Granger-causality between real exchange rate and economic growth: evidence from Thailand

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Abstract

In order to know what factors drive economic growth, this paper attempts to examine the Granger-causality relationship between real exchange rate and economic growth using Thailand as a case study. The standard time series techniques are used for the analysis. We found that GDP is an exogenous variable. The result shows that real exchange rate is the endogenous (i.e. ,lagging) variable and could not have an impact on net export and economic growth. On the other hand, economic growth can influence net export and promote real exchange rate stability through net export and foreign reserve. In addition, since economic growth drives net exports, the policies which claim to be able to promote economic growth, such as fiscal and monetary policies, should be beneficial for the policy makers for further study.

Keyword Real exchange rate, Economic growth, VECM, VDC, Thailand

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Introduction

Agricultural exporting countries and real exchange rate volatilities drew a global attention because of their potential effects on international trade. Thailand Rice is the country's most important crop; by 2012, Thailand was the largest exporter in the world in rice market. To realize the critical importance of real exchange rate and its consequence on economic growth, how the policy makers use real exchange rate when developing their economic policies should be important.

In order to find out if there truly exists a relationship between the REXR and the Economic growth, this paper first looks at the underlying theories of REXR and how it is connected with economic growth theoretically.Then the literature will give insight to the several studies done with empirical results illustrating the nature of the relationship between REXR and economic growth.

The theoretical and empirical studies of real exchange rate and economic growth are controversial and also contradict among the number of studies. This raises the issues whether real exchange rates can be used as a policy instrument to bring about improvements in a country's competitive position; does real exchange rate impact on rice exporting countries? In an economy of exporting countries which variable leads and which variable follows?

Although the effects of exchange rate volatilities on international agricultural export countries have been examined for long time, volatilities of exchange rate effect in rice exporting countries especially Thailand have not been examined at large. Therefore, this paper will attempt to fill the gap to justify the nature of the causality between REXR and Economic growth by employing econometric models.

This paper focuses on the causality between real exchange rate and economic growth, the study has been found that GDP is most exogenous variable and second exogenous is Net export. To promote economic growth probably boots Net export of country, Thai policymaker should focus on economic growth to promote net export stability in line with Thailand being the largest of rice exporters in the world. And real exchange rate and foreign exchange reserve are endogenous.

So, this paper is an attempt to support policymakers by providing more awareness into the causality relationship real exchange rate and growth and employing data for the Thailand

economy for the period of 21 years starting with 1997 (Q2). The study employs econometric methods of standard time series techniques, in particular, cointegration, error correction modeling and variance decomposition, in order to find empirical evidence on the causality between real exchange rate and GDP.

Literature Review

Theoretical underpinnings

The theoretical relationships that real exchange rate and economic growth have to one another can be anlaysed by going through factors that influence exchange rates which are also related to economic growth or Gross Domestic Product (GDP). Most economists seem to agree that the sources of change in the market rate of exchange in both nominal and real. Nominal changes in exchange rates arise when the rate of inflation differs between countries

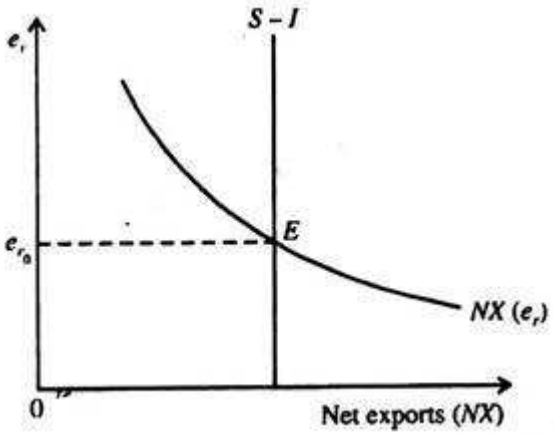
Firstly, the nominal exchange rate can be described as the relative price of goods of two countries, which is commonly known as Exchange Rate For instance, if the exchange rate is 1 dollar equal to 35 baht, then a USA can exchange one dollar for 35 baths in the world market. Similarly, Thailand can exchange 35 baht to get one dollars. While, if the exchange rate is 1 dollar equal to 37 baht, this is the exchange rate raise in terms of USA Exchange rate in terms of Thailand. It means the Thai Baht is deceased in value as “depreciation and USA is raised in value as appreciated.

Secondly, the real exchange rate is referred to the relative price of products of two counties. It is the rate at which the one country is able to trade its own products for those countries. The real rate is another name for the terms of trade, which is expressed

In addition, the real exchange rate is computed by using the nominal exchange rate between price levels of the two countries. If the real exchange rate is higher in value, foreign products become cheaper than domestic products. When Real Exchange rate is lower in value, foreign products are more costly relative to domestic products.

REXR = (Nominal exchange rate x Price of the foreign basket) / (Price of the domestic basket)

Real Exchange Rate and Trade Balance



The volatility of Real Exchange rate affects the net exports of the country. Net Exports is Exports deducts the value of Imports. Figure below the relationship between the REXR and Net Exports is negative. This means with higher REXR, Net Exports are lower and when REXR is lower Net Exports is bigger. The determinant of REXR is connected between the Net Exports curve and the vertical line representing Saving (S) Investment (I). E represent as the Real Exchange rate where, the quantity of local currency supplied for net foreign investment equals the quantity of local currency demanded for the net export of goods and services.

In the case of low REXR when local products are relatively low, local residents will demand less for higher price imports. This would be increased demand for local products from foreign counties. Both these movements results in raising size of Net Exports. On the other hand, when REXR is high, local products become more expensive and demand for imports increased, this action lead to negatively size of Net Exports as local import is higher than local export.

The trade balance (Net Exports) is equivalent the net capital outflow. This is equal to Savings(S), which is fixed by the consumption function and fiscal policy) minus Investment (I), fixed by the investment function and the world interest rate (Mankiw,2013).

Net export is one of the determined GDP of counties. When a local exports products, local resident could benefit as bring more income into countries which in turn raises the GDP and stimulus the economy of the country.

GDP = C + I + G+ (X-M)

Where C is consumption,

I is investment,

G is government expenditure

(X-M) is net exports (exports-imports).

Hence if there is a change in any of the components it would affect the GDP. Net Exports is positively related to GDP, which means that if the Net exports increase, GDP will increase and if the Net Exports becomes low it would lead to a decrease in the nations GDP.

There is causality between Real Exchange rate and GDP through Net Exports. While Net Exports are a function of the real exchange rate, it is also element of the GDP. As this is only based on theory there is a need to find any empirical studies have been conducted to find if the theory stands in the case of Real Exchange Rate and GDP having a relationship. The next part of the paper looks across the literature to find studies done on this relationship between Economic Growth (measured by GDP) and Real Exchange Rate (Mankiw, 2013).

Empirical studies

There are many literature reviews that have been studied on the causality between real exchange rate (REXR) and economic growth with empirical evidence from different economies. Later examine have focused on coming up with policy implications for policy maker to influence economic growth through intervention exchange rate of county whether overvaluation or undervaluation.

The fundamental indicator of real exchange rate volatilities whether appreciated or depreciated that influence economic growth which based on the several macro factors, exporting is key factor of rice and agriculture countries.

Shan, et (2008) has studied on US agricultural exports has been impacted by trade weighted exchange rate and trade partner income. The study done on sample on period 1970–2006 which investigation found that one % annual increase in trade partner' income make total agricultural exports raise by about 0.75 %, while a one % appreciation of the dollar comparative to trade partner trade-weighted currencies make total agricultural exports decease by about 0.5 %. The result illustrate that there is an asymmetric exchange rate effect so that the negative effect of exchange rate appreciation on exports and dominates the positive sometime effect of foreign income growth. An export has been powerfully boosted by growth.

Iftekharul (2012), examine effects of exchange rate volatilities on developed counties' trade and developing countries' trade on the agriculture term wheat, corn, soybeans and rice. The study using quarterly data for the period 1999:1- 2010:4. The results show that trade between

developing countries is more sensitive to exchange rate than trade between developed countries.

This investigation confirm by Kalaitzi (2013) Real exchange rate effect in normal term of export as strong effect on nominal exports examined the impact of change in exchange rate on Vietnam's trade flows, using monthly data from 2004-2015. The study applied the a multivariate Structural Vector Autoregressive (SVAR) and Vector Error correction model (VECM) to analyze short-term and long-term effects of foreign exchange rate on trade balance of Vietnam, the studied found that Real effective exchange rate is used to reflect overall performance of Vietnam's currency. Also, Ahmad & Baharumshah (2001) the real effects of devaluation are distributed over a period of eight to nine quarters

Murat (2002) examines the impact of exchange rate volatility on the exports of Asian countries, which applied an Engle± Granger residual-based cointegrating technique. The results show that the exchange rate volatility reduced real exports for these countries. If the volatilities of real exchange rate increase, the producers prefer to sell local products rather than foreign products. Afshan & Batul (2014) and Naseer (2013) confirm of this investigation, the exchange rate increased in value will lead to cost push on imported and reduce the cost on export. Meanwhile, This studies argue by Abdulla,et (2015) examined the determine the flow of rice exports from Pakistan, which Agriculture sector of Pakistan is key role of economic especially rice exporting, to keep the domestic rice prices at a level source the study done by 54 majors importing partners using data year 2000 -2012 and applied gravity model. The findings revealed that the volatility of exchange rate decrease in the value of Pakistan's currency would boost its rice exports.

Rice exporting has been affected by the Intervention currency through monetary and fiscal policy Gertrudys Brito (1989), studied the relationship between exchange rate changes and rice trade in Dominican Republic. The result has been found that expansion and increasing government expenditures have revealed in an increasing exchange rate that change in Dominican rice exports. This is risky to make generalization on policy action with respect to impact export performance. Abinaya & Jerinabi (2017), The role of exchange rate in supporting trade balance in Vietnam argue that invention by forecasting price fluctuation tool which it could reducing risk, The study found major factors of the price fluctuation are exchange rate and export prices of other export trading partner.

Abinaya (2017) study Causal relationship between Exchange Rate and Exports of SAARC nations, using data 2005—2015. This study applies Granger causality test. The results indicated that there is no causal relationship between Exchange Rates and Exports. Vector Error Correction Model is used to analyses the impact of Exchange Rate on Exports. It also resulted that exchange rate had a negative effect on Exports.

Economic growth can be defined as an increase in the ability of a country or region in providing for the economic needs of the population. High or low economic growth can be measured by calculating the gross domestic product (GDP). CHEN (2012)studies studies the role of the real exchange rate in economic growth and in the convergence of growth rates among provinces in China. The results reported here confirm the positive effect of real exchange rate promote on economic growth in the provinces. These studies confirm by & Nurina & Semuel, (2015) examined the impact of Exchange Rates on Gross Domestic Product (GDP) in Indonesia. The result finds that exchange rate is positive relationship on the GDP. Foreign exchange reserve accumulation is effect REXR that promote economic growth Polterovich (2002). While Ahmad et(2013) argue that exchange rate has negative affect economic growth and Razin & colien (1997) confirm that higher value of exchange rate lead to economic slowdown whereas lower of exchange rate associated with rapid economic growth

Azeem Naseer2013 examined causal relationship among FDI (foreign direct investment), trade, real effective exchange rates and economic growth. The study applied the Johansson co-integration and ECM. The findings suggest real effective exchange rate significantly affect trade. The Granger causality test demonstrations that export causes increase in economic growth.Ejaz, et (2012) and Kazi & Uddin (2014) fine that there is long-run equilibrium relationship between exchange rate and GDP but causality does not run in either direction. Whereas, Uddin (2014) suggest that there is a bi-directional causality runs through exchange rate to economic growth and economic growth to exchange rate. Abul & Masih (1996) exchange rate appear to have borne most of the brunt of short-run adjustment endogenously in different proportions in order to re-establish the long-run equilibrium.

This test was carried by Berdiev (2011) to examines the influence of government ideology, political uncertainty and globalization on the choice of exchange rate regime thought panel multinomial logit approach using annual data over the period of 1974–2004 of developed and developing countries. A government is important determinants of the choice of exchange rate

regime. The result finds that political uncertainty factors have effects on the choice of exchange rate regime in developed and developing countries.

In this paper, we will attempt find out whether real exchange rate incites or obstructs economic growth. This paper is confined the nexus between exchange rate and economic growth. Since the above mentioned causality issue relating to a particular country could not be resolved from the findings of the time series studies, single-country time-series studies were conducted to resolve the issue.

Data and Methodology

In order to construct this study, we employed quarterly macroeconomic data for 21 years ranging from the beginning of 1997. The totals of 68 observations were obtained. The collection variables comprise of Net Export (NEX) which is the difference between net export minus net import, GDP (GDP) is calculated based on nominal GDP and inflation (using CPI index), Real exchange rate (EXR), and the country foreign exchange reserve fund (REV). All data are collected from the data stream.

Research methodology, results and interpretation

This study uses a time series technique, in particular, Cointegration, error correction modeling and variance decomposition, in order to find empirical evidence of the nature of relations between real exchange rate and economic growth. This technique is favored over the traditional regression technique for the accompanying reasons.

Firstly, financial and economic variables has been proven are non-stationary, not constant in mean and variance over time. Conducting normal regression on the variables will render the result misleading, as measurable tests like t-test and F-test are not valid when performing with non-stationary variables. Conducting the normal regression on the variables with different form can resolve the statistical issue; however, it will also remove the theoretical part out of the variables. Thus, the test is only statistic not the economic theory.

Secondly, in traditional regression assume the theoretical relationship between the variables, the endogeneity and exogeneity of variables are also assumed. However, since there is contradicting in theories in relationship between economic growth and real exchange rate, letting the data determine its relationship tends to be more precise. The time series technique is collected which it is suitable with objective due to proving relationship through cointegration. Moreover, the endogeneity and exogeneity of the variables will also be determined from the data.

Testing stationary of variables

Testing the unit root in order to see characteristic of each variable are stationary or non-stationary which was implemented for carry on the co-integration test in the next section. The meaning of stationary is its mean; variance and covariance are constant over time.

If total variable is stationary, it fulfill the assumption of the simple OLS regression, However, the most of the economic variable are demonstrated to be non – stationary, while the OLS test is not valid such as testing R-square and t-test. I (1) is applied in the time series technique which mean the variable is stationary at the first differenced form. Hence the Augmented Dickey-Fuller (ADF) was tested each variable to see its characteristic on both level and different from on each variable. After test, total variables have been found that the observation of variables, including: net export (NEX), GDP (GDP), real exchange rate (EXR), and foreign exchange reserve (FER) are I (1) variables. The table below summarizes the results of the ADF test.

Table 1: Results of the ADF stationary test

Variable	Test Statistic	Critical Value	Implication
Variable in level form			
LNEX	-2.6090	-2.9001	non-stationary
LGDP	-1.7466	-2.9001	non-stationary
LEXR	-1.3158	-2.9001	non-stationary
LFER	-0.99943	-2.9001	non-stationary
Variable in differenced form			
DNEX	-4.3406	-2.9006	stationary
DGDP	-6.6215	-2.9006	stationary
DEXR	-6.2963	-2.9006	stationary
DFER	-5.1162	-2.9006	stationary

The null hypothesis for the ADF test is that the variable is non-stationary. In all cases of the variable in level form, the test statistic in absolute term is lower than the absolute of critical value. Therefore, we cannot reject the null. Conversely, in all cases of the variable in differenced form, the absolute of test statistic is higher than the absolute of critical value. Thus we can reject the null and conclude that the variable is stationary (in its differenced form)

ADF regression order is selected based on the highest estimated value for Akaike Information Criterion (AIC) and Schwarz Bayesian Criterion (SBC) in order to select Test statistic. To reach the result for ADF statistic compared Test Statistic selected with 95% critical value. In some test, AIC and SBC provide different order. However, in this case compared both of them, the result has been showed that AIC and SBC provided the same result both non-stationary and stationary test.

VAR Order

The Schwartz-Bayesian Criterion (SBC) and Akaike Information Criterion (AIC) are used to figure out the optimal number of lags included in the test. Upon analysing, both the AIC and SBC recommended the lag order of 2

Table 2 Determination of lag order using VAR model

Order	AIC	SBC	p-Value	C.V.
1	463.3929	439.8258	0.106	5%

Testing Cointegration

To see the theoretical relationship between variables in long-term we applied Cointegration test to prove it. If the result show Cointegration which mean that there is Cointegration and relationship between variables are moving a long together in long term. There are two technique commonly applied to test Cointegration. Firstly, Engle- Granger (E-G) the result shows that there is Cointegration between variables. Secondly, Johansen Cointegration test is more advance than Engle- Granger (E-G) test since it show not only have Cointegration but it is also show number of Cointegration of variables. When the Johansen's Cointegration is tested which the result based on maximal eigenvalue of the stochastic matrix and based on trace of the stochastic matrix indicated that one Cointegration vector of variable is presented as the following table.

Table 3 Maximal Eigenvalue and Trace test results

Cointegration LR Test Based on Maximal Eigenvalue of the Stochastic Matrix					
Null	**Alternative**	**Statistic**	**95% Critical Value**	**90% Critical Value**	**Result**
r = 0	r = 1	39.2308	31.79	29.13	1 cointegration
r<= 1	r = 2	21.0151	25.42	23.1	
Cointegration LR Test Based on Trace of the Stochastic Matrix					
Null	**Alternative**	**Statistic**	**95% Critical Value**	**90% Critical Value**	**Result**
r = 0	r = 1	74.1249	63	59.16	1 cointegration
r<= 1	r = 2	34.8942	42.34	39.34	

Maximal Eigenvalue and Trace, the test statistic for null of r = 0 is greater than the 95%, therefore, we reject the null that r=0. However, the test statistic is less than critical value for null of r = 1, thus, we cannot reject the null that r=1

Long Run Structural Modeling (LRSM)

Next, the LRSM test is conducted in order to test the statistical findings with theoretical expectations. Which we are interested LEXR as focused variable is normalized with exactly identifying restriction test by providing its estimated coefficient equal to one. The acquired results are found that the t-ratio LFER is only close and more than two respectively which represent the level of significant of the variable. Therefore, the t-ratio of LFER shows that the variable is insignificant.

Table 4 Exact Identification and Over Identification result

Variables	**PANEL A**	**PANEL B**	**PANEL C**
LNEX	0.081009	**1.0000**	0.42656
	0.059157	***NONE***	0.2139
LGDP	0.51524	**1.0000**	3.8821
	0.49416	***NONE***	1.5433
LEXR	**1.0000**	**1.0000**	**1.0000**
	NONE	***NONE***	***NONE***
LFER	0.28523	0.30293	**1.0000**
	0.047321	0.039938	***NONE***
Trend	0.0099541	0.0050385	0.3665
	0.0045694	0.0012197	0.016118
CHSQ(1)	**NONE**	**1.9619[0.375]**	**13.3406[0.000]**

The null hypothesis of over identification test is that the given restriction is correctly identified

In order to test the statistic significant of each level we continue conducting over-identifying restrictions for each variable and measure the Chi-Sq. The result found that p-value more than 5% where we fail to reject the null hypothesis which the restriction is correct. See table 4

According to the result, panel given estimate coefficient of net export (LNEXP) and real GDP (LGDP) are insignificant (equal to zero) provided the p-value more than 5% which we fail to reject the null hypothesis that restriction is correct.

Although, the Exact identifying test shows that LNEX and LGDP are not significant and proved by Over Identification (estimated coefficient equal to zero) that restriction is correct, we make decision to keep it in our remaining test. The reason is because these variables were proved according to Cointegration test which it has Cointegrating vector together with other variables. However, we are still not able to complete that which variables are leaders and followers. So, it is better to keep this variable utilizing for the next testing.

Vector Error Correction Model (VECM)

According to LRSM test, we still have no idea whether which variables are exogenous (independent) or endogenous (dependent). The test only shows variable are significant and not significant as well as illustration the estimated coefficient of variables.

By knowing which variable is exogenous and endogenous, it is much better for policy maker which they are able to predict and carry on the policy. Moreover, they can concentrate on the exogenous variable that can affect the endogenous. Hence, in order to test this causality, the VECM is carried on.

For each variables whether significant or not significant is examined and checked by the error correction term, et-1. We found that there are two exogenous variables, LNEX, LFER, while we found two endogenous variables LGDP, LEXR as illustrate following table.

Table 5 VECM (-1) results

ecm1(-1)	Coefficient	Standard Error	T-Ratio [Prob.]	C.V.	Result
dLNEX	0.18826	0.49919	0.37712[.707]	0.05	Exogenous
dLGDP	0.080479	0.038384	2.0967[0.039]	0.05	Endogenous
dLEXR	-0.56775	0.92257	-106.1540[0.000]	0.05	Endogenous
dLFER	0.13404	0.9744	1.3757[0.173]	0.05	Exogenous

The null hypothesis of VECM test is that the variable is exogenous. If the p-value is less than 5%, we reject the null and accept that the variable is endogenous

The implication of this result can provide us the causality between real exchange rate and economic growth. The result shows that GDP and real exchange rate is lagging variable which could not create impact to net export and foreign reserve. On the other hand, the changing in Net export and can influence the economic growth.

However, VECM test cannot give the level of exogenous and endogenous between variables. Hence, in order to find out whether which variables is the most exogenous, we conduct the variance decomposition test which will be explained in the next testing.

Variance Decomposition (VDC)

According to VECM test, we found that there are two endogenous variable LEXR and LGDP while, LNEX and LREF are exogenous variables. At this step we conduct VDC test which can indicate the degree of exogeneity of each variable. VDC decomposes the variance of forecast error of each variable into proportions attributable to shocks from each variable in the system, including itself. The most exogenous variable is the variable whose variation is explained mostly by its own past variations.

There are two types of VDC test, generalized and orthogonalized approach. The generalized approach is more preferred compared to the orthogonalized approach. This is because the orthogonalized approach based on the particular ordering of the variables in the VAR and has assumption that when a particular variable is shocked, all other variables in the system are switched off. The generalized does not depend on ordering of the variables in the VAR, therefore, it less bias toward the variable order.

However, we perform the test the generalized approach. The result of the test in 1 year, 2 years, 3 years and 5 years are shown in the following tables..

Table 6: VDC test based on Orthogonalized Approach

1 Year

LNEX	LGDP	LEXR	LFER
92.24%	4.36%	1.44%	1.95%
1.05%	96.51%	0.86%	1.58%
18.20%	8.05%	65.99%	7.76%
0.97%	0.10%	9.66%	89.26%
2	1	4	3

4 Year

LNEX	LGDP	LEXR	LFER
95.37%	2.90%	0.79%	0.94%
0.13%	91.76%	7.58%	0.53%
0.69%	1.15%	45.68%	52.48%
0.17%	0.01%	8.52%	91.29%
1	2	4	3

8 year

LNEX	LGDP	LEXR	LFER
89.69%	5.33%	3.55%	1.43%
1.51%	94.82%	2.96%	0.71%
42.22%	9.88%	17.91%	29.99%
1.29%	0.10%	13.16%	85.44%
2	1	4	3

9 year

LNEX	LGDP	LEXR	LFER
89.35%	5.42%	3.71%	1.52%
1.53%	94.72%	3.09%	0.66%
44.05%	10.01%	14.19%	31.75%
1.31%	0.10%	13.34%	85.25%
2	1	4	3

According to the result, we found that the GDP is the most exogenous followed by NEX for the whole period of studies, excludes Year 4 NEX is exogenous followed by GDP, LFER EXR

respectively. The EXR is the least exogenous or endogenous variable which is according to the VECM test indicates that the EXP is the most exogenous and GDP, foreign exchange reserve is more exogenous whereas real exchange rate is least exogenous of variable in the group.

Since VDC determine the level of exogenous from degree of variation which is explained by its own past variations, therefore, it is surprise that GDP is the most exogenous since the level of GDP is not generally determined independently from the government policy. However, the test indicates that the level of GDP can influence in changing of other variables such as Net export, foreign reserve and real exchange rate.

Lastly based on our focusing topic, it has proved that, in case of Thailand as rice exporting countries, the real exchange rate is least exogenous that it is not able to influence other variable especially to promote economic growth. Whereas, economic growth leads Net Export which Net export leads the foreign reserve and foreign reserve lead real exchange rate change.

In another word Thailand is being as oriented export, to promote Net export stability the government should focus on economic growth which it lead higher accumulation of foreign exchange serve and it will change in real exchange rate.

Impulse Response Functions (IRF)

IRF essentially is a graphical display of dynamic response path of a variable owing to a one-period standard deviation shock to other variables. The figures below show the response of variables in VAR system when endogenous and exogenous variable is shocked

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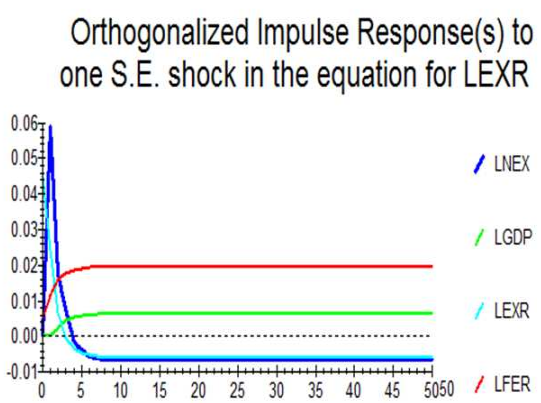
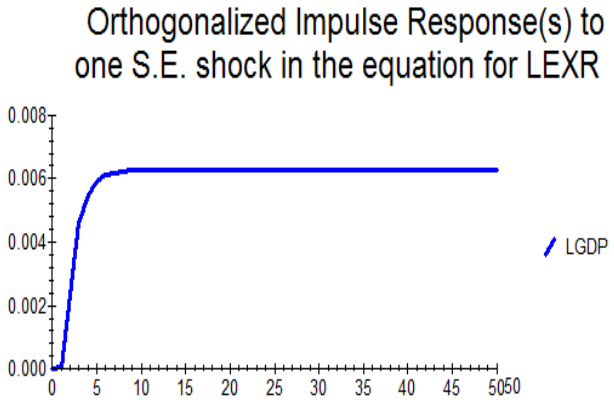
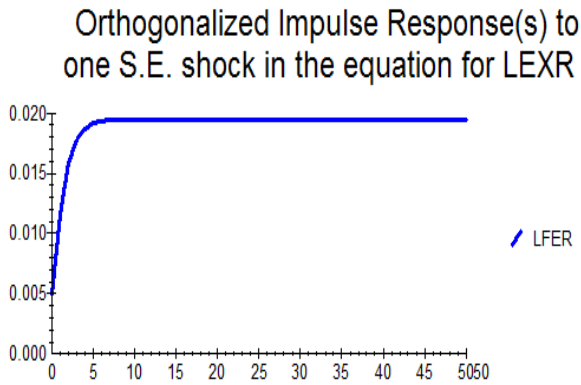
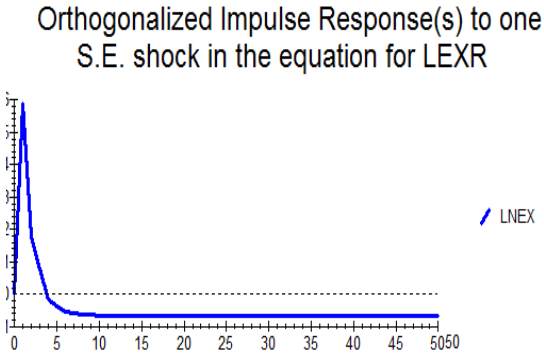






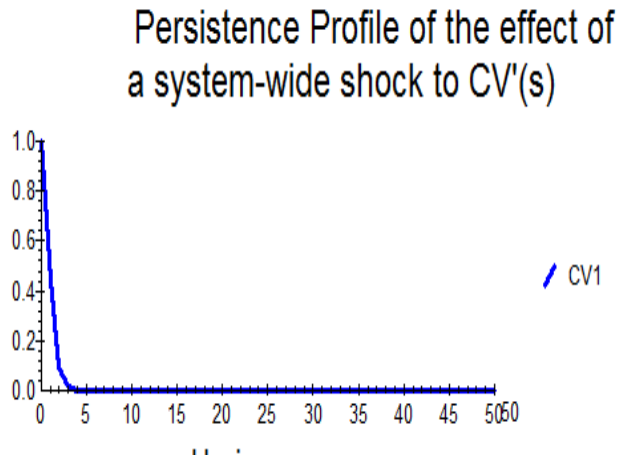


From the figures, we can interpret that shocked in NEX GDP and FER can create impact to its follower variables in VAR, it is quite evident that all the variables seem to take about 5 quarter in order to normalize after a 'shock'.

Persistence Profile

The persistence profile shows the situation when the entire cointegrating equation is shocked, and indicates the time it would take for the relationship to get back to equilibrium. The figure below shows the persistence profile for the cointegrating equation of this study.

Figure 4: Persistence Profile of the Effect of a System-wide Shock to CV



The figure indicates that it would take approximately 5 quarters for the cointegrating relationship to return to equilibrium following a system-wide shock.

Conclusion and Policy Implications

This paper investigated the Causality between real exchange rate and economic growth and using quarter time series data covering 21 years starting with the period of 1997(Q2) of Thailand country. The result suggests that there is cointegration among the variables. However, it is interesting to note that and Net export became the leader variables, leaving the rest of the variables endogenous. Even though most studies suggest the volatility of real exchange often promotes rising of export country and influence economic growth, we can dispute that exchange rate volatility influence in exporting of countries is deceased in Pakistan and Asian countries, which may have been stricken by relatively to those countries that police intervention in exchange rate such as (Vietnam and SAARC nations). Thus, it is necessary for government as policymaker to pay attention of these two strong variables as they will have a deeply impact on the country's economy as a whole. In other word, the policymakers will make decision on Net export based on economic growth because changes GDP will boost Net export, as GDP is a leader variable.. This challenge for the Thailand government is to implement developing and

maintaining the economic growth policy in order to sustain Net export which it will influence to foreign exchange reserve and lead to change in real exchange rate.

GDP is presenting of economic growth, it is the most exogenous variable of our examine, the policymaker should also encourage and enhance economic growth in order to sustainability of exchange rate though Net export and foreign exchange reserve. GDP may support more supply rice as more demand will be allowed enter into market which it lead growing foreign exchange reserve. Therefore, policy maker should promote economic growth to arrive stabilizing of exchange through promoting Net export and foreign exchange reserve. This study is in accordance with foreign accumulation promote real exchange rate sustainability Polterovich (2002).

However, Since Crisis 1997, Thailand was quickly losing foreign exchange reserve. Experience shows that foreign reserves can disappear quickly In 1997, Thailand lost virtually all of its reserves in a matter of weeks before economic crisis FERNQUEST (2015). As the result, Thailand country has tried to keep it same level which foreign exchange reserve is a useful precaution for countries exposed to financial crises. This the reason why foreign reserve is one of the endogenous variable that government should not focus on to promote economic growth but it can be used for the purpose of intervening in the exchange market to influence real exchange rate.

Furthermore, Thailand political uncertainty continued for a period. In which in 2005 Thailand foreign exchange reserve fell to about ThB 330 billion from over ThB 350 billion the previous year Douglas (2006). Berdiev (2011) suggest that Country of a government is important determinant of the choice of exchange rate regime. The result finds that political unsustainable that have effects on the choice of exchange rate regime in developed and developing countries.

This is an humble attempt to find the causality between REXR and economic growth in order to support policy makers. However, readers should bear in mind that the findings are based on the Thailand economy only and the methodology used also has limitations of its own. The study can be further supported using other econometric methods such as Panel Techniques to study the economic variables of a group of developing countries to see if the results of this study are supported and to make the policy implications strong enough for the governments to use in designing their policies for economic growth and stability

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