



**THE EFFECT OF CONSUMER BEHAVIOR ON THE PURCHASE OF OIL  
FUEL USING MYPERTAMINA APPLICATION AT PUBLIC FUEL FILLING  
STATIONS IN THE CITY OF SURABAYA  
(CASE STUDY ON PERTALITE AND PERTAMAX FUEL)**

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**ABSTRACT**

*The aim of this study was to determine the effect of consumer behavior on the use of the MyPertamina application in purchasing Pertalite and Pertamina fuel oil at Public Fuel Filling Stations (SPBU) in Surabaya. The data studied is the behavior of gas station consumers who use the MyPertamina application when purchasing fuel.*

*Consumers have different behaviors for each individual in making purchasing decisions. This is a demand for business actors to continue to innovate in the all-electronic business world, especially in the field of payments which has become the main trend today.*

*The object of this research is consumers who purchase fuel with the payment method using the MyPertamina application at gas stations in Surabaya. This research method uses a quantitative descriptive approach. The results of this study indicate that consumer behavior has a significant influence on fuel purchases using the MyPertamina application at gas stations in Surabaya.*

**Keywords : Consumer behavior, MyPertamina**

**A. INTRODUCTION**

The rampant cases of counterfeiting money, as well as the large operational costs incurred by Bank Indonesia each year for printing, storing, distributing and destroying money is the background for Bank Indonesia as the Central Bank of Indonesia in launching a movement to use non-cash payment instruments (*Cashless Society*, especially in conducting transactions on economic activities which are named the National Non-Cash Movement. The emergence of electronic money (*E-Mony*) was motivated by Bank Indonesia regulation No 11/12/PBI/2009 as one of the supporters of Bank Indonesia's agenda to create a *cashless society* in Indonesia.

Electronic money has *stored-value* or *prepaid* where a certain amount of money is stored in an electronic media that is owned by someone. The media can be *server based* or *chip based*. *Server based* is electronic money with storage media in the form of a *server*. Meanwhile *chip-based* is electronic money with a chip-based storage medium. The value of electronic money will decrease when consumers use it for payment. Electronic money can be used for various types of payments. PT. *Fintek Karya Nusantara* application-based electronic money *smartphone* or *financial apps* in the form of LinkAja. This application tries to accommodate various needs related to *Cashless* and *Mobile Payments*. The LinkAja application is currently available for *the Android iOS platform*.

LinkAja as a company under the auspices of a State-Owned Enterprise (BUMN), the strategy used by LinkAja to increase the mobility of its users is working with companies that are also under the auspices of BUMN, including PT. Pertamina. In accordance with the vision of electronic money, LinkAja is trying to become a financial application that works on an ongoing basis and also a social mission that LinkAja wants to develop, LinkAja is determined through a

practical payment application to support government programs related to the National Non-Cash Movement, which is also offered, namely the electronic money system.

PT. Pertamina continues to strive to improve services for the community with various programs, including digitizing gas stations and the *MyPertamina* application. With the digitization of gas stations, Pertamina can monitor the condition of fuel stocks, fuel sales, and payment transactions at gas stations. In addition, all of these data can also be accessed directly by a number of authorities such as the Ministry of Energy and Mineral Resources (ESDM), the Ministry of BUMN, the Ministry of Finance, and the Downstream Oil and Gas Regulatory Agency (BPH MIGAS), so that they can support each other. for monitoring fuel distribution.

Pertamina also provides convenience for consumers to buy Pertamina products by means of non-cash payment (*Casless Payment*). Non-cash payments at gas stations can be made through the *MyPertamina* application which has integrated with the LinkAja application. Through this application, consumers get various benefits such as convenience, practicality in non-cash payments, access to the nearest gas station, and earn reward points with various benefits. *MyPertamina* also provides *cashback* for purchasing certain products according to terms and conditions.

In the theory above, studying the characteristics of a person's behavior in making purchases, to understand consumer desires and trying to find out the effects of behavior in product purchases. Through this consumer behavior theory, the author can understand the consumer decision-making process in using LinkAja electronic money with integrity with the *MyPertamina* application individually or in groups along with the factors that influence it. Based on the explanation above, the researcher wants to conduct research with the title "The Influence of Behavior on Purchasing Fuel Oil Using the *My Pertamina* Application at Surabaya City Public Fuel Filling Stations (Case Study on Peralite and Pertamina BBM types).

#### **Understanding Behavior Consumers**

According to Mangkunegara, DA (2019: 5) consumer behavior is actions taken by individuals, groups, or organizations related to the decision-making process in obtaining, using goods or services that they hope can meet their needs. According to Priansa, DJ (2016: 61) consumer behavior is defined as the behavior shown by consumers in searching, buying, using, evaluating and spending products or services that they hope can satisfy their needs.

According to Supriadi, SW (2013: 235) consumer behavior is the behavior shown by consumers in searching, exchanging, using, appraising, managing goods or services that are considered capable of satisfying their needs.

Consumers will try to maximize satisfaction as long as their financial capabilities allow. They have knowledge of product alternatives that can satisfy their needs, as long as the marginal utility obtained from purchasing the product is greater or equal to the costs incurred, consumers will tend to buy the product again. That is, if the satisfaction level is above average or the same, then a consumer will tend to use the product again, but if the level of satisfaction is below average, then the consumer will be more likely to look for other products in order to meet their needs.

In essence, consumer needs will experience changes in their lives in line with social, economic and cultural changes that occur in the environment in which they live. Changes will affect consumer behavior, namely in making purchasing decisions or using a product or service that they expect. (Arifin & Utomo, 2022)

#### **Understanding MyPertamina**

*MyPertamina* is a *loyalty* and *e-payment* program that provides *easy user experiences* from Pertamina for all Pertamina customers (Gina Salsabila Heryadi, 2018: 23). In this *e-money*, it has been registered and supervised by Bank Indonesia. *MyPertamina* functions as a *cashless payment* (non-cash payment system), a means for customers to get *points* and *rewards* as well as the application of *e-vouchers* that can be used at various *merchants* that have collaborated with Pertamina through *MyPertamina Loyalty Program*. In the *MyPertamina* application, Pertamina prioritizes promotions related to non-subsidized fuel, both in promotions to get *points*, *vouchers*, and so on. This is in accordance with Pertamina's goal of making people prefer or make decisions to use non-subsidized fuel (Danila, Yuliani, 2019).

*MyPertamina* is here as a form of appreciation to all loyal consumers of a Pertamina product in collaboration with *LinkAjain* supporting the payment system to make it easier for customers

when making transactions. *MyPertamina* is an application that is easy to access with many benefits and can be exchanged for various types of *rewards* through the *MyPertamina* application.

He said, in the current digital era, the need for people to carry out practical transactions using *fintech* (*financial technology*) in their hands is increasing. Therefore, Pertamina continues to strive to improve its services. The average transaction through the *MyPertamina* application has increased, starting from hundreds of thousands in 2020, increasing to 1.5 million transactions per month in 2021. Meanwhile the number of application downloaders has reached 7 million.

With the increase in the number of transactions, it can be said that people are starting to slowly become aware of the convenience of making fuel purchase transactions using the *MyPertamina* application. *MyPertamina* is a non-cash payment system that is used to get Pertamina goods and find out the nearest outlet from the consumer's location.

## **B. RESEARCH METHOD**

### **Types of Research**

Based on the types of problems discussed in this study, the researchers used a descriptive research pattern. Descriptive research is a research method that seeks to develop and interpret objects as they are. Good descriptive research actually has the same process and foundation as other qualitative research. Besides that, this research also requires careful action on each component in order to describe the subject under study.

### **Type of data The**

Data used in this research is primary data. Primary data is data collected by the researcher directly from the first informant or the object of the research. The primary data was obtained through a questionnaire/questionnaire. Questionnaire is a data collection technique that is carried out by giving a set of questions, in this study using a gooleform for respondents to answer.

### **Place and Time of Research**

The place that is used as the object of research is Gas Station 54.601.103 which is located at Jl. Rukun Dupak No. 108 Asemrowo, Asemrowo District, Surabaya City. A gas station that operates 24 hours and is PASTI PAS! from PT. Pertamina. The research time that will be used by researchers is January, February and March 2021.

### **Data Sources**

The data collected is using a questionnaire with the measurement scale used is the Likert Scale. The Likert scale is used to measure attitudes, opinions, and perceptions of a person or group of people about existing phenomena. The Likert scale is 4 choices from strongly agree to strongly disagree which is a person's perception of attitudes or events from the questions given in the form of a questionnaire.

This scale is used to measure responses or a person's responses about social objects which are obtained through answers in stages from the questions posed to the sample who are research respondents, in this case the Consumers of Gas Station 54,601,103 Asemrowo, Surabaya City.

### **Data Analysis**

In analyzing the research data, researchers used quantitative analysis techniques as follows:

#### **Validity**

Test Validity test is used to test whether the instrument can be used to measure what should be measured. The validity test was carried out to determine the instrument's ability to measure research variables. This test was carried out by submitting questionnaire questions which would later be given to 30 respondents.

1. If the sig. (2-tailed) < 0.361 and the Pearson Correlation is positive, then the questionnaire items are valid
2. If the sig. (2-tailed) < 0.361 and the Pearson Correlation is negative, then the questionnaire items are invalid
3. If the sig. (2-tailed) > 0.361, then the questionnaire item is invalid

#### **Reliability**

Test Reliability test is a tool for measuring a questionnaire which is an indicator of a variable or construct. A questionnaire is said to be reliable or reliable if one's answers to the questions are consistent or stable from time to time. The criteria for a research instrument are said to be reliable

by using this technique, if the reliability coefficient ( $r_{11}$ )  $> 0.7$ . The reliability test of the research instrument has a significant level ( $\alpha$ ) = 5%.

### **Normality**

Test The normality test aims to test whether in the regression model, confounding variables or residuals have a normal distribution, as is known the t test assumes that the residual value is used the *Kolmoorov-Smirnov* (KS) which is calculated using SPSS to find out whether the data is normally distributed or not. KS test is done by making a hypothesis;

H<sub>0</sub>: If the sig value  $> 0.05$ , the regression value is normally distributed

H<sub>a</sub>: if the sig value  $< 0.05$ , the regression value is normally distributed

### **Autocorrelation**

Test The autocorrelation test aims to test whether in the linear regression model there is a correlation between the confounding errors in period t and confounding error in period t-1 (before). If there is a correlation, then there is called an autocorrelation problem.

In this study to test the presence or absence of autocorrelation symptoms using the *Durbin-Watson* (DW test) as follows:

1. If d is less than dL or greater than (4-dL) then the null hypothesis is rejected, or there is autocorrelation.
2. If d lies between dU and (4-dU), then the null hypothesis is accepted, or there is no autocorrelation.
3. If d lies between dL and dU or between (4-dU) and (4-dL), then it does not produce a definite conclusion

### **Multicollinearity**

Test Multicollinearity test is used to test whether or not there is a correlation between independent (independent) variables. A good regression model should not have a correlation between the independent variables. If the independent variables are mutually correlated, then these variables are not orthogonal. Orthogonal variables are independent variables whose correlation values among independent variables are equal to zero. Detection to find out whether there are symptoms multicollinearity in the regression model of this research can be done by looking at the *Variance Inflation Factor* (VIF) value and the *Tolerance* as follows;

Decision capitalization based on Tolerance

1. If the Tolerance value is greater than 0.10, it means that there is no multicollinearity in the regression model
2. If the Tolerance value is less than 0.10, it means that there is multicollinearity in the regression model.

Decision guidelines based on the VIF value:

1. If the VIF value  $< 10.00$ , it means that there is no multicollinearity in the regression model
2. If the VIF value  $> 10.00$ , it means that there is multicollinearity in the regression model

### **Heteroscedasticity Test**

Heteroscedasticity is the residual variable in the homogeneous model. The Glejer test was used to detect the presence of heteroscedasticity symptoms. The Glejer test is carried out by regressing the absolute residual with the independent variable. A good regression model is one that meets the requirements of heteroscedasticity or does not have heteroscedasticity, as follows:

1. If the significance value (sig) is  $> 0.05$ , the conclusion is that there are no symptoms of heteroscedasticity in the regression model.
2. If the significance value (sig)  $< 0.05$ , the conclusion is that there are symptoms of heteroscedasticity in the regression model

### **Simple Regression Test Regression**

Analysis is basically a study of the dependence of the dependent (bound) variable with one or more independent (free) variables with the aim of estimating the average -population average or the average value of the dependent variable based on the known value of the independent variable. The results of the regression analysis are in the form of coefficients for each independent variable. The simple regression analysis in this study aims to determine the influence of the independent variable (consumer behavior) on the dependent variable (Use of

the *MyPertamina* Application).

The general form of the simple regression equation used in this study is  $Y = a + b_1.X_1 + e$

Description;

Y : Use of the *My Pertamina* application a : Constant

e : Error rate

x1 : Consumer behavior

b1 : Regression coefficient

b1 : Regression coefficient of the variable Consumer behavior

### **Hypothesis**

Testing The hypothesis test aims to find out whether there is a significant influence between the independent variables on the variables dependent.

The t test is used to test the effect of the independent variables partially on the dependent variable. This test is carried out by t test at a confidence level of 95% with the following conditions ;

By using a significant probability value.

1. If the significant level is  $> 0.05$ , it can be concluded that  $H_0$  is accepted, otherwise  $H_a$  is rejected.
2. If the significant level is  $< 0.05$ , it can be concluded that  $H_0$  is rejected, otherwise  $H_a$  is accepted.

By comparing t count with t table

1. If t count  $>$  t table then  $H_0$  is rejected, otherwise  $H_a$  is accepted.
2. If t count  $<$  t count then  $H_0$  is accepted, otherwise  $H_a$  is rejected.

The hypothesis if it has been proposed in the research is formulated as follows

$H_{a1} : b_1 > 0$ , meaning that there is a positive influence on consumer behavior on the use of the *MyPertamina* application.

## **B. RESEARCH RESULTS AND DISCUSSION**

### **Research Results The**

Data in this study came from primary data in the form of questionnaires submitted to consumers using the Google form at gas stations 54.601.103 Dupak Rukun No. 108 Asemrowo Surabaya City whose transactions use the *MyPertamina* application with the choice of Peralite and Pertamina products as many as 97 samples of respondents from the total population 3,016 obtained from the company's transaction data the Consumer Behavior variable from the level of answers of respondents who answered strongly agreed was 93.1%, agreed 6.9%, to disagree and strongly disagreed 0 %, it can be interpreted that Consumer Behavior is more dominant in agreeing to the use of the *MyPertamina* application.

Variable, *My* the level of answers of respondents who answered strongly agreed 92.1%, agreed 7.9%, disagreed and strongly disagreed 0%, it can be interpreted that the use of the *MyPertamina* application was very well received by consumers with various conveniences and the convenience.

### **Data**

#### **Analysis Descriptive Analysis**

This research is quantitative in nature where the resulting data will be in the form of numbers. From the data obtained, an analysis was carried out using *software* . This study aims to analyze the influence of consumer behavior on fuel purchases using the *MyPertamina* application. With objectives based on , data were collected with a questionnaire of 97 respondents who were the accuracy of these consumers buying fuel using the *MyPertamina* application. Questionnaires were distributed by filling out a Google form with a Likert scale of 1-4. This study used one independent variable, namely consumer behavior, and the dependent variable, namely fuel purchases using the *MyPertamina* application.

The distribution of the respondents in this study in terms of the gender of the respondents that of the 97 respondents, 60 respondents (61.9%) were male, while 37 respondents (38.1 %) others are female. Thus it can be concluded that the composition of respondents in this study was mostly dominated by men with a difference of 23 respondents (23.7%).

The distribution of respondents in this study when viewed from the type of vehicle of the 97

vehicle respondents, 48 respondents (49.5%) of them are four-wheeled vehicles, while 49 respondents (50.5%) are two-wheeled vehicles. Thus it can be concluded that, the composition of the respondents in this study was mostly dominated by two-wheeled vehicles with a margin of one (1.03%).

The distribution of respondents in this study when viewed from the type of product chosen that of the 97 respondents, 4 respondents (4.1%) of them prefer Peralite type BBM products, while 93 respondents (95.9%) prefer Pertamina type BBM products. Thus it can be concluded that the composition of respondents in this study was mostly dominated by Pertamina fuel with a difference of 89 (92%) greater than Peralite products.

### **Quantitative analysis**

#### **Normality**

Test Research normality test with statistical analysis of the *one-sample Kolmogorov Smirnov test* with a significance level of 0.05, if it is significant  $<0.05$  then the data is not normally distributed. The KS test results show that the value of KS is 0.857 and is significant at 0.454, so this shows that the residual data is normally distributed.

#### **Autocorrelation**

Test The autocorrelation test aims to test whether in the linear regression model there is a correlation between the confounding errors in the  $t$  period and the confounding errors in the  $t-1$  (previous) period. If there is a correlation, then there is called an autocorrelation problem. Durbin-Watson test ( $d$ ) of 1.916 is greater than the  $dU$  of 1.7116 and less from  $(4-dU)$   $4-1.7116 = 2.2884$ . So as the basis for decision making in the Durbin-Watson test above, it can be concluded that there are no problems or symptoms of autocorrelation.

#### **Multicollinearity test**

The multicollinearity Test aims to test whether the regression model found a correlation between independent variables. A good regression model should not have a correlation between the independent variables. To determine the presence of multicollinearity in the regression model, it can be seen from the Variance Inflation Factor (VIF) value.

It is known that the tolerance value is 947, and the VIF value is 1.056. It can be concluded that variable  $X$  has a tolerance value  $> 0.10$  and VIF value  $< 10$ , so that all variables are free from multicollinearity problems.

#### **Heteroscedasticity**

Test The heteroscedasticity test aims to test whether in the regression model there is an inequality of variance from the residuals of one observation to another. If the variance from the residual of one observation to another observation remains, then it is called homoscedasticity and if it is different it is called heteroscedasticity. A good regression model is one that has homoscedasticity or does not have heteroscedasticity. The value of the heteroscedasticity test results can be seen from the  $t$  sig. The Consumer Behavior variable is the variables above have a sig value greater than 0.05, so it can be said that the data does not have heteroscedasticity.

#### **Multiple regression test**

This analysis is used to determine the effect of consumer behavior on the use of the MyPertamina application. The results of data processing with the help of the SPSS version 28 program obtained the regression equation  $Y = a + b \cdot x + e$  or  $Y = 5.883 + 0.098X_1 + e$

1. The constant coefficient has a positive value of 5.883 assuming that the consumer behavior variable ( $x^1$ ) is fixed, then the use of the MyPertamina application ( $y$ ) is 5.883
2. The regression coefficient  $X^1$  has a positive value of 0.098 assuming that consumer behavior can increase the use of the MyPertamina application.

#### **Hypothesis**

Testing This test is carried out to prove the hypothesis based on existing research. This test includes the  $t$  test and the determinant coefficient.

##### 1. Test The $t$

Test is used to test the significance of the relationship between the independent variables (independent) to the dependent variables separately or individually can be concluded that the Consumer Behavior Variable in this study shows the value of  $t_{count}$  (2.137) is greater than  $t_{table}$  (0.1975) and a significant value of 0.035 or 3.5% is smaller than the significance level ( $\alpha$ ) which is 0.05 or 5%, it can be concluded that  $H_a$  is accepted and  $H_0$  is rejected, meaning that the

regression coefficient on the Behavioral Consumers have a partial influence on the use of the MyPertamina application.

## 2. The coefficient of determination

The coefficient of determination ( $R^2$ ) to measure the ability of the model to explain the dependent variation. The value of  $R^2$  is between 0 and 1. A small value of  $R^2$  means that the ability of the independent variable to explain the dependent variable is very limited. From the results of using SPSS 28, it can be explained that the R square value is 0.102 (10.2%) that the use of the application, MyPertamina (y) can be interpreted by the Consumer Behavior variable (x) while the rest is influenced by other variables of 89.8% which not discussed in this study. The effect of consumer behavior on the MyPertamina. The results of hypothesis testing show that there is a significant influence on the consumer behavior variable on the use of the MyPertamina application. Based on an average value of 3.73, it means that the level of influence of consumer behavior on the use of the MyPertamina application is very high. Based on the results of the t test, the tcount results of 2.137 are greater than ttables of 0.1975 and a significant value of 0.035 or 3.5% is smaller than the significance level ( $\alpha$ ) which is 0.05 or 5%, it can be concluded that consumer behavior from personal indicators which include age, life cycle stage and position, social which includes reference culture, role/status and family, culture which includes social and psychological culture and class which includes perceptions and beliefs that have a significant effect on the use of the MyPertamina application, the more indicators that can influence consumer behavior, the more often consumers make transactions to purchase fuel using the MyPertamina application. This research is in accordance with that conducted by Gilang Tri Pamungkas (2018) who stated in his research that consumer behavior has a significant effect on the decision to use *e-money*.

The use of the MyPertamina

The results of testing the hypothesis that there is a significant influence between the variables of consumer behavior and service quality simultaneously on the use of the MyPertamina application. use of the MyPertamina application shows an average value of 3.68, meaning that consumers tend to agree . Based on the results of the F test, it shows that thecalculated (6.455) is greater than the ftable (3.090) and the significant value is 0.002 or 0.2% less than the significance level ( $\alpha$ ) which is 0.05 or 5%, it can be concluded that the variables Consumer Behavior and Service Quality simultaneously influence the use of the MyPertamina application. This research is in accordance with research conducted by Artini (2019) who stated in his research that trust, convenience and security of electronic money have a significant effect on interest in using electronic money.

## D. CONCLUSION

Based on the results of research and discussion of data, the authors obtain conclusions that can be drawn from this study regarding "The Influence of Consumer Behavior on Fuel Purchases Using the MyPertamina Application at City Gas Stations" as follows:

1. Consumer Behavior Variable has a significant influence on use of the MyPertamina application at Surabaya city gas stations. That is, the more indicators that can influence consumer behavior, the greater the level of use of the MyPertamina application.
2. The results of this study indicate that 10.2% of the dependent variable using the MyPertamina application can be influenced by independent variables, namely Consumer Behavior and Service Quality, while the remaining 89.8% is influenced by other variables not explained in this study.

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