quality that complies with Euro 4 regulatory standards and customer needs.

According to Cognitive Market Research, with a market value of USD 33514.2 million in 2024, DEF is expected to grow at a compound annual growth rate (CAGR) of 6.1% from 2024 to 2031. Phagare (2024) explain that Europe accounts for over 30% of the global market size of USD 10,054.26 million due to stringent emission regulations imposed by the European Union to minimize harmful pollutants emitted by diesel vehicles. Commercial vehicles, including trucks and buses, are the largest segment driving DEF demand due to their heavy usage and compliance requirements. Furthermore, the increasing use of diesel engines in passenger cars, coupled with growing awareness of environmental sustainability, is further driving the market growth.

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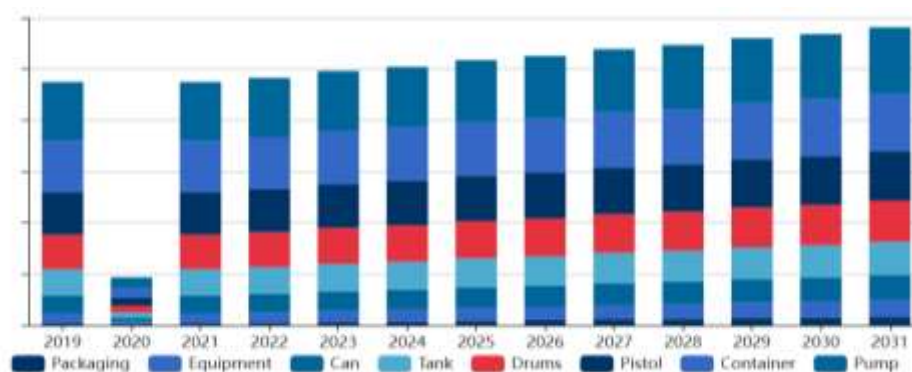


Figure 1. Diesel Exhaust Fluid Market Share 2019 – 2031

Based on the data in Figure 1, it shows that the predicted global DEF market share in 2019-2031 fluctuates every year but is predicted to grow over time and increase until 2031. As one of the countries that ratified the Paris Agreement in 2015, Indonesia has a commitment to reduce greenhouse gas emissions, as stated in The First Nationally Determined Contribution submitted to the United Nations Framework Convention on Climate Change in November 2016. The emission system regulations implemented in Indonesia continue to increase every year, where the Euro 4 Indonesian motor vehicle exhaust emission standards began to be implemented on October 8, 2018 for gasoline-fueled cars and April 8, 2021 for diesel cars. Due to the Covid19 pandemic, this regulation was only implemented in 2023 based on a letter from the Ministry of Environment and Forestry number S786/MENLHK-PPKL/SET/PKL.3/5/2020 dated May 20, 2020. The automotive industry is required to adapt to higher standards, including the use of more advanced emission control technology and cleaner fuels. The implementation of Euro 4 which requires the use of SCR technology in diesel vehicles automatically increases the demand for DEF. Quoting from Gusana (2024), the market growth projection for DEF in Indonesia shows a significant increase over the next five to ten years and industry analysts estimate that the market could grow at a compound annual growth rate (CAGR) of around 7-10%.

According to Kotler & Keller (2016), purchase interest is consumer behavior where they have the desire to make a purchase or choose a product, which is based on their experience when wanting, choosing, using and consuming the desired product. Personal selling, packaging, and product quality play a crucial role in influencing consumer purchasing decisions, including Pusri DEF. Effective personal selling builds direct relationships with consumers, provides education, and fosters trust in the product. Attractive packaging not only protects the product but also provides visual appeal, enhancing brand image and influencing consumer perception. Similarly, high product quality is a key factor in ensuring consumer satisfaction, ensuring they are confident in the benefits and value they receive. The combination of effective personal selling, attractive packaging, and superior product quality will enhance consumer trust in Pusri DEF, encourage repeat purchases, and foster long-term loyalty.

Research conducted by Juniarto (2022); Yousif (2021); Murithi (2020); Wu et al (2024); Bongers et al (2025) shows that buying interest is positively and significantly influenced by personal selling. However, research from Wigati (2022) concluded different results, that personal selling had a positive and insignificant effect on purchasing interest. Research conducted by Waheed (2023); Lee (2022); Mugiono (2022); Zekiri (2020) shows that packaging has a positive and significant effect on purchasing interest. Different results were shown in research from Fauzy (2020) that purchasing interest is not influenced by packaging. Natalisa (2018); Tregear (2020); Kuruvilla (2020); concluded that purchasing interest is positively and significantly influenced by product quality. In contrast to the results of this study, the research results of Shafitri (2021) and Fauzy (2020) shows that purchasing interest is not influenced by product quality.

Empirical evidence on the influence of marketing factors on purchase intention of Diesel Exhaust Fluid (DEF) products in developing countries like Indonesia is still relatively limited. The low level of product adoption is caused by limited consumer understanding of DEF's benefits, obstacles in the distribution system, and a less than optimal personal approach carried out by industrial sales personnel. Based on these factors, this study focuses on the influence of personal selling, packaging, and product quality on purchase intention of Pusri Diesel Exhaust Fluid (Pusri DEF) in accordance with Euro 4 emission standards.

The main problem that will be discussed in this research is how do personal selling, packaging and product quality influence the purchasing interest of Pusri Diesel Exhaust Fluid (Pusri DEF) for Euro 4 standard vehicles in Indonesia?

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## **LITERATURE REVIEW**

### **Purchase Interest**

According to Kotler & Keller (2016), purchase interest is consumer behavior where they have the desire to make a purchase or choose a product, which is based on their experience when wanting, choosing, using and consuming the desired product. Ferdinand (2022) identifying several dimensions of purchasing interest, namely:

1. Transactional interest refers to the consumer's willingness or desire to purchase certain goods/products.
2. Explorative interest describes an individual's tendency to continue searching for data and information related to the product of interest, with the aim of validating and strengthening the positive attributes of the product.
3. The behavior of a person who determines a product as his main choice or priority is interpreted as preferential interest.
4. Referential interest, namely a person's tendency to refer a product to other people.

### **Personal Selling**

According to Kotler & Armstrong (2019), personal selling is a face-to-face presentation activity carried out by salespeople or company sales staff with the aim of supporting sales success while building good relationships with customers. (Stevenson, 2010), the dimensions of personal selling consist of 7, namely as follows:

1. Prospecting & Qualifying, namely how to identify consumers.
2. Pre-Approach, namely determining an accurate approach in sales.
3. Approach, namely introducing and approaching consumers.
4. Presentation, namely making presentations and delivering or showing the products being sold.
5. Handling Objections, namely concrete steps to address customer complaints.
6. Closing, namely the success of sales people in selling products to consumers.
7. Follow-up, namely activities carried out by sales people after selling a product.

### **Packaging**

According to Kotler & Keller (2018), packaging is a business established by individuals to maintain brand equity and promote sales. The packaging process involves design and production. The primary function of packaging is to protect the product and maintain its quality. Kotler & Keller (2018) states that packaging can be divided into 3 dimensions, namely:

1. Design, which is one aspect that forms the quality of assurance and accountability.
2. Attractive colors, which depict a meaning for each product
3. The size of the packaging depends on the type of product being packaged, including the length, width, thickness and thinness of the packaging.

### **Product Quality**

According to Tjiptono (2019), quality represents performance which is a direct reflection of a product, including aspects of reliability, ease of use, aesthetics, and other supporting factors. Gaspersz (2017) stated that product quality can be measured through eight main dimensions, namely:

1. Performance is the main characteristic of a product that shows the actual function of the product.
2. Features namely additional or complementary characteristics of a product that reflect the level of completeness of the attributes it has.
3. Reliability, is the extent to which a product can be relied on or shows consistency in its operational processes in the eyes of consumers.
4. Conformance to Specifications namely describing the standard of a product that meets previously established standards.
5. Durability, namely the extent to which a product is capable of being used within a certain period of time and can be interpreted as the expected size of the operational life of the product when used under normal conditions.
6. Serviceability, covering aspects of speed, comfort, competence, ease of repair, and speed in responding to complaints.
7. Aesthetics, is related to the product's appeal to the five senses, which includes attributes such as color, design, shape, taste, aroma, and so on.
8. Perceived Quality, namely the quality that consumers feel about a product.

### **Research Conceptual Framework**

Based on the theoretical basis presented above, a conceptual research framework was created, which aims to test the relationship between the independent variables of personal selling, packaging and product quality towards interest in buying Pusri Diesel Exhaust Fluid (Pusri DEF) for Euro 4 standard vehicles in Indonesia.

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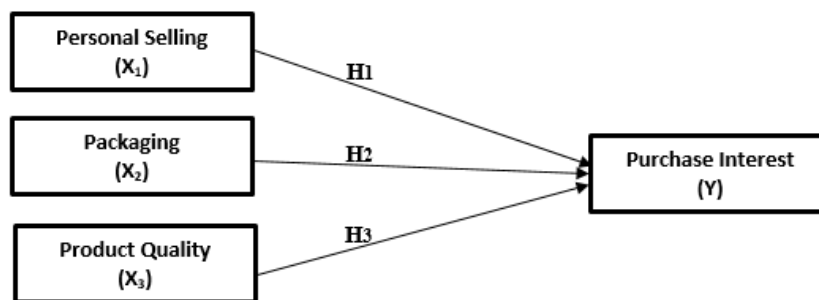


Figure 2. Research Conceptual Framework

## Hypothesis

Kotler & Armstrong (2019) states that personal selling is a face-to-face presentation activity carried out by salespeople or company sales personnel with the aim of supporting sales success while building good relationships with customers. In line with Kotler & Armstrong, according to Tjiptono (2019), personal selling is a form of direct, face-to-face communication between a seller and a potential customer with the goal of introducing a product, building consumer understanding of it, and encouraging their interest in trying it and ultimately making a purchase. Personal selling is a form of interpersonal communication within the promotional mix. Unlike advertising, which is non-personal and directed at a mass audience, personal selling involves two-way interaction that can be conducted face-to-face, over the phone, or through video conferencing. Quoting from Stevenson (2010), the main focus of personal selling is sales activities carried out through direct communication between individuals. The function and intensity of personal selling within a company varies greatly, determined by various key factors, including the nature of the product or service, the scale of the organization, and the industry category in which the company operates. According to Tjiptono (2019), personal selling also plays a dominant role in industrial companies.

H1: *Personal selling* has a positive and significant influence on purchasing interest

Packaging is an important element in a product, because besides its function of protecting the product, packaging also acts as a promotional medium that can attract consumers' attention. According to Kotler & Keller (2018), packaging is a tool designed to maintain brand equity while supporting sales promotion efforts. When optimally designed, packaging can stimulate consumer purchasing interest and increase sales because packaging is the first part of the product seen and assessed by consumers. Packaging plays a crucial role in attracting consumer decisions by attracting attention or, conversely, can discourage consumers from purchasing. Therefore, companies strive to convey a positive impression through packaging design while distinguishing it from similar products from competitors, so that consumers can recognize the differences in the products offered. Quoting from Susanti (2021), packaging that is attractively designed and available in various variations tends to be easier to remember and attracts consumers' attention.

H2: Packaging has a positive and significant influence on purchasing interest

According to Kotler & Armstrong (2015), product quality is the product's ability to demonstrate its performance and is one of the main factors that salespeople prioritize in marketing their products. If consumers perceive a product to be of good quality, this has the potential to encourage purchasing decisions. Quoting from Monalisa (2015), this decision arises when the consumer has determined the product that is considered most suitable to fulfill his desires.

H3: Product quality has a positive and significant effect on purchasing interest

## RESEARCH METHODOLOGY

This study applies a quantitative approach with a survey method using a five-point Likert scale questionnaire. The study population includes 36 companies engaged in transportation, heavy equipment, and energy that have operated Euro 4 standard vehicles. The research sample consisted of 108 respondents, three people from each company, covering the positions of director, manager, and branch manager. Data analysis was conducted using multiple linear regression techniques using SPSS software. The testing process includes classical assumption tests including normality, multicollinearity, and heteroscedasticity as well as hypothesis testing through t-tests, F-tests, and coefficient of determination ( $R^2$ ).

## RESULTS AND DISCUSSION

The research results and discussion in this study include several stages including classical assumption testing, multiple linear regression analysis and hypothesis testing, each of which is described as follows:

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## Classical Assumption Test

### 1. Normality Test and Heteroscedasticity Test

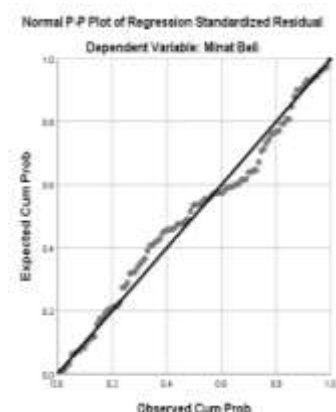


Figure 3. Normal Probability Plot

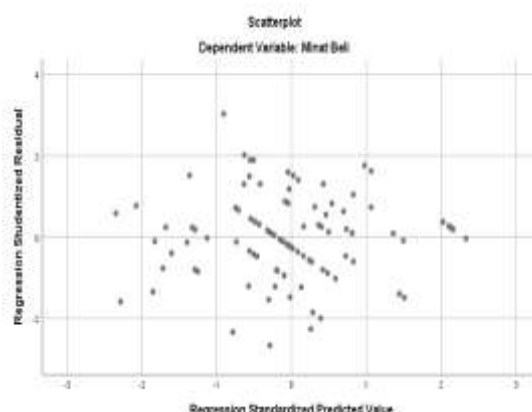


Figure 4. Scatterplot

Based on Figure 3, it can be seen that the residual data is normally distributed because its distribution is around the diagonal line. Meanwhile, Figure 4 shows that the data distribution does not form a specific pattern and is spread below zero on the Y axis, indicating that the research data is free from heteroscedasticity.

### 2. Multicollinearity Test

Table 1. Multicollinearity Test Results

| Model            | Unstandardized Coefficients |            | Standardized Coefficients | Sig.  | Collinearity Statistics |       |
|------------------|-----------------------------|------------|---------------------------|-------|-------------------------|-------|
|                  | B                           | Srd. Error | Beta                      |       | Tolerance               | VIF   |
| 1                |                             |            |                           |       |                         |       |
| Constant         | .936                        | .330       |                           |       |                         |       |
| Personal Selling | .601                        | .060       | .602                      | 0.000 | 0.893                   | 1,707 |
| Packaging        | .511                        | .071       | .519                      | 0.000 | 0.696                   | 1,537 |
| Product Quality  | .770                        | .070       | .778                      | 0.000 | 0.992                   | 1,845 |

The Variance Inflation Factor (VIF) values for the personal selling variable were 1.707; packaging was 1.537; and product quality was 1.845; all below 10. This indicates that there is no multicollinearity problem among the independent variables, so the model is suitable for further analysis.

### Multiple Linear Regression Analysis

The following multiple linear regression equation is formulated based on the analysis data contained in Table 1.

$$Y = 0,936 + 0,601X_1 + 0,511X_2 + 0,770X_3$$

Interpretation of the results shows that:

- The personal selling variable has a positive and significant influence on purchasing interest ( $\beta = 0.601$ ; sig. = 0.000).
- The packaging variable has a positive and significant effect on purchasing interest ( $\beta = 0.511$ ; sig. = 0.000).
- The product quality variable also has a positive and significant influence on purchasing interest ( $\beta = 0.770$ ; sig. = 0.000).

The calculated F value of 58.512 with a significance level of 0.000 indicates that the three independent variables simultaneously have a significant effect on purchase intention. Meanwhile, the R value of 0.792 indicates a strong relationship between the three variables and purchase intention. The coefficient of determination ( $R^2$ ) value of 0.628 indicates that 62.8% of the variation in purchase intention can be explained by the variables in the research model. Meanwhile, the remaining 37.2% is influenced by factors not included in this model.

The research results show that product quality has the greatest influence on purchase intention, followed by personal selling and packaging. This finding suggests that consumers in the industrial sector tend to prioritize technical aspects and product reliability in their purchasing decision-making process. Nevertheless, personal selling remains a strategic role because it can build trust and expedite the decision-making process through direct interaction between salespeople and customers. This is in line with Murithi (2020) and Bongers et al (2025), who emphasized the importance of salespeople's contributions in the context of business-to-

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business marketing. Packaging has also been shown to play a supporting role in shaping perceptions of professionalism and facilitating product use by consumers.

## CONCLUSIONS, LIMITATIONS, AND SUGGESTIONS

The conclusion shows that personal selling, packaging, and product quality have a positive and significant effect on the purchase intention of Pusri Diesel Exhaust Fluid (Pusri DEF) for Euro 4 standard vehicles in Indonesia. The R value of 0.792 indicates that there is a close relationship between the variables of personal selling, packaging, and product quality on the purchase intention of Pusri Diesel Exhaust Fluid (Pusri DEF) for Euro 4 standard vehicles in Indonesia. The R square ( $R^2$ ) value of 0.628 or 62.8% shows the proportion of variation in purchasing interest that can be explained by the variables of personal selling, packaging, and product quality towards Pusri Diesel Exhaust Fluid (Pusri DEF) in vehicles with Euro 4 regulatory standards in Indonesia.

This research has limitations that can be used as consideration for subsequent researchers to obtain better results, including the object used in this study was only Pusri DEF customers and because the product is not yet widely sold, it resulted in difficulty in finding respondents. This study also could not fully control for external factors that can influence purchasing interest such as changes in government regulations, changes in fuel prices, or global economic conditions that can affect the decision to purchase Pusri DEF products. Further research should consider identifying other external factors that can influence consumer decisions and purchasing interest of the product such as product price, brand awareness, logistics of goods delivery, distribution channels, environmental awareness, trust factors (trust in the credibility of the manufacturer), skills and technical expertise of salespersons and after-sales service. In addition, there are limitations in the research methodology so there is a possibility that the data obtained does not fully cover the emotional and psychological nuances that influence purchasing decisions. Further research is recommended to combine qualitative methods such as in-depth interviews, focus group discussions (FGDs) or discussion groups to obtain an advance and holistic picture.

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