



## *Analysis of Monetary Instability Factors Against Indonesia's Automotive Industry*

**Herry Wira Wibawa**

Universitas Borobudur, Jakarta

[hwibawa@gmail.com](mailto:hwibawa@gmail.com)

**Hendry Muhammad Ali**

Universitas Borobudur, Jakarta

[hendryali.hayati@gmail.com](mailto:hendryali.hayati@gmail.com)

**Rizal Riyadi**

Institut Bisnis dan Informatika Kesatuan

[rizalriyadi@ibik.ac.id](mailto:rizalriyadi@ibik.ac.id)

---

### Abstract

*Economic growth is thought to be a leading predictor of economic change. This study intends to investigate and analyze the causes of financial instability in Indonesia's automobile sector. Causal relationships are used in this research method. Secondary data on interest rates, the gross domestic product (GDP), the exchange rate for the rupiah, inflation, and the automobile industry are used. Analysis methods include multiple linear regression and a residual approach. The study's findings showed a R square of 92.931%, indicating that the magnitude of the simultaneous influence of interest rates, the gross domestic product, the rupiah exchange rate, and inflation on the automotive industry is very significant up to 92.931%, with the influence of other factors other than those included in the research variables accounting for the remaining 7.069%. The GDP, Rupiah exchange rate, and partial interest rates are important and helpful for the automotive sector. Despite the fact that the inflation rate is not large or favorable for the automotive industry, this is due to the fact that at the moment, vehicles are the primary requirement, thus an increase in inflation is not a major barrier; The annual increase in car prices in Indonesia is quite minor, and both banking institutions and non-banking financial institutions offer a variety of finance options; In general, Indonesia's inflation rate is rising at a relatively modest rate (below double digits).*

**Keywords:** *interest rates, GDP, rupiah exchange rate, inflation, automotive industry*

---

### INTRODUCTION

The country's automotive industry is still at risk from the Covid-19 epidemic, but the Ministry of Industry (Kemenperin) is making strategic steps to reduce that risk. In order to maintain performance and continue making a significant contribution to the national economy, connected parties have been coordinated with. In more detail, the Minister of Finance's Regulation No. 23 of 2020 lays the groundwork for accelerating incentives and VAT refunds for a period of six months, as well as reducing import taxes. On OJK Regulation No.11 of 2020 Concerning National Economic Stimulus as a Countercyclical Impact Policy (Covid-19), the monetary stimulus is founded.

The automobile industry has very high capital requirements, both in terms of financial resources and technological capital, which makes investors particularly concerned about the level of risk associated with their investments. Risks include licensing red tape, high bank interest rates, the value of the rupiah, low-quality human resources, inadequate infrastructure, and a number of other factors.

"The impact of Covid-19 epidemic on MSMEs," Saturwa et al. (2021), Journal of Economics and Commerce, Volume 24 No. 1, April 2021, 65–82. The early 2020 Covid-19 pandemic had a significant impact on a number of economic factors, including a company's financial situation. Small businesses and MSMEs in this situation have the ability to have a greater impact on the economy, but huge corporations have a less impact because they have more resources.

The article by Khasanah (2018), titled "The Impacts of Inflation Risk, Interest Rate Risk, Foreign Currency Rate Risk, and Leverage on Stock Return," appeared in the Journal of Business Administration (JAB), ISSN 1411-0393, Vol. 57 No. 1, April 2018, at Universitas Brawijaya in East Java (Study on the Automotive and Component Sub-Sector Manufacturing Industry Listed on the Indonesia Stock Exchange for the 2006-2016 Period). The variables employed in this analysis are stock prices, interest rates, leverage, inflation, and foreign exchange rates. Multiple linear regression analysis is the technique used.

The article by Andes et al. (2017), titled "The Impact of Inflation, Rupiah Exchange Rate, and Interest Rate on Stock Return of Manufacturing Firms," appeared in Journal of Financial and Business Accounting Vol. 10, No. 2, November 2017, 8–16. Investors that experience capital gains, or a difference in selling price that exceeds the share's purchasing price, are one source of stock returns. According to the analysis's findings, only the exchange rate of the rupiah has an impact on stock returns.

The article "The Effect of Exchange Rates and World Crude Oil Prices on PT. Indomobil Sukses International Tbk and PT. Astra International Tbk in 2006-2016" by Fadlilah and Hermuningsih was published in Dewantara Management Journal Vol. 1. No. 2, 2017, e-ISSN 2579-4612, Universitas Sarjana Wiyata Tamansiswa, Jogjakarta. Global Crude Oil Price, Exchange Rate, and Stock Return are the variables used in this study. The method of multiple linear regression analysis is the one employed as an analytical tool.

Paizal (2017) published an article titled "The Impact of Macroeconomic and Micro Companies on Share Prices of Automotive Sub-Sector Firms Listed on the Indonesia Stock Exchange for the 2012-2015 Period" in Student Online Journal of Management, Vol. 1 No. 1, 2017, 2407-8565. Macroeconomic factors (such as inflation and exchange rates) and small businesses are used in this study (Return on Equity, Debt to Equity Ratio, Earning Per Share). The multiple linear regression analysis approach was the analysis technique used in this research.

The community's high income has an impact on how much more people save. In this manner, third-party funds are positively impacted by national revenue (savings). Keynes postulated that the marginal consumption tendency is the amount consumed for every additional dollar between 0 and 1 in Gregory (2006; Gregory). This means that when people have extra funds, they typically save some before spending it. As is well known, banks perform intermediation duties (receiving deposits from the public, which are then distributed to other parties who need funds). People will store money in the Bank as public deposits rise, which will eventually serve as a source of finance for the banking industry. The substantial amount of public deposits in banks serves as a source of funding for the banks, which subsequently distributes cash to businesses or other parties in need of loans for investment.

Investment is another way that interest rates act. Customers who desire to invest less as a result of rising interest rates. Due to the fact that an investor will expand his investment if the profit is more than the interest rate on investment funds, or the cost of using funds, an entrepreneur will do so (cost of capital). Entrepreneurs are more inclined to invest when interest rates are low since using money is less expensive.

## METHOD

This study employed causality, often known as causality research. Secondary data on interest rates, the gross domestic product (GDP), the exchange rate for the rupiah, inflation, and the automobile industry are used. Analysis methods include multiple linear regression and a residual approach.

RESULTS AND DISCUSSION

Result

According to the foregoing introduction, the study topic can be summed up as follows:

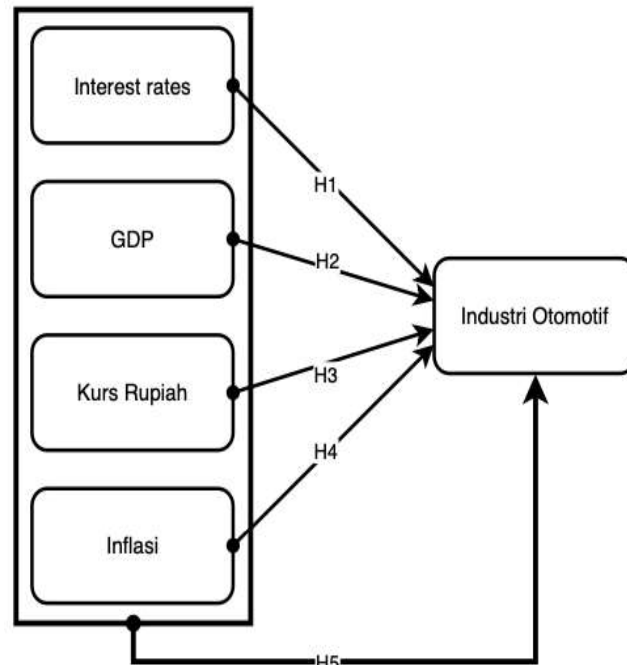


Figure-1. Frame of Thinking

Impacts of GDP, inflation, interest rates, and the Rupiah exchange rate all at Once on the Automobile Industry A significance test is first performed before the formula is created and used for analysis.

Tests of significance are run to see whether it concurrently affects the independent and dependent variables. It can be applied to analysis if it appears to have a large impact. The test is run based on the data processing output results shown in table 1 below:

Tabel 1. Testing the significance of structural equations without using logs

Dependent Variable: Automotive Industry

Method: Least Squares

Date: 10/11/21 Time: 23:01

Sample: 2009Q1 2020Q4

Included observations: 48

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-5133017.	1692128.	-3.033468	0.0041
Interest rates	62924.67	27811.12	2.226256	0.0313
GDP	1.536122	0.067204	22.73242	0.0000
Kurs Rupiah	758238.6	172992.0	4.383086	0.0001
Inflation	71451.91	63980.93	1.116769	0.2703
R-squared	0.954501	Mean dependent var		3736336.
Adjusted R-squared	0.950269	S.D. dependent var		1080547.
S.E. of regression	240967.6	Akaike info criterion		27.72105
Sum squared resid	2.50E+12	Schwarz criterion		27.91596
Log likelihood	-660.3051	Hannan-Quinn criter.		27.79470
F-statistic	225.5194	Durbin-Watson stat		0.188988
Prob(F-statistic)	0.000000			

Source: Data Processed, 2021

LITERATUS is a journal published by Neolectura, issued two times in one year. Literatus is a scientific publication media in the form of conceptual paper and field research related to social impact and cultural studies. It is hoped that LITERATUS can become a media for academics and researchers to publish their scientific work and become a reference source for the development of science and knowledge.

Our focus:  
Social and Culture

Our Scope:  
Humanities, Education, Management, History, Economics, Linguistics, Literature, Religion, Politics, Sociology, Anthropology, and others.



Researchers use two calculation results to contrast the outcomes of equation computations made with and without logarithms. Table 2 below provides the results of the structural equation's calculation using the normal logarithm (Ln).

**Table 2. Testing The Significance Of Structural Equations With Normal Logarithms**

Dependent Variable: Ln (Automotive Industry)

Method: Least Squares

Date: 10/11/21 Time: 23:59

Sample: 2009Q1 2020Q4

Included observations: 48

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	11.65631	0.614459	18.93781	0.0000
Ln (Interest rates)	0.021325	0.010099	2.103585	0.0414
Ln (GDP)	4.03E-07	2.44E-08	16.54197	0.0000
Ln (Kurs Rupiah)	0.325458	0.062818	5.180945	0.0000
Ln (Inflation)	0.043603	0.023233	1.876736	0.0674
R-squared	0.929313	Mean dependent var		15.08782
Adjusted R-squared	0.922737	S.D. dependent var		0.314799
S.E. of regression	0.087502	Akaike info criterion		-1.935975
Sum squared resid	0.329235	Schwarz criterion		-1.741059
Log likelihood	51.46341	Hannan-Quinn criter.		-1.862316
F-statistic	141.3285	Durbin-Watson stat		0.162793
Prob(F-statistic)	0.000000			

Source: Data Processed, 2021

**Table 3. Test Results of the Effect of Interest rates, GDP, Rupiah Exchange Rate, and Inflation on the automotive industry**

Simultaneous Influence	R <sup>2</sup>	F <sub>count</sub>	p-Value	Standard Error of Reg
The Effect of Interest rates, GDP, Rupiah Exchange Rate, and Inflation on the automotive industry	0,929313	151,3385	0,000000	0,097402

Source: Data Processed, 2021

**Table 4. Test Results of the Effect of Interest rates on the Automotive Industry**

Partial Influence	$\beta_1$	t count	p-Value	Conclusion
The Effect of Interest rates on the Automotive Industry	0,021235	2,103585	0.0414	Reject H <sub>0</sub> , accept H <sub>1</sub> . There is a significant and positive influence of Interest rates on the automotive industry

Source: Data Processed, 2021

**Table 5. Test Results of the Effect of GDP on the Automotive Industry**

Partial Influence	$\beta_2$	t count	p-Value	Conclusion
the Effect of GDP on the Automotive Industry	4.03E-07	16,54197	0.0000	Reject H <sub>0</sub> , accept H <sub>1</sub> . There is a significant and positive influence of GDP on the automotive industry

Source: Data Processed, 2021

**Table 6. Test Results of the Effect of the Rupiah Exchange Rate on the Automotive Industry**

Partial Influence	B	t count	p-Value	Conclusion
the Effect of the Rupiah Exchange Rate on the Automotive Industry	0,325458	5,180945	0.0000	Reject H <sub>0</sub> , accept H <sub>1</sub> . There is a significant and positive influence of the Rupiah Exchange Rate on the automotive industry

Source: Data Processed, 2021

**Tabel 7. Test Results of the Effect of Inflation on the Automotive Industry**

Partial Influence	B	t count	p-Value	Conclusion
The Effect of Inflation on the Automotive Industry	0,043603	0,023233	0.0674	Reject H <sub>0</sub> , accept H <sub>1</sub> . There is a significant and positive influence of Inflation on the automotive industry

Source: Data Processed, 2021

**Tabel 8. Theory Conformity Test Results**

Relationship between variables	Pre-estimation	Post estimation	Conformity
Interest rates, GDP, Rupiah Exchange Rate, and Inflation simultaneously on the automotive industry	positive (+)	positive (+)	Appropriate
Interest rates, GDP, Rupiah Exchange Rate, and Inflation partially on the automotive industry:			
a. the effect of interest rates partially on the automotive industry	positive (+)	positive (+)	Appropriate
b. the effect of GDP partially on the automotive industry	positive (+)	positive (+)	Appropriate
c. the effect of Rupiah exchange rate partially on the automotive industry	positive (+)	positive (+)	Appropriate
d. the effect of inflation partially on the automotive industry	positive (+)	positive (+)	Appropriate

Source: Data Processed, 2021

**Tabel 9. Ability Test Results**

Explanatory Ability	Standard Error	Coefficient	½ Coefficient	Hasil Uji
Interest rates, GDP, Rupiah Exchange Rate, and Inflation simultaneously on the automotive industry	0.087502	141.3285	70.66425	SE < ½ Coefficient
Interest rates, GDP, Rupiah Exchange Rate, and Inflation partially on the automotive industry.				
1.the effect of interest rates partially on the automotive industry	0.010099	0.021325	0.010618	SE < ½ Coefficient
2.the effect of GDP partially on the automotive industry	2.44E-08	4.03E-07	2.02E-07	SE < ½ Coefficient
3.the effect of Rupiah exchange rate partially on the automotive industry	0.062818	0.325458	0.162729	SE < ½ Coefficient
4.the effect of inflation partially on the automotive industry	0.023233	0.043603	0.021802	SE > ½ Coefficient

Source: Data Processed, 2021

## Discussion

### 1. Inductive Analysis

Because table-2's test results yielded a rational R squared value of 0.929313, table-2 was chosen from tables-1 and 2. This is taken into account because there are other factors outside the scope of the study that also have an impact on the size of the automotive industry. The outcomes of multiple linear regression can be determined by using the computation results in Table 2 above:

Structural Equations:

$$\ln Y = f(X)$$

Simultaneous Equations:

$\ln(\text{Automotive Industry}) = f(\text{Interest rates; GDP; Rupiah Exchange Rate; Inflation})$

$\ln(\text{Automotive Industry}) = \beta_0 + \beta_1 \text{Interest rates} + \beta_2 \text{GDP} + \beta_3 \text{Rupiah Exchange Rate} + \beta_4 \text{Inflation} + C_i$

$\ln(\text{Automotive Industry}) = 11,65631 + 0,021235 * \text{Interest rates} + 4.03E-07 * \text{GDP} + 0,325458 * \text{Rupiah Exchange Rate} + 0,043603 * \text{Inflation} + C_i$

According to the equation above, each independent variable's precise contribution to the automotive industry can be deduced as follows:

LITERATUS is a journal published by Neolectura, issued two times in one year. Literatus is a scientific publication media in the form of conceptual paper and field research related to social impact and cultural studies. It is hoped that LITERATUS can become a media for academics and researchers to publish their scientific work and become a reference source for the development of science and knowledge.

**Our focus:**  
Social and Culture

**Our Scope:**  
Humanities, Education, Management, History, Economics, Linguistics, Literature, Religion, Politics, Sociology, Anthropology, and others.





- 1) Constant value  $\beta_0 = 11,63651$ . It indicates that, statistically, the Automobile Industry will grow by 11.65631 units provided all independent variables—Interest rates, GDP, Rupiah Exchange Rate, and Inflation—remain constant or fixed.
- 2) Constant value  $\beta_1 = 0,021235$ . As a result, interest rates are inflexible. This implies that, statistically speaking, the automotive industry grows by 0.021235 units if interest rates increase by one unit.
- 3) Constant value  $\beta_2 = 4.03E-07$ . Hence, GDP is inelastic, which indicates that, statistically, the Automobile Industry will expand by 4.03E-07 units if GDP increases by one unit.
- 4) Constant value  $\beta_3 = 0,325458$ . Since the Rupiah Exchange Rate is inelastic, the Automobile Industry will statistically increase by 0.325458 units if the Rupiah Exchange Rate increases by one unit.
- 5) Constant value  $\beta_4 = 0,043603$ . As inflation is inelastic, the automotive industry will grow by 0.043603 units statistically speaking if inflation rises by one unit.

The F Snecdecor test is used to examine the impact of interest rates, GDP, inflation, and the Rupiah exchange rate on the automotive industry. F-statistic or F count yields a result of 151.3385, and Prob (F-statistics) is 0.000000 at 5% significance, while the F value of the table with the number of  $n=48$  and the number of independent variables = 4 variables and the dependent variable = 1 variable, then  $df_1 = k-1 = 5-1 = 4$ , and  $df_2 = n-k = 48-5 = 43$ , using a significance of 5% obtained the result F table = 2.59. Thus F count is greater than F table (F count = 151.3385 > F table = 2.59). Mean  $H_0$  is rejected and  $H_1$ . Thus Structural Equations can be used to find out the causal relationship of variables and predictions.

#### a. Simultaneous Hypothesis Testing

Hypothesis testing was carried out to determine the effect of Interest Rates, GDP, Rupiah Exchange Rate, and Inflation on the Automotive Industry simultaneously, carried out through Regression Analysis with multiple Linear Regression equations with dependent variables and independent variables using Natural Log (Ln) which shows causal relationships between variables as follows:

The following conclusions are reached based on statistical calculations performed using the Eviews statistical program to examine the simultaneous effects of interest rates, the gross domestic product, the exchange rate of the rupiah, and inflation on the automotive industry (table-2):

The following can be used to evaluate the hypothesis based on its simultaneous formulation:

$H_0: \beta_1 = \beta_2 = \beta_3 = \beta_4 = 0$ : There is no concurrent significant effect of Interest rates, GDP, Rupiah Exchange Rate, and Inflation on the Automotive Industry.

$H_1: \beta_1 \neq \beta_2 \neq \beta_3 \neq \beta_4 \neq 0$ : There is a significant effect simultaneously from Interest rates, GDP, Rupiah Exchange Rate, and Inflation on the Automotive Industry.

Test criteria:  $H_0$  rejected and  $H_1$  accepted, if  $F_{count} > F_{table}$ , or Significant  $\leq P$  value 0,05.

To determine the effect together of Interest rates, GDP, Rupiah Exchange Rate, and Inflation on the Automotive Industry using Snecdecor's F test statistics. The result of F-statistic or F count is 151.3385 and Prob (F-statistics) is 0,000000 at 5% significance, while the F value of the table with the number of  $n = 48$  and the number of independent variables = 4 variables and the dependent variable = 1 variable, then  $df_1 = k-1 = 5-1 = 4$ , and  $df_2 = n-k = 48-5 = 43$ , using 5% significance obtained the result F table = 2.59.

In the table it is seen that  $F_{count} > F_{tabel}$  or  $151,3385 > F_{tabel} = 2,59$ .  $H_0$  rejected and  $H_1$  accepted. This indicates that the GDP, Rupiah exchange rate, interest rates, and inflation all have a major impact on the automotive industry.  $R^2 = 0.929313$  or 92.93 percent represents the simultaneous contribution of all independent variables to the automotive industry. This indicates that 92.93 percent of the factors influencing the automotive industry include interest rates, GDP, rupiah exchange rates, and inflation, while the remaining 7.07 percent is driven by factors outside than the research variables.

#### 1) Partial Hypothesis Testing

The Partial Effect of Interest Rates on the Automotive Industry

The partial effect of the variable Interest Rate (X1) on the Automotive Industry (Y)

needs to be tested statistically, so as to test it using statistical hypotheses:

$H_0 = \beta_1 = 0$ : Does not significantly affect Interest rates on the Automotive Industry

$H_1 = \beta_1 \neq 0$ : significant effect of Interest rates on the Automotive Industry

Test criteria:  $H_0$  rejected and  $H_1$  accepted, if  $t$  count  $>$   $t$  table or Significant  $\leq$  P value 0,05

Based on Table-4, the Interest Rate regression coefficient ( $\beta_1$ ) is marked positive. The results obtained from the calculation illustrate that the calculated  $t$  value is 2.103585 with significance ( $\alpha$ ) = 5%, degrees of freedom =  $n-k-1$  or  $48-5-1 = 42$ , and the test is carried out with two sides (2-tailed), obtained  $t$  table of 2.01808; so that  $t$  calculate the  $>$  of  $t$  table ( $2.103585 > 2.01808$ ); similarly P-values  $0.0414 < 0.05$ ; so that it can be concluded that  $H_0$  rejected which means  $H_1$  accepted, meaning that the variable Interest Rate has a significant and positive effect on the Automotive Industry.

## 2) The Partial Effect of GDP on the Automotive Industry

The following statistical hypotheses are then used, partially assessing GDP (X2) versus the automotive industry (Y):

$H_0 = \beta_2 = 0$ : Does not significantly affect GDP on the Automotive Industry

$H_1 = \beta_2 \neq 0$ : significant effect of GDP on the Automotive Industry

Test criteria:  $H_0$  rejected and  $H_1$  accepted, if  $t$  count  $>$   $t$  table, or Significant  $\leq$  P-value 0,05

Based on Table-5, the value of the regression coefficient of GDP ( $\beta_2$ ) is marked positive. The calculation shows the result of the calculated  $t$  value is 16.54197 and significance ( $\alpha$ ) = 5%, degrees of freedom =  $n-k-1$  or  $48-5-1 = 42$ , and the test is carried out with two sides (2-tailed), obtained  $t$  table of 2.01808; so that  $t$  calculate  $>$  of  $t$  table ( $16.54197 > 2.01808$ ); similarly P-values  $0.0000 < 0.05$ ; so it can be concluded that  $H_0$  rejected which means  $H_1$  accepted so that GDP has a very positive effect on the automotive industry.

## 3) Effect of Rupiah Exchange Rate on Automotive Industry

The following statistical tests are partially performed on the variable Rupiah Exchange Rate (X3) with the Automotive Industry (Y) using the following statistical hypotheses:

$H_0 = \beta_3 = 0$ : there is a significant influence of the Rupiah Exchange Rate on the Automotive Industry

$H_1 = \beta_3 \neq 0$ : Significant effect of Rupiah Exchange Rate on Automotive Industry

Test criteria:  $H_0$  rejected and  $H_1$  accepted, if  $t$  count  $>$   $t$  table, or Significant  $\leq$  P-value 0,05

Based on Table-6, the value of the Rupiah Exchange Rate regression coefficient ( $\beta_3$ ) is positive. This shows that the value of  $t$  count is 5.180945 with Significant ( $\alpha$ ) = 5%, degrees of freedom =  $n-k-1$  or  $48-5-1 = 42$ , and the test is carried out with two sides (2-tailed), obtained  $t$  table of 2.01808; so that  $t$  count  $>$  of  $t$  table ( $5.180945 > 2.01808$ ); similarly, P-values  $0.0000 < 0.05$ ; so it is concluded that  $H_0$  rejected which means  $H_1$  accepted.

## 4) The Effect of Partial Inflation on the Automotive Industry

The following statistical hypotheses should be used to assess inflation (X4) versus the automotive industry (Y):

$H_0 = \beta_4 = 0$ : No Significant Effect of Inflation on the Automotive Industry

$H_1 = \beta_4 \neq 0$ : Significant Effects of Inflation on the Automotive Industry

Test criteria:  $H_0$  rejected and  $H_1$  accepted, if  $t$  count  $>$   $t$  table, or Significant  $\leq$  P-value 0,05

Based on Table-7 the regression value of Inflation ( $\beta_4$ ) is positive. From the calculation results, it is known that the  $t$  count value is 0.023233 with Significant ( $\alpha$ ) = 5%, degree of freedom =  $n-k-1$  or  $48-5-1 = 42$  and the test was carried out with two sides (2-tailed), obtained  $t$  table of 2.01808; so that  $t$  count  $>$   $t$  table ( $0.023233 < 2.01808$ ); similarly P-values  $0.0674 < 0.05$ ; so that it can be

LITERATUS is a journal published by Neolectura, issued two times in one year. Literatus is a scientific publication media in the form of conceptual paper and field research related to social impact and cultural studies. It is hoped that LITERATUS can become a media for academics and researchers to publish their scientific work and become a reference source for the development of science and knowledge.

**Our focus:**  
Social and Culture

**Our Scope:**  
Humanities, Education, Management, History, Economics, Linguistics, Literature, Religion, Politics, Sociology, Anthropology, and others.



concluded that H0 accepted which means H1 rejected, means that the Inflation variable is not Significant and positive for the Automotive Industry.

## 2. Interpretation

The study's findings are connected to the core ideas of the theory.

a. The Effect of Interest rates, GDP, Inflation, Rupiah Exchange Rate Simultaneously on the Automotive Industry.

R square (R2) values for the findings were 92.931%. This indicates that while other factors account for 7.069% of the total influence on the automotive industry, the simultaneous impact of interest rates, rupiah exchange rates, the gross domestic product, and inflation is highly strong at 92.931%. This is reasonable given that the primary factor affecting the automotive industry is these variables.

Several factors, including GDP, interest rates, the exchange rate of the rupiah, and inflation, have an impact on the automotive industry. Of these factors, GDP, interest rates, and the rupiah exchange rate have a genuine and positive impact.

The research of the inflation variable in the automotive industry produced favorable but not statistically significant results because of the following factors:

- 1) The primary demand at the moment is for motor vehicles, particularly two-wheelers, so that the increase in inflation is not too big of a barrier.
- 2) Because brand holders have a very big production capacity for their automotive cars, the increase in vehicle prices in Indonesia each year is quite moderate..
- 3) The availability of various loan facilities offered by financial companies both inside and outside of banks
- 4) In general, Indonesia's inflation rate is rising at a relatively low rate. (inflation below double digits).

## 3. Feasibility test

The feasibility test showed that the research met the good econometrics or expected characteristics as referred to by Koutsoyiannis (1977) and Wirasmita Yuyun (2006) who showed the following test results:

a. Theoretical Plausibility

The result of this study is Appropriate testing with expectations, and using economic theory as the rationale.

b. Accuracy of the estimates of the parameter

The result of this study is an accurate regression estimator. Analysis assumptions can be met and the probability of statistical error from very or  $p\text{-value} < \alpha$

- 1) The simultaneous effect of GDP, Interest Rates, Inflation, and Rupiah Exchange Rate on the Automotive Industry. The results of this study suspect that the regression coefficient is accurate. The analysis assumption is fulfilled and the probability of statistical error is low so that the  $p\text{-value}$  results for all variables =  $0,0000 < \alpha = 0,05$
- 2) The Effect of Interest Rates, GDP, Inflation, and Rupiah Exchange Rate Partially on the Automotive Industry. The results of this study suspect an accurate regression coefficient. The probability of statistical error is very low: where the interest rate is  $p\text{-value} = 0.0000 < \alpha = 0.05$ , GDP  $p\text{-value} = 0.0414 < \alpha = 0.05$ , Rupiah exchange rate =  $0.0000 < \alpha = 0.05$ , Inflation  $p\text{-value} = 0,0674 > \alpha = 0,05$

a. *Explanatory ability.*

The relationship between many economic occurrences can be explained by this research. *Standard Error of estimate (SE), where Variance Error forecast =  $SE^2 < \text{mean squared regression}$* . As shown in the preceding table and the table below, the standard error of the regression coefficient is significantly less than  $\frac{1}{2}$  times the value of the regression coefficient.:

Table 12's ability test results indicate that only inflation, whose SE value surpasses  $\frac{1}{2}$  regression coefficient, applies to all SE variables with a smaller than  $\frac{1}{2}$  regression coefficient. When compared to the value of the regression coefficient of  $\frac{1}{2}$ , this value is not very different. This indicates that every variable can be used to explain how each variable being researched relates to the others.



b. *Forecasting ability*

Able to accurately predict the dependent variable designated with a high coefficient of determination ( $R^2$ ) exceeding 50% with details of interest rates, GDP, Rupiah exchange rates, and Inflation simultaneously in the Automotive Industry  $R^2 = 0.929313 = 92.931\% > 50\%$ , so that the predictive ability possessed is high against the dependent variable.

## CONCLUSION

According to the study's findings, investment is influenced simultaneously by significant, variable interest rates, the Rupiah exchange rate, the GDP, and inflation by 92.931 percent; the remaining 7.069 percent of investment is unaffected by other variables. In part, interest rates, GDP, and the Rupiah exchange rate are significant and beneficial for the automotive industry, while variable inflation is not significant and beneficial for the industry. This is because, at this point, vehicles have become the primary need, making an increase in inflation less of a barrier. Additionally, the increase in vehicle prices in Indonesia each year is also relatively small, and banking institutions are able to offer a variety of credit facilities. Indonesia's general rate of inflation is quite low in the banking sector.

Based on the conclusions above, there are advices taken. First, linked parties must evaluate regulatory measures to make them more favorable and comprehensive, speed up the economic recovery, and provide helpful encouragement for a variety of issues that are present in the automotive industry. Initiating cooperation with numerous parties, particularly financial, banking, and insurance institutions as well as supervisory institutions, is the second task that the government and businesspeople help with. Third, the government must promote and safeguard business certainty for investors in order to boost business competitiveness in the automotive industry. Fourth, enhancing the caliber of human resources through instruction, in-depth study, and open corporate governance. Fifth, significant infrastructure readiness is required to establish a Tripartite and build strategic concepts for a highly competitive automotive. Finally, the strategy pushes automakers to create locally to utilize less imported material and increase the competitiveness of domestic automobile products.

## BIBLIOGRAPHY

- Fadlilah, A., & Hermuningsih, S. (2017). Pengaruh Nilai Tukar And Harga Minyak Mentah Dunia Terhadap Return Saham PT Indomobil Sukses Internasional Tbk. And Pt. Astra Internasional Tbk. Tahun 2006-2016. *Manajemen Dewantara*, 1(2), 61–67. <https://doi.org/10.26460/md.v1i2.1680>
- Gregory, M. N. (2006). *Menduga bahwa kecenderungan konsumsi marjinal*. <https://cerdasco.com/kecenderungan-mengkonsumsi-marjinal/>
- Gregory, M. N. (2006). *Menyatakan bahwa tingkat tabungan adalah determinan penting dari persediaan modal pada kondisi mapan*. 1–9.
- Khasanah, Y. N. (2018). *Pengaruh risiko Inflation, risiko suku bunga, risiko kurs valuta asing and leverage terhadap return saham sektor otomotif and komponen yg terdaftar di BEI periode 2006-2016*. 57(1), 63–72.
- Koutsoyiannis, A. (1977). *Modern Microeconomics*. The Macmillan Press Ltd. <https://doi.org/10.1007/9781349160778>
- Manurung, M. (2008). Teori-Teori Konsumsi. *Jurnal Mimbar Bumi Bengawan*, 6(13), 26–58.
- Wirasmita Yuyun. (2006). Pengaruh Pengeluaran Agregat dalam Mendorong Pertumbuhan Produk Domestik Bruto and Implikasinya pada Kesejahteraan Sosial Oleh : Sharifuddin Husen (Sekolah Tinggi Ilmu Ekonomi Swadaya Jakarta). 216–246

LITERATUS is a journal published by Neolectura, issued two times in one year. Literatus is a scientific publication media in the form of conceptual paper and field research related to social impact and cultural studies. It is hoped that LITERATUS can become a media for academics and researchers to publish their scientific work and become a reference source for the development of science and knowledge.

**Our focus:**  
Social and Culture

**Our Scope:**  
Humanities, Education, Management, History, Economics, Linguistics, Literature, Religion, Politics, Sociology, Anthropology, and others.

