

# Multiple Linear Regression Model to Measure the Influence of Gold Price Fluctuations and Promotions on Customer Interest in Gold Installment Products

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## Article Info

## ABSTRACT

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This study aims to determine the effect of gold price fluctuations and promotions on customer interest in using gold installment products at PT. Pegadaian UPS Johan Pahlawan. The population in this study were customers of PT Pegadaian UPS Johan Pahlawan. The sample in this study amounted to 61 respondents. The technique used in this test is Multiple Linear Regression Analysis. The model used in this research is descriptive quantitative. data analysis was carried out using the help of SPSS version 25. With a sig value of  $0.000 < 0.05$ , the F value is  $25.766 > F$  table 3.16. So gold price fluctuations and promotions, simultaneously, have a positive and significant influence on customer interest. in the first regression equation obtained the R square value of 0.470 or 47.0%. So it can be concluded that at PT Pegadaian UPS Johan Pahlawan, gold price fluctuations and promotions simultaneously have a positive effect on customer interest in using gold installment products.

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## I. Introduction

PT. Pegadaian Syariah is a gold bullion ownership financing service in installments. Gold installments can be an alternative safe investment option to realize future needs such as education funds, retirement, pilgrimage and others. Islamic pawnshops are also non-bank financial institutions, in carrying out their operations adhering to sharia principles.

Nowadays, people are faced with various needs. So it is necessary to have excess funds so that they can be used in the future. Investing in precious metals is the right choice, because precious metals are liquid, not easily faded and also damaged. Gold is not easily affected by inflation. The price of gold is volatile, and will continue to rise, but even when it falls, the value will not be too significant.

However, some people prefer to buy gold in the market rather than in pawnshops, because according to them gold in pawnshops is more expensive than the purchase price in the market. Why is the price of gold in the pawnshop more expensive than the gold seller in the market? It must first be clarified what gold is meant, gold jewelry or gold bars (precious metals), if gold jewelry, of course different places are different prices, different gold content, different shapes, the price must be different. But if LM gold anywhere the price remains the same, whether in a pawnshop or in a gold shop the price remains the same, as long as the gold is officially certified LM Antam.

Fluctuation is a special price change caused by market mechanisms whose changes are in the form of an increase or decrease in the value of the price itself which can be depicted graphically. Some of the factors that cause price fluctuations include high public consumption, demand and supply in the market, policies set by the government and economic conditions.

in Pegadaian UPS Johan Pahlawan experiencing high fluctuations in gold prices, thus reducing customer interest in investing. Price fluctuations that are too high cause many complaints made by



customers regarding these prices. one of them is due to limited customer capital, some customers are not sufficiently able to invest at high prices.

Promotion is a medium used by pawnshops to provide information and introduce the products offered in order to make people have the desire to use pawnshop products. Good promotional activities can retain customers and expand the image of pawnshops from the customer's perspective. As an example of the first promotion in disseminating product information, namely by disseminating through the media, websites, exhibitions and brochures.

In the promotion system, PT Pegadaian Syariah Johan Pahlawan is still lacking in promoting the products. Because the Pawnshop only uses promotions through brochures. Therefore, the Pawnshop must improve a more mature promotional strategy in an effort to attract the attention of potential new customers.

Interest is a desire that arises from oneself without coercion from others to achieve a certain goal. Customer interest in an Islamic financial service which is the result of instructions from within the customer to make elections for Islamic financial services, planning, taking relevant actions such as choosing, making decisions to choose services, to proposing and finally recommending to the closest people.

Customer interest in Islamic financial services can be said to be the tendency to consume pawnshop service products, or in other words, customers will take action for service consumption as measured by the level of probability of customers making transactions. With less effective or less efficient promotion causing customer interest to decline, coupled with fluctuations in the price of gold which tend to be unstable will affect customer interest, so that when prices are high customers are reluctant to buy these gold products.

The objectives of this study are: 1. To find out whether gold price fluctuations affect customer interest. 2. To find out whether promotion affects customer interest. 3. To find out whether gold price fluctuations and promotions affect customer interest.

## II. Literature Review and Hypothesis Development

### A. Gold Price Fluctuations

In terms of gold price fluctuations are the ups and downs of the price of an item that can be represented in a graph. Fluctuations can also be interpreted as price changes that occur because they are influenced by various factors such as the world political situation, changes in exchange rates, market demand and supply, interest rates and the global economic situation [1].

Price is the amount of money charged for a product or service. This means that the price is the amount of value that the buyer must pay to own or benefit from the product or service. the price reflects the economic value set by the seller and influences consumer purchasing decisions [2].

While gold is an investment instrument that has proven to be safe against inflation from the past until now, the continuous increase in the price of gold shows that investing in gold consistently over time will be very profitable [3].

### B. Promotion

Promotion is an important part of the marketing mix used by companies to promote their products and services to customers either through direct or indirect means [4].

### C. Customer Interest

Interest is something that illustrates that the interest that arises at the time of purchase can be a strong motivation for consumers. When consumers note their interest, this can encourage them to take actions that meet their needs, as well as realize what they wanted before [5].

Interest is a condition that arises when someone sees the characteristics or meaning of a situation related to their personal wants or needs [6].

## III. Research Methods

This research is descriptive analysis, which is a type of research that aims to describe and analyze current problems or phenomena using existing data. Quantitative research is a method based on the philosophy of positivism, used to research on certain populations and samples, sampling techniques

are generally carried out randomly, data collection using research instruments, data analysis is quantitative / statistical with the aim of testing predetermined hypotheses [7].

#### A. Data Collection Technique

The data collection technique used in this research is the distribution of questionnaires using a Likert scale. The questionnaire is a formulation of questions that will be answered by respondents. Questionnaire is a data collection technique that is done by giving a set of questions to respondents to answer them [7].

#### B. Population and Sample

- Population is the entire research subject. If the researcher wants to examine all the elements in the research area, his research is population research. Objects in the population are studied, the results are analyzed, concluded and the conclusions apply to the entire population [8]. The population in this study were customers at PT Pegadaian UPS Johan Pahlawan, totaling 61 people in 2021-2023.
- The sample is part of the number and characteristics possessed by the population [8]. If the subject is less than 100, then the entire population becomes the research sample. But if the subject is more than 100 then 10-15% or 15-25% can be taken [8]. In this study, the sampling method was carried out using saturated sampling, namely taking the entire existing population to serve as a research sample. This technique was chosen because the population was relatively small and easy to reach, namely 61 customers at PT. Pegadaian UPS Johan Pahlawan.

#### C. Metode Analisis Data

The analysis used in this study is multiple linear regression analysis. Multiple linear regression analysis is used to analyze the effect between independent variables (gold price fluctuations and promotions) on the dependent variable, namely customer interest.

$$y = a + b_1X_1 + b_2X_2 + e$$

The mathematical formula of multiple linear regression used in this study is:

Description:

- a = Constant
- Y = Customer Interest
- b1 = Regression Coefficient
- X1, X2 = Gold Price Fluctuations and Promotion
- e = error

#### D. Operational Variables

In this section mention the variables used, arrange them like the example below:

1. Dependent Variable: Customer Interest
2. Independent Variable: Gold Price Fluctuations and Promotion

## IV. Results and Discussion

#### A. Respondent Characteristics

This research is about the effect of gold price fluctuations and promotions on customer interest in using gold installment products at PT Pegadaian Ups Johan Pahlawan. The characteristics of the sample in this study were grouped according to gender, age, education and occupation.

Tabel 1. Gender

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Male	11	18.0	18.0	18.0
Female	50	82.0	82.0	100.0
Total	61	100.0	100.0	

Source Data Output SPSS Version 25

Based on Table 1. it can be seen that of the 61 respondents, 11 respondents or 18.0% were male, while those who were female totaled 50 respondents or 82.0%. It can be concluded that the most customers at PT Pegadaian UPS Johan Pahlawan are women.

Table 2. Age

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid <20	3	4.9	4.9	4.9
20-30	45	73.8	73.8	78.7
31-40	6	9.8	9.8	88.5
>40	7	11.5	11.5	100.0
Total	61	100.0	100.0	

Based on table 2, it can be seen that of the 61 respondents. as many as 3 customers or 4.9% aged <20 years, as many as 45 customers or 73.8% aged 20-30 years, as many as 6 customers or 9.8% aged 31-40 years, and as many as 7 customers or 11.5% aged > 40 years. So it can be concluded that most customers at PT Pegadaian UPS johan hero are around 20-30 years old to > 40 years old.

Table 3. Education

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Junior High School / Equivalent	2	3.3	3.3	3.3
High school/equivalent	27	44.3	44.3	47.5
Diploma/equivalent	20	32.8	32.8	80.3
Other	12	19.7	19.7	100.0
Total	61	100.0	100.0	

Based on table 3 above, it shows that the education of customers of PT Pegadaian Ups Johan Pahlawan is the junior high school level / equivalent of 2 respondents or 3.3%, then the high school level / equivalent of 27 respondents or 44.3%, while the diploma / equivalent is 20 respondents or 32.8%, and the other level is 12 respondents or 19.7%. From the results above, it can be concluded that most of the customers of PT.Pegadaian ups Johan Pahlawan have a high school education / equivalent as many as 27 respondents.

Table 4. Occupation

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid PNS	8	13.1	13.1	13.1
Self-employed	11	18.0	18.0	31.1
Student	17	27.9	27.9	59.0
Other	25	41.0	41.0	100.0
Total	61	100.0	100.0	

Based on Table 4 above, it shows that the employment level of PT customers. Pegadaian ups johan hero is 8 or 13.1% as civil servants, 11 or 18.0% as self-employed, 17 or 27.9% as students / students, and 25 or 41.0% other jobs. From these results, most of the customers of PT. Pegadaian UPS johan Pahlawan who do other jobs are 25 or 41.0% of customers.

### B. Validity Test

The validity test is used to measure whether a questionnaire is valid or not. The questionnaire is declared valid if  $r_{count} > r_{table}$ .

Table 5. Variable Gold Price Fluctuations (X1)

Variables	Item	r table	r Count	Description
Fluctuations Gold Price	X1-1	0, 2521	0,407	Valid
	X1-2	0, 2521	0,595	Valid
	X1-3	0, 2521	0,676	Valid
	X1-4	0, 2521	0,678	Valid
	X1-5	0, 2521	0,430	Valid
	X1-6	0, 2521	0,641	Valid
	X1-7	0, 2521	0,703	Valid
	X1-8	0, 2521	0,572	Valid

Based on the results of the calculation of the validity test of the first variable in the form of gold price fluctuations (X1), it is declared valid because the results of  $r_{count} > r_{table}$  ( $r_{table}$ , 0.2521 with  $df = 61-2$  obtained from the formula  $df = N-2$ ). therefore, in the X1 data research questionnaire as many as 8 statements are valid.

Table 6. Promotion (X2)

Variables	Item	r table	r Count	Description
Promotion	X1-1	0, 2521	0,650	Valid
	X1-2	0, 2521	0,758	Valid
	X1-3	0, 2521	0,736	Valid
	X1-4	0, 2521	0,834	Valid
	X1-5	0, 2521	0,788	Valid
	X1-6	0, 2521	0,755	Valid
	X1-7	0, 2521	0,812	Valid
	X1-8	0, 2521	0,776	Valid

Based on the results of the calculation of the validity test of the second variable in the form of promotion (X2), it is declared valid because the results of  $r_{count} > r_{table}$  ( $r_{table}$ , 0.2521 with  $df = 61-2$  obtained from the formula  $df = N-2$ ). Therefore in the X2 data research questionnaire as many as 8 statements are valid.

Table 7. Customer Interest (Y)

Variables	Item	r table	r count	Description
Customer Interest	Y-1	0, 2521	0,814	Valid
	Y-2	0, 2521	0,844	Valid
	Y-3	0, 2521	0,770	Valid
	Y-4	0, 2521	0,760	Valid
	Y-5	0, 2521	0,762	Valid
	Y-6	0, 2521	0,752	Valid
	Y-7	0, 2521	0,777	Valid
	Y-8	0, 2521	0,808	Valid

Based on the results of the calculation of the validity test of the third variable in the form of Customer Interest (Y), it is declared valid because the results of  $r_{count} > r_{table}$  ( $r_{table}$ , 0.2521 with  $df = 61-2$  obtained from the formula  $df = N-2$ ). Therefore it can be concluded that all data from respondents' statements in the Y data research questionnaire as many as 8 statements are valid.

### C. Reliability Test

In addition to the validity test, this study also tested the reliability of the data. The purpose of the reliability test is to see if the data is realizable to proceed to the next calculation. The results obtained are as follows.

Table 8. Reliability Test

Variables	Cronbach's Alpha	Description
Fluctuations Gold Price	0,793	Reliable
Promotion	0,675	Reliable
Customer Interest	0,694	Reliable

Based on the table data above, the three research variables are reliable. This is because each variable has a Cronbach alpha value greater than 0.05.

From the results in the table above, it can be seen that the reliability value of the gold price fluctuation variable is 0.793, the reliability value of the promotion is 0.675, and the reliability value of customer interest is 0.694. So this data can be used as a measuring tool for further research.

From the analysis that has been made, it can be concluded that in general the questionnaire that has been made has met the rules and assumptions of valid and reliable, meaning that the statements in the reliability test column are appropriate for use in examining the effect of gold price fluctuations and promotions on customer interest in PT. Pegadaian ups Johan hero.

### D. Normality Test

The normality test is conducted with the aim of seeing whether the data population is normally distributed or not. Data that has been regressed will be said to be good if it is normally distributed. To test whether the data is normal or not, the researcher uses Kolmogorov Smirnov Analysis.

Table 9. Normality Test Results

One-Sample Kolmogorov-Smirnov Test		
Unstandardized Residual		
N		61
Normal Parameters <sup>a,b</sup>	Mean	.0000000
	Std. Deviation	3.83222724
Most Extreme Differences	Absolute	.089
	Positive	.089
	Negative	-.061
Test Statistic		.089
Asymp. Sig. (2-tailed)		.200 <sup>c,d</sup>

Based on the results of the normality test, the significance value is  $0.200 > 0.05$ , so it can be concluded that the residual value is normally distributed.

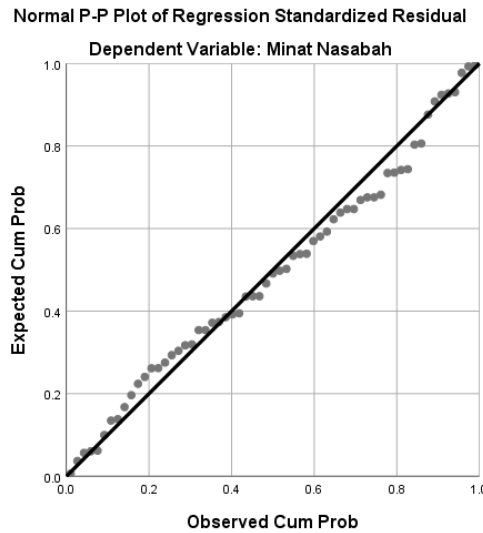


Fig. 1. SPSS version 25 output, data processed 2024

Based on the results of the normality test using the graph in the image above, it shows that the points are not far from or close to the diagonal line and the points follow the diagonal line. This shows that the data tested is normally distributed [15].

*E. Multicollinearity Test*

The multicollinearity test aims to test whether there is a relationship between independent variables or not. If there is a correlation, then there is an error in the multicollinearity test. The problem of variance inflation factor (VIF) can be seen through the tolerance value and the value (VIF) Opposite each other. If the tolerance value > 0.1 and VIF < 10 means that there is no multicollinearity problem, while if the tolerance value < 0.1 and VIF > 10 means that there is a multicollinearity problem. The results of the multicollinearity test are as follows.

Table 10. Multicollinearity Test Results

Model	Unstandardized Coefficients		Coefficients <sup>a</sup>			Collinearity Statistics	
	B	Std. Error	Standardized Coefficients Beta	t	Sig.	Tolerance	VIF
(Constant)	6.293	4.193			1.501	.139	
Fluctuations Gold Price	.303	.149	.234	.234	2.037	.046	.692 1.444
Promotion	.510	.111	.528	.528	4.599	.000	.692 1.444

a. Dependent Variable: Customer Interest

Based on Table 10, it can be seen in the tolerance table that each variable has a tolerance value > 0.1, namely 0.692 (gold price fluctuation), 0.692 (promotion). and VIF value < 10, namely 1.444 (gold price fluctuation) and 1.444 (promotion). Based on the tolerance and VIF values above, it can be concluded that the two variables do not experience multicollinearity symptoms.

*F. Uji Heteroskedastisitas*

The purpose of conducting a Heteroscedasticity test is to test whether in the regression model there is inequality of variance from the residuals of one observation to another. One way to detect the presence or absence of Heteroscedasticity can be done by looking at the scatterplot graph.

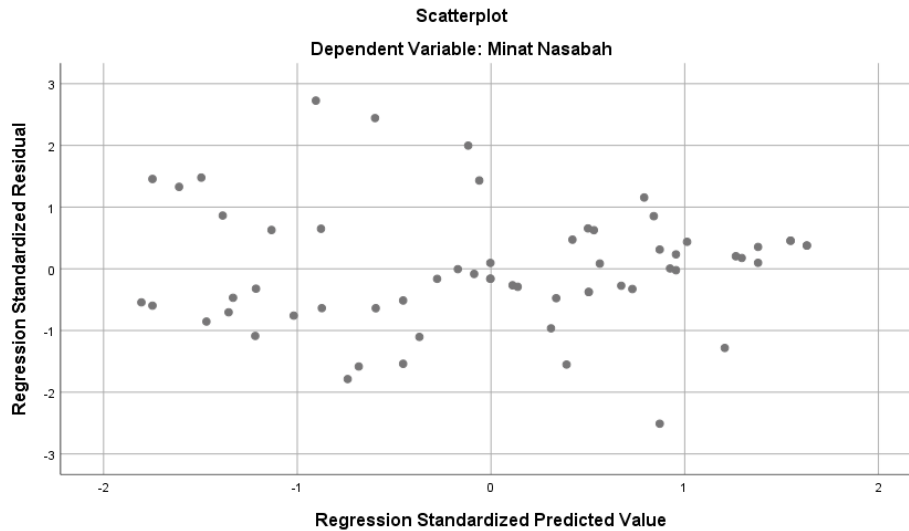


Fig. 2. Heteroscedasticity Test Results

From the data processing above, it can be obtained that the scatterplot output above shows that the points in the image above do not form a certain pattern, in other words, the graph depicts a scattered plot. Thus, it can be concluded that there is no worrying Heteroscedasticity of the variables used in this study.

G. Partial Test (t-Test)

Used to see the level of significance between independent variables and dependent variables individually. By looking at the t and sig values. if the t count value > t table and sig < 0.05 then it is said that the independent variable has a significant effect on the dependent variable individually, while if the t count value < t table and sig > 0.05, then it is said that the independent variable does not significantly affect the dependent variable individually. The results of the T test obtained are as follows:

Table 11. T-Test Results

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
	B	Std. Error			
1 (Constant)	6.293	4.193		1.501	.139
Fluctuations Gold Price	.303	.149	.234	2.037	.046
Promotion	.510	.111	.528	4.599	.000

a. Dependent Variable: Customer Interest

Based on the explanation in Table 11, the results of the T test on each variable can be seen as follows:

- a. the t-test value for gold price fluctuations is 2.037 with a significance of 0.046. The t-table value at a significance level of 0.05.t-table is 0.2521 and the t-test value = 2.037 therefore t-test> t-table, namely 2.037> 0.2521. It can be concluded that Ha1 is accepted and H01 is rejected, so that the coefficient of gold price fluctuations partially has a significant positive effect on customer interest.
- b. the t-test value for promotions is 4.599 with a significance of 0.000. The t-table value at a significance level of 0.05.t-table is 0.2521 and the t-test value = 4.599 therefore t-test> t-table, namely 4.599> 0.2521. So it can be concluded that Ha1 is accepted and H01 is rejected, so that the promotion coefficient partially has a significant positive effect on customer interest.

#### H. Simultaneous Test (F Test)

The F test is conducted to see how far the relationship between the independent variables and the dependent variable simultaneously. By looking at the F value and sig. if the f count value  $>$  f table and sig  $<$  0.05, then  $H_a$  is accepted, so it can be concluded that the independent variables affect the dependent variable simultaneously. The following are the results of the F test obtained as follows:

Table 12. F Test Results

Model	ANOVA <sup>a</sup>				
	Sum of Squares	df	Mean Square	F	Sig.
1					
Regression	782.908	2	391.454	25.766	.000 <sup>b</sup>
Residual	881.158	58	15.192		
Total	1664.066	60			

a. Dependent Variable: Customer Interest

b. Predictors: (Constant), Promotion, Gold Price Fluctuation

Based on the results of the F test in table 12, it shows that the F count value in the table is 25.766 and sig 0.000. The  $f_t$  table value at a significance level of 0.05 is 3.16. Therefore, the f count value = 25.766  $>$   $f_t$  table = 3.16 and sig = 0.000  $<$  0.05, so there is a significant positive effect simultaneously.

It can be concluded that there is a significant positive effect of the gold price fluctuation variable (X1) and promotion (X2) simultaneously on customer interest in PT. Pegadaian UPS Johan Pahlawan.

#### I. Coefficient of Determination (R<sup>2</sup>)

to see the extent of the relationship between the independent variable and the dependent variable by looking at the R square value. The results of the determination coefficient test in this study are as follows:

Table 13. F Test Results

Model	Model Summary <sup>b</sup>			
	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.686 <sup>a</sup>	.470	.452	3.898

a. Predictors: (Constant), Promotion, Gold Price Fluctuation

b. Dependent Variable: Customer Interest

Based on Table 13, it shows that the R Square value is 0.470, which means that the gold price fluctuation variables (X1) and promotions (X2) can simultaneously explain the relationship with the customer interest variable (Y) by 47.0%, while the remaining 53% is influenced by other factors not studied by the author.

## V. Conclusion

Based on the research results, it can be concluded that the results of this study are as follows: Gold Price Fluctuations have a Positive Significance effect on customer interest at PT Pegadaian ups johan Pahlawan. This is evidenced by the acquisition of a t-count value of 2.037 which is greater than the t-table, which is 0.2521. And a significance value of 0.046.

Promotion has a positive effect on customer interest at PT Pegadaian ups johan Pahlawan. This is evidenced by the acquisition of a t-count value of 4.599 which is greater than the t-table, which is 0.2521. And a significance value of 0.000.

Gold Price Fluctuations and Promotions simultaneously have a significant positive effect on customer interest at PT. Pegadaian ups johan Pahlawan. This is indicated by the acquisition of an F-count of 25.766 which is greater than the F-table, which is 3.16 and a significance of 0.000.

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