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# THE RELATIONSHIP BETWEEN INTEREST RATES AND INFLATION TOWARD THE ECONOMIC GROWTH IN MALAYSIA

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## Abstract

*This study analyses the relationship between interest rates and inflation toward the economic growth in Malaysia. Statistical Package for Social Sciences (SPSS) was used to assess the prospective relationships between the economic growth and the inflation rates and interest. The quarterly data employed for 10 year from 2004 until 2013. The findings showed there was a positive relationship between interest rate with economic growth besides, the negative relationship could be observed between the inflation rate with economic growth. From the regression result, it showed that the interest rate is a significant and have an impact on the economic growth in Malaysia.*

**Keywords**: Gross Domestic Product, Interest Rates, Inflation

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## Introduction

An interest rate is the rate at which interest is paid by borrowers (debtors) for the use of money that they borrow from lenders (creditors). Specifically, the interest rate is a percentage of principal paid a certain number of times per period for all periods during the total term of the loan or credit. Interest rates are normally expressed as a percentage of the principal for a period of one year, sometimes they are expressed in different periods such as a month or a day. Different interest rates exist parallelly for the same or comparable time periods, depending on the default probability of the borrower, the residual term, the payback currency, and many more determinants of a loan or credit. For example, a company borrows capital from a bank to buy new assets for its business, and in return, the lender receives rights on the new assets as collateral and interest at a predetermined interest rate for deferring the use of funds and instead lending it to the borrower. Monetary security alludes to an environment where organizations in a money related framework are solid and can keep on meeting their contractual commitments without interference or with no outer help.

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Inflation is the rate at which the general level of prices for goods and services is rising and, consequently, the purchasing power of currency is falling. Central banks attempt to limit inflation, and avoid deflation, in order to keep the economy running smoothly.
While the financial strength are alluding to an unlucky deficiency of unnecessary vacillations in the macroeconomic. An economy with genuinely consistent yield development and low and stable expansion will be considered monetarily stable. An economy with successive huge retreats, a proclaimed business cycle, high or variable swelling, or regular money related emergencies will be considered monetarily shaky.

An in number patterned and arrangement contrasts in the middle of cutting edge and developing economies, and a steady move in portfolio distribution toward developing markets, more often than not will be directed to capital streams into developing business sector economies. To maintain a strategic distance from these dangers from the quick resumption of capital inflows, which are huge in verifiable setting that has postured dangers to financial and money related steadiness, strategy creators need to utilize the fiscal approach as an apparatus.

The money related strategy in Malaysia will experienced a procedure of steady development and have included value solidness, guaranteeing a satisfactory stream of credit to different beneficial parts of the economy and accomplishing monetary steadiness. The arrangement position will based upon the appraisal of the financial and money related conditions and fiscal measures. An unmistakable comprehension of the fiscal approach will helps in guaranteeing a viable and effective execution of money related and monetary soundness.

Other than that, the policy arrangement will keep on mitigating so as to support the development of the Malaysian monetary any potential vulnerabilities emerging from swelling and budgetary uneven characters. The proceeds with low worldwide and residential interest rate environment will likewise make it vital to be careful to the development of money related irregular characteristics. While the upgrades in the developed economies will have positive overflow impacts on whatever is left of the world and give back to the rising economies, there remains instable. Value weights are required to be more grounded and there is a hazard that higher worldwide product costs and more grounded than-anticipated interest conditions could put an upward weight on expansion. Rising inflationary desires and extreme compensation build, if happen, will likewise posture upside dangers to swelling.

Besides that, the usage of fiscal strategy measures will enhance the effectiveness of the intermediation process in giving financially to profitable monetary exercises and also to upgrade the proficiency of the operations of the currency business sector to permit interest rates to reflect fundamental liquidity conditions. These measures likewise plan to strengthen the basic push of approach to accomplish the destinations of monetary and budgetary security. This study aims to examine the relationship and the significant impact of interest rate and inflation price toward economic growth in Malaysia.

## Literature Review

This chapter reviews literature review of previous studies relating to the interest rates and inflation toward the economic growth in Malaysia. Economic stability is something important to Malaysia's people. To the contrary, it is more potent during financial crises because aggressive monetary policy easing can make adverse feedback loops less likely, Frederic S. Mishkin (2009). The fact that monetary policy is more potent than during normal times

provides a rationale for a risk-management approach to counter the contractionary effects of financial crises, but also in being prepared to quickly take back some of that insurance in response to a recovery in financial markets or an upward shift in inflation risks. However, Abdul Aziz Farid Saymeh and Marwan Mohammad Abu Orabi (2013) stated that there is a positive relationship between current interest rates and has an influential power on growth rates.

Financial and economic stability is something important to Malaysia's people. Magda Kandil (2014) examines the allocation of monetary policy shocks, both expansionary and contractionary, between price inflation and output growth is indicated by the time-series basis of sample data of the counties. The variability of output growth decreases in the face of monetary Fluctuations across Countries, consistent with the stabilizing function of monetary policy.

A number of large economies are used to demonstrate the influence of foreign interest rates in an increasingly globalized world capital market. A method is developed to adjust both long and short-term interest rates for expected inflation. There is only a weak relationship between real interest and economic growth. Barry P. Bosworth (2012) suggests that capital markets are highly integrated at the global level and that it makes little sense to model.

Furthermore, high and sustainable economic growth and low inflation are the two main objectives of policy-makers and the central bank. It is generally believed that inflation has a negative and significant impact on economic growth in medium and long-run [Khan and Senhadji (2001)]. Besides that Vikesh Gokal and Subrina Haniff (2004) in general, the findings reveal that there is a negative relationship between inflation and growth that is statistically significant and of an economically interesting magnitude.

## Methodology

The source and description of data which includes Data using quarterly based with the period of 10 years from 2004 until 2013. The information comprises of Interest rate, GDP and Inflation from Bursa Malaysia, Department Statistics and Bank Negara.

Subsequently, the explanation to the model specification, where the sign of coefficient is stated based on earlier theoretical frameworks. SPSS software is employed and the statistical techniques that will be conducted in this study are descriptive statistic, correlation coefficient and multiple regression analysis.

### Dependent Variable

Gross domestic product (GDP) shows when the economy grows fast, as opposed to slowly or declining, there will be rising on people's incomes and purchasing power.

### Independent Variables

Inflation is the rate at which the general level of prices for goods and services is rising and, consequently, the purchasing power of currency is falling.

An interest rate is the rate at which interest is paid by borrowers (debtors) for the use of money that they borrow from lenders (creditors).

**Research Hypothesis**

A multiple regression equation expresses the linear relationship between two or more variables. The dependent and independent variable identify based on theoretical basis. The general form of a multiple regression model with independent variables as follows:

Where:

Y = Dependent Variable
X1X2 = Independent variable
α = the intercept
B1B2 = regression coefficient
e = the regression residual

Hypothesis 1:
H0(1): There is no relationship between interest rates toward economic growth in Malaysia
H1(1): There is a relationship between interest rates toward economic growth in Malaysia
Hypothesis 2:
H0(2): There is no significant impact between interest rates toward economic growth in Malaysia
H1(2): There is a significant impact between inflation toward economic growth in Malaysia
Hypothesis 3:
H0(3): There is no relationship between inflation toward economic growth in Malaysia.
H1(3): There is a relationship between inflation toward economic growth in Malaysia.
Hypothesis 4:
H0(4): There is no significant impact of inflation toward economic growth in Malaysia.
H1(4): There is a significant impact of inflation toward economic growth in Malaysia.

## Result and Discussion

### Regression Result

**Table 4.1: ANOVA Result**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | .198 | 2 | .099 | 78.674 | .000[b] |
| | Residual | .030 | 24 | .001 | | |
| | Total | .229 | 26 | | | |

a. Dependent Variable: GDP

b. Predictors: (Constant), inf, int

**Table 4.2: Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 5.656 | .487 | | 11.624 | .000 |
| | int | 1.006 | .081 | .932 | 12.479 | .000 |
| | inf | .001 | .023 | .002 | .028 | .978 |

Significant at 0.001

a. Dependent Variable: GDP

As the result above shows that the $R^2$ = 0.868 (86.8%) in which that it represents the overall percentages of impact between my independent variable to my dependent variable in Malaysia. The coefficient table shows that the Interest Rates are significant with Gross Domestic Product (GDP) at 0.01 significant levels while the Inflation is not significant with Gross Domestic Product. This shows that there is a significant impact cause by Interest Rates toward the Economic Growth in Malaysia while the Inflation has not a significant impact toward the Economic Growth in Malaysia.

$$GDP = 5.656 + 1.006\ (int) + .001\ (inf) + e$$

As presented by the model, the regression showed some information of which factors that has impact on the Gross Domestic Product. This study found that there is significant impact between GDP and interest rate with the significant value stand at 0.000 of 1% significant level. Positive relationship means that, when 1% of interest rate increase, it will increase GDP by USD 1.006. Meanwhile, this study found that there is no significant impact between GDP and inflation rate with t-stat value is 0.028. While the significant value stand at 0.978 of 1% significant level. This is means that, even if inflation rate increased by USD 1, it will not affect the GDP.

All the results for regression analysis are supported by the previous researchers as tabulate in the below table.

**Table 4.3: Discussion of Regression**

| Explanatory Variables | Results |
|---|---|
| Inflation rate | Insignificant positive impact |
| Real interest rate | Significant positive impact |

## Correlation

**Table 4.4: Correlation Results**

| | | int | inf | gdp |
|---|---|---|---|---|
| gdp | Pearson Correlation | .938** | -.100 | 1 |
| | Sig. (2-tailed) | .000 | .540 | |
| | Sum of Squares and Cross-products | 1.000 | -.199 | 2.745 |
| | Covariance | .026 | -.005 | .035 |
| | N | 40 | 40 | 80 |

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Correlation table shows that there is a positive significant relationship between Interest Rates with Gross Domestic Product at 0.01 significance level. Which means that when the Rate of Interest increase. There will also be increased in Gross Domestic Product. Lastly the correlation table shows that inflation is not significant at all toward the Gross Domestic Product which conclude that Inflation does not have relationship at all with the increase of Economic Growth in Malaysia.

**Table 4.5: Discussion of Correlation**

| Dependent Variable | Independent Variables | Result | Hypothesis |
|---|---|---|---|
| Gross Domestic Product | Inflation rate | Insignificant positive relationship | Reject $H_0$ |
| | Rate of interest rate | Significant positive relationship | Fail to reject $H_0$ |

**Overall analysis**

**Table 4.6: Overall analysis**

| Variable | Result | Significant level | hypothesis |
|---|---|---|---|
| Interest rate | Regression<br>Significant =0.000<br>Correlation =0.000 | 0.01<br><br>0.01 | Accept H1(2)<br><br>Accept H1(1) |
| Inflation | Regression<br>Significant =0.540<br>Correlation =0.000 | <br>-<br>- | Reject H1(4)<br><br>Reject H1(4) |

Overall result indicates that there is significant impacts and relationship of interest rate toward gross domestic product which means that there is impacts and relationship that can be linked on interest rate with economic growth in Malaysia. The impact and relationship of interest rate significantly at 0.01 significant levels (H1 (2) and H1(1) accepted. While inflation, the impacts and relationship, both are not significant (H1 (4) and H1 (3) rejected. Which this indicates that interest rates give impact to the economic growth in Malaysia but there is no significant impact and relationship of this inflation that can be use proves that cause economic growth in this country.

**Comparison Of Analysis**

**Table 4.7: Comparison Of Regression Analysis**

| REGRESSION (BETA) | |
|---|---|
| | Gross Domestic Product |
| **Interest rates** | .932 |
| **Inflation** | .002 |

The results of regression table 4.7 shows that the frequency of on how interest rates gives highest impact on economic growth in Malaysia. The frequency distribution is 3/3 which means that interest rate is most likely to be the major factors that influence economic in Malaysia in this case. While inflation hold the frequency distribution of 1/3 which in this case, unemployment is the minor contributor as the cause of economic growth in Malaysia.

**Table 4.8: Comparison Of Correlation Analysis**

| CORRELATION (PEARSON CORRELATION) | |
|---|---|
| | Gross Domestic Product |
| **Interest rates** | **.938** |
| **Inflation** | **-.100** |

The results of correlation table 4.7 indicates that interest rates as the major variable with the highest significant relationship. With the frequency distribution of 3/3 of the highest variable that effects gross domestic product, it is proven that interest rates has a strong relationship with gross domestic product while inflation in this case is the minor contributor as the causes that leads to economic growth in Malaysia.

## Conclusion

The results of my research indicate that there is significant relationship and impacts between interest rates and gross domestic product towards this country. (Supported by: Barry, 2012 and Abdul Aziz, 2013) in which means that the interest rates will influence the gross domestic product.

The study found that the interest rate has been the major contributor as the variable that gives the highest impacts and relationship on gross domestic product. The existence of interest allows borrowers to spend money immediately, instead of waiting to save the money to make a purchase. The lower the interest rate, the more willing people are to borrow money to make big purchases such as houses and cars. This will encourage businesses and farmers to make large equipment purchases due to the low cost of borrowing. Besides that, when the consumer pays less interest, this will give them more money to expand and it also can create a ripple effect of increased spending throughout the economy.

The researcher found that there is no significant relationship and impacts between inflation towards economic growth in Malaysia. (Supported by: Khan and Senhadji, 2005 and Vikesh Gokal and Subrina Hanif 2004) . Inflation means prices going up and buying capacity of people going down and when interest rates move up and new capacity becomes difficult to add. So the production goes down and as a whole gross domestic product comes down. So it shows that inflation does not have influence the economic growth. The way of how all these independent variables will be affecting my dependant variables is almost mostly depending on how is the economic condition of the country itself. The government and the economist should govern and evaluate carefully in order to make sure that every decision that will be taken is for the sake of the county itself.

## Recommendation

From the exploration paper and in light of the outcomes from my studies, there are a few proposals which can be connected by the financial analyst to assess the state of one nation economy all the more obviously. To start with they can utilize a bigger measure of information. This will build the points of interest and exactness's of the tested information.
Next, they can utilize every day information or quarterly information premise if conceivable. A long run information will helps a ton all together for the market analyst to have a superior results for their exploration. The information must be from the dependable sources. On the off chance that there is nothing change then it is prescribed that the scientist to utilize a superior strategy or variable technique keeping in mind the end goal to ensure that the outcomes or results of the studies is exact and solid. The market analyst need to make a point to apply the strategy that they are going to use with an important vital that usually used to quantify every one of the variables that being tried.

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