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THE EXISTENCE OF ECONOMIC OPENNESSAND THE STRENGTH OF REAL EXCHANGE RATE:A CASE STUDY OF INDONESIA AND PHILIPPINES

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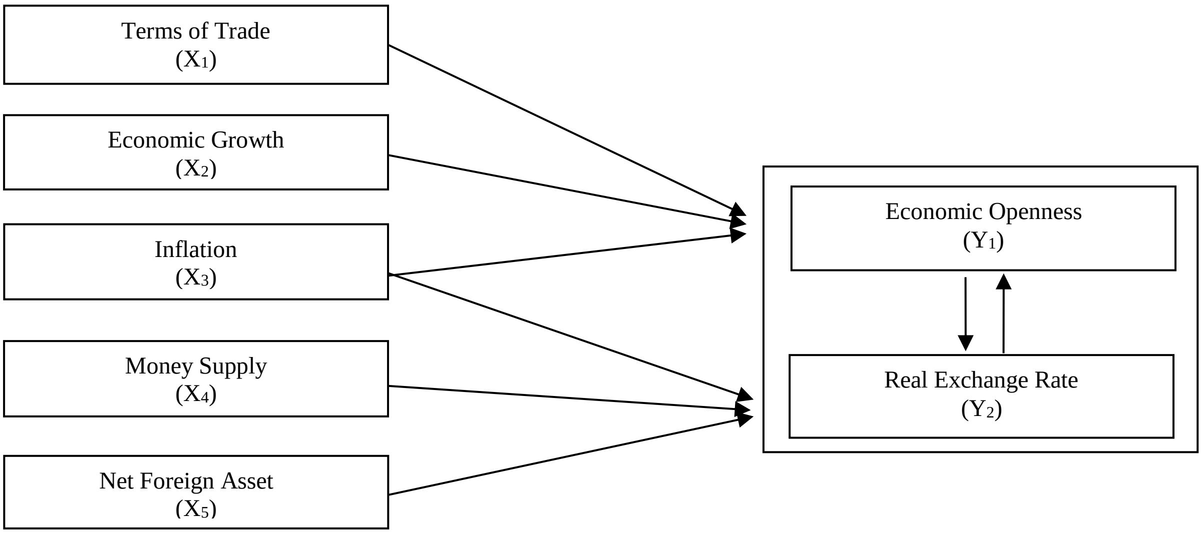
Research Highlights

The important findings in this study are; First, economic openness in Indonesia is positively influenced by terms of trade and inflation, while in the Philippines it is positively affected by terms of trade and real exchange rates; Second, the strength of real exchange rates in Indonesia is positively influenced by money supply, net foreign assets, and economic openness, besides that it is negatively affected by inflation, while in the Philippines it is positively affected by the money supply; Third, economic opennes that affect the real exchange rate in Indonesia and the real exchange rate that affects the economic openness in the Philippines.

Graphical Abstract

The conceptual framework in this study is summarized in the following graphics:



Research Objectives

This study aims to compare the conditions of economic openness and the strength of real exchange rate and their determinants. The objects in this study were Indonesia and the Philippines. The rationality in choosing the country is because Indonesia has a low level of economic openness and high fluctuations in the real exchange rate, while the Philippines has a high level of economic openness and low real exchange rate fluctuations. Based on this, the Philippines is used as a reference to improve the conditions of economic openness and fluctuations in the real exchange rate in Indonesia so that Indonesia can improve the conditions of economic openness and control the fluctuations in the real exchange rate.

Methodology

This study uses time series data from 1970 to 2017 obtained from World Bank Indicator Data. Analysis in each country is done separately with the simultaneous equation model approach. Based on the conceptual framework in abstract grafis, an econometric model can be written for simultaneous equation models;

$$Y_{1it} = \alpha_0 + \alpha_1 X_{1it} + \alpha_2 X_{2it} + \alpha_3 X_{3it} + \alpha_4 \log(Y_2)_{it} + U_{1it}$$

$$\log(Y_2)_{it} = \beta_0 + \beta_1 X_{3it} + \beta_2 X_{4it} + \beta_3 X_{5it} + \beta_4 Y_{1it} + U_{2it}$$

Where;

Y_1 and Y_2 = endogenous variables;

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$X_1 - X_5$ = exogenous variables;
α_0 and β_0 = constants;
$\alpha_1 - \beta_4$ = structural parameter;
i = countries (Indonesia, Philippines);
t = year (1970 – 2017);
U_1 and U_2 = residual.

Rules for identifying simultaneous equation models;
First, the equation is under identified if $K - k < m - 1$, parameter estimation cannot be carried out, the solution is to form another model;
Second, the equation has just identified if $K - k = m - 1$, the parameter estimation technique is ILS (Indirect Least Square);
Third, the equation is over identified if $K - k > m - 1$, the parameter estimation technique is 2SLS (Two Stages Least Square).

Results

The condition of economic openness in Indonesia is positively and significantly influenced by terms of trade and inflation, besides that economic growth has a negative effect and the real exchange rate has a positive effect but both are not significant (Halil Altintas, 2014; Lee Sin Yee, 2016). While in the Philippines positively and significantly affected by the terms of trade and real exchange rate, besides economic growth and inflation have a positive effect but both are not significant(Kostoska, 2009).
The condition of the strength of the real exchange rate in Indonesia is positively and significantly influenced by the money supply, net foreign assets, and economic openness, besides that inflation has a negative and significant effect (Kilicarslan, 2018; Mirchandani, 2013). While in the Philippines positively and significantly affected by the money supply (Elfaki, 2018; Manuel Benazic, 2016).

Findings

Based on the results of the analysis, it can be concluded that there is only one direction effect, which is only economic openness that affects the real exchange rate in Indonesia, while only the real exchange rate affects the influence of economic openness in the Philippines.
Indonesia must be able to increase the role of the real exchange rate to increase the existence of economic openness and control the money supply to reduce fluctuations in real exchange rates because these variables are the main determinant in the existence of economic openness and exchange rate strength in the Philippines

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