How Important Is Foreign Direct Investment To Malaysia And Thailand? Evidence From The Emerging Economies

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ABSTRACT

This study is motivated to investigate the impact of foreign direct investment (FDI) on the economy of Malaysia and Thailand for the past 28 years with a specific focus on examining the strength of relationship between net FDI and three key economic indicators – real Gross Domestic Product (GDP), exchange rates and long-term interest rates. Within the framework of Keynesian Income Theory, this paper deploys both Ordinary Least Squares (OLS) regression and Engle-Granger Cointegration test as estimation tools to model the yearly secondary data from 1992 through 2019. The empirical findings show that net FDI does have some influence on real GDP, exchange rates and long-term interest rates in these two countries. From Pearson correlation coefficient, we observe a strong positive correlation between net FDI and real GDP. It is clear that net positive FDI plays an important role not only in sustaining GDP growth but also in strengthening host country's exchange rates. Both Malaysia and Thailand must look into devising good trade and investment policies which could attract quality FDI that optimizes scarce national resources in the best possible manner.

1.0　　　INTRODUCTION

Foreign direct investment (FDI) is important for emerging economies because their domestic companies need these foreign companies' funds and expertise to provide them with financing and new technologies. By definition, FDI refers to foreign entities investing in local economies and they bring with them foreign capital and technological know-hows. Broadly speaking, FDI is a long haul inward investment undertaken by a foreign business entity ranging from mergers and acquisitions to establishing new facilities for existing businesses. It is estimated that the developing and emerging market countries received USD671 billion in 2017, accounting for 47% of total global FDI. Malaysian government has long recognized the importance of FDI and initiated a number of economic transformation programs since mid-1960s with the objective of utilizing its low-cost fast-growing economy to attract the multinational companies around the world. As a result, Malaysia has succeeded in streamlining its economic resources from low value-added activities to higher productivity-based economic sectors since early 1980s (Leinbach, 2020).

The Thai economic growth has been solid for almost two decades. Today, Thailand is one of the world's top ten automobile-exporting nations. Being a newly industrialized country that promotes quality FDI and efficient work force, Thailand has been able to enjoy transfer of technologies from its foreign investors particularly in industrial and service sectors. In the light of intense global competition, the Thai government has taken a pragmatic approach by putting an emphasis on export-oriented manufacturing to sustain its economic growth. By the virtue of its inexpensive but highly-skilled workforce, well-developed infrastructure and stable Thai-Bath, Thailand has now become an attractive investment destination luring hefty foreign direct investment particularly from Japan, Singapore and Hong Kong (Ouyyanont, 2017).

Looking at the business environments and economic resources in South East Asia, there are a lot of opportunities for foreign investors to discover. For instance, Malaysia and Thailand are two neighboring countries that are very focused on revitalizing their manufacturing and services sectors. With respect to market innovation, foreign

investors can tap into Malaysia's digital economy as its e-commerce segment alone is developing so rapidly for the past five years.   A part of digital economy, foreign investors are now considering countries like Malaysia and Thailand which are committed towards embracing Industry-Revolution 4.0 and green technology. Strategic trade and investment policies that offer attractive tax policies and investment incentives to both local and foreign firms must be properly formulated so as to ensure the country's competitive edge in the global marketplace.

This study is motivated to examine the impact of inward FDI in Malaysia and Thailand on three key macroeconomic variables, namely real Gross Domestic Product (GDP), exchange rates and long-term interest rates. It is known that FDI is an important source of economic wealth and all trading countries around the world are competing to be the preferred investment hubs. Real GDP measures a country's national income or the level its economic prosperity to the entire nation. A sustainable economic growth is a reflection of sound economic policies and well-functioning market activities. Exchange rates and long-term interest rates significantly influence a country's international competitiveness and it is therefore important to see how inward FDI interact with these two important economic indicators.   All in all, government and local business community must recognize the significance of FDI in harnessing a country's long-term competitive advantage. This paper is organized as follows. The next section is literature review, followed by the methodological discussion and then the empirical results. The conclusions are presented in the last section.

2.0   LITERATURE REVIEW

From the literature perspective, the relationship between foreign direct investment (FDI) and two diametrically opposing effects, that is, growth-enhancing or growth-retarding factors for an emerging economies remain inconclusive. Considerable amount of researches have been conducted on this subject, but so far only yield more conflicting evidences between FDI and economic growth. Further researches are warranted to shed some light on this lingering issue.

Studies by Singer (1950), Prebisch (1968), Griffin (1970) and Weisskof (1972) point toward the evidence that recipients of FDI gain very little benefits because major portion of it goes to the multinational companies. Bacha (1974) investigates the effects of FDI on recipient countries where US companies are operating and his study reveals a negative relationship between FDI and economic growth. Saltz (1992) examines the effect of FDI on economic growth for 68 developing countries and his findings also show a negative correlation between the two variables. There are other investigations that reveal an absence of empirical evidence to link FDI to having a positive impact on economic growth in developing countries (Haddad & Harrison, 1993 and Mansfield & Romeo, 1980).

De Mello (1999) posits that FDI can be deemed as a catalyst for output growth, capital accumulation, and technological. His study uses both time series and panel datasets involving a sample of 32 developed and developing countries. The objective is to examine the causal relationship between FDI and economic growth. In the case of India, Pradhan (2002) finds that the FDI stocks have no significant impact on the whole sample. He employs Cobb-Douglas production function stating FDI stocks as an additional input variable for the observed period from 1969 till 1997. Similar finding is documented for Malaysia as advocated by Jarita (2007).

On the other hand, the arguments to support the role of FDI exerting significant positive impact on economic growth in emerging economies are numerous and varied. In Blomstrom et al. (1992) studies using a single equation estimation technique with annual data over the period 1960-1985 for 78 developing countries clearly indicate a positive influence of FDI inflows on economic growth. While Borensztein et al. (1998) study found that FDI had a positive influenced on economic growth on recipient countries and can spur domestic investment in these countries. His study used an endogenous growth model developed to measures the influence of the technological diffusion of FDI on economic growth in a sample of 69 developing countries over two set of periods, 1970-1979 and 1980-1989.

A myriad of studies indicate that higher economic growth would lure greater FDI inflows into host countries. Jackson and Markowski (1995) suggest that sustainable economic growth in recipient countries encourages more FDI inflows, especially in some Asian countries. The literature review pertaining to the causal nexus between FDI and economic growth in emerging economies have been well-established yet the outcomes appear to be varied and ambiguous in some cases. In a study by Chakraborty and Basu (2002) on India, they find that

a causality point running from the GDP to FDI flows. They deploy vector error-correction model (VECM) as an estimation tool to examine the short run dynamics between FDI and economic growth over a study period from 1974 through 1996. Interestingly, Bende-Nabende et al. (2001) also investigate the impact of FDI on economic growth of the ASEAN-five economies over the period 1970-1996 and their study supports the existence of bidirectional relationship between the two variables. Most of the FDI studies involve the use of cointegration tests and VECM to examine the causal relationship between FDI and economic growth due to its capability in interpreting the short term and long term dynamics (Walter, 1995). Viewing from FDI augmented gravity model, where inward and outward FDI are added as further determinants of economic growth, a number of studies indicate that the relationship between international trade and FDI is rather complementary (Goh, Wong, & Tham 2013; Hejazi & Safarian, 2001).

As pointed out by Uttama (2005), greater FDI inflow into the South Est Asia region is strongly driven by the ASEAN economic cooperation among its member countries. In particular, the ASEAN Investment Area (AIA) agreement which was signed in October 1998 is regarded as a significant milestone contributing to the surge of inward FDI into this ASEAN region. As a result, this resource-rich region has been turned into an attractive and productive investment hub for multinational companies around the world (Bergstrand 1990).

3.0   DATA & METHODOLOGY

An econometric modelling is used to analyse yearly macroeconomic data from 1992 through 2019. All data on net foreign direct investment (Net FDI), long-term interest rates, real gross domestic product (Real GDP) and exchange rates are obtained from Bank Negara Malaysia (BNM) Statistical Bulletin and CEIC database. This 28-year period is chosen because the secondary data on Malaysia's long-term interest rate series is only available in 1992. The net FDI is sum difference between FDI inflows and outflows, while the long-term interest rate is proxied by 20-year Treasury Bond rates. Real GDP is preferred because it is an adjusted-inflation measure that reflects the true value of the economy. Lastly, RM-USD and Bath-USD exchange rates are considered as this American greenback is the most widely accepted currency in international trade. Ordinary Least Square (OLS) Regression and Engle-Granger 2 steps cointegration procedure (EG cointegration test) are deployed to investigate the relationship between net FDI and these three macroeconomic variables. The OLS regression acts as the baseline estimation method, whilst cointegration test is the main tool in this contemporary time series analysis. It is important to note that time series data normally have trends – either in stochastic manner or in deterministic fashion. As such, the deployment EG cointegration test is deemed appropriate in modelling non-stationary time series data.

3.1   Dependent and Independent Variables

Foreign direct investment (FDI) is an economic catalyst that has been supporting South East Asia's economic growth since 1960s. Hence, it is critical to look at how inward FDI in the past has helped stabilize and promote stronger economic development in both Malaysia and Thailand. As part of the modelling process, the dependent and independent variables must be clearly specified. Net FDI is designated as the controlled variable (or independent variable) that influences a country's real GDP, exchange rate and long-term interest rates.

3.2   Estimation Methods

Based upon the Keynesian Income theory (Keynes, 1936), we deploy OLS linear regression function as well as Engle-Granger Cointegration test (1987). The use of Engle-Granger methodology is warranted as some of these variables might have a stochastic trend in time series. This study is an attempt to measure strength and significance of the relationship between net FDI and the three individual key economic indicators. Here, we hypothesize that real GDP is a function of net FDI and the same specification is set upon exchange rates and long-term interest rate respectively. Due to Asian Debt Crisis 1997-1998, Malaysia government has implemented capital control policy on RM-USD exchange rates from 1998 till 2004. As such, this 7-year capital control period is removed from our net FDI-exchange rate dataset. In the case of Thailand, however, we make use of the full sample period of 28 years. Specifically, there are three estimated models in this study and they are mathematically expressed as follows:

$$\text{Real GDP}_t = \alpha + \text{Net FDI}_t + \varepsilon_t \qquad (t=1,2,\dots N=T) \ \dots\dots\dots(1)$$

Exchange Rate$_t$ = α + Net FDI$_t$ + ε$_t$ (t=1,2,…N=T) …………..(2)

Long-Term Interest Rate$_t$ = α + Net FDI$_t$ + ε$_t$ (t=1,2,…N=T) …………..(3)

Where:
α = Intercept of the regression model
Net FDI$_t$ = Net FDI at time t
Real GDP$_t$ = Real GDP at time t
Exchange Rate$_t$ = Exchange Rate at time t
Long-Term Interest Rate$_t$ = Long-Term Interest Rate at time t
ε$_t$ = Error term (assumed to be normally distributed)

4.0   EMPIRICAL RESULTS
This study employs econometric time series analysis involving 28-year observation from 1992 till 2019. This section provides detailed explanations on the empirical findings from both OLS regression analysis and Engle-Granger Cointegration test. The diagnostics tests are also presented and elaborated in this section.

4.1   Descriptive Statistics and Pearson Correlation Analysis
Figure 1 and Figure 2 below show the movements of net FDI and real GDP from 1992 through 2019 for both Malaysia and Thailand respectively. The study finds that both variables are not moving in tandem and have been detrimentally affected by the global financial crisis of 2007-2008. The economic activities started picking up in 2010 and a sign of strong economic recovery was noticeable from 2012 till 2016. Looking at the erratic movements of net FDI against the 28-year period, we understand how uncertain and vulnerable the net FDI of Malaysia and Thailand have been in the past. Any dramatic changes in international business policies would most definitely affect the degree of competitiveness among the trading nations like Malaysia and Thailand in particular.
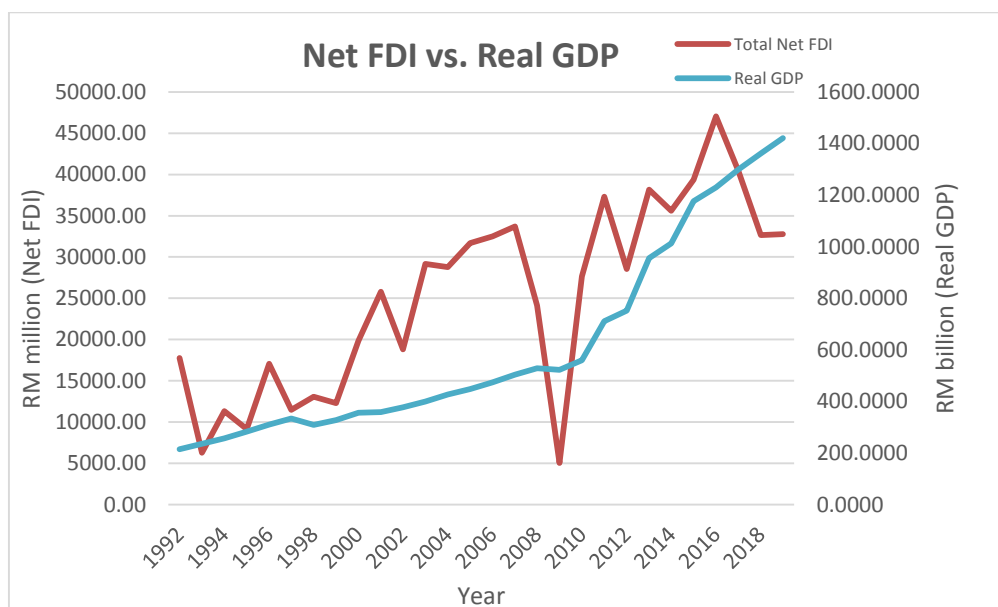

Figure 1. Movements of Net FDI and Real GDP over a 28-year period in Malaysia
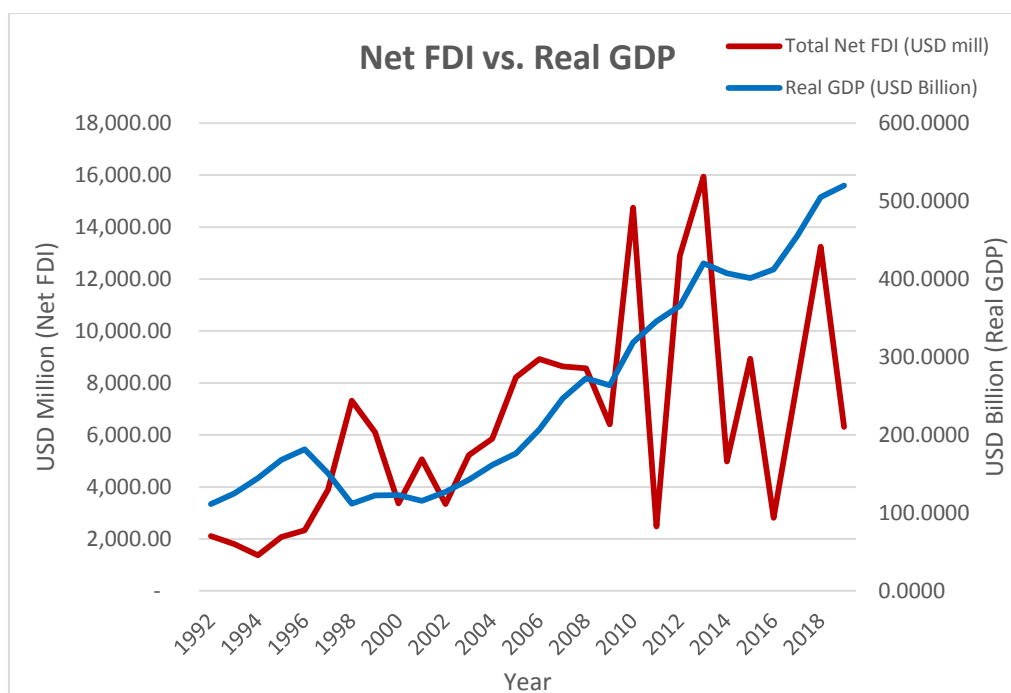
Figure 2. Movements of Net FDI and Real GDP over a 28-year period in Thailand

Meanwhile, Figure 3 and Figure 4 below demonstrate movements of net FDI involving Malaysia and Thailand against their respective exchange rates from 1992 till 2019. As shown in Figure 3, the Ringgit exchange rate against the USD seems volatile after the removal of capital control measure in 2005. For the first 8 years after the removal, Ringgit appeared stronger against the USD but this Malaysian currency began to show a sign of weakening in 2013 and this unfavourable trend continues until 2019. Unlike Malaysia, the Thai Bath started appreciating against USD in 2004 and continued its relative strength until 2015. Interestingly, the Thai Bath has gained its upward momentum dramatically since 2015 and the best rate was registered below THB30 per USD in 2019.
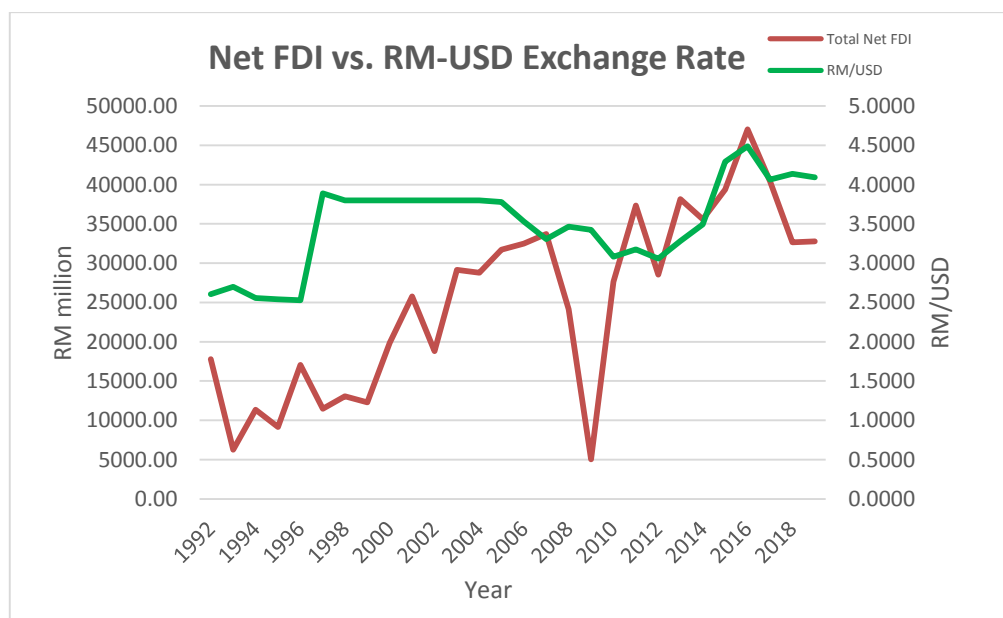
Figure 3. Malaysian Net FDI vs. Malaysian Exchange Rate
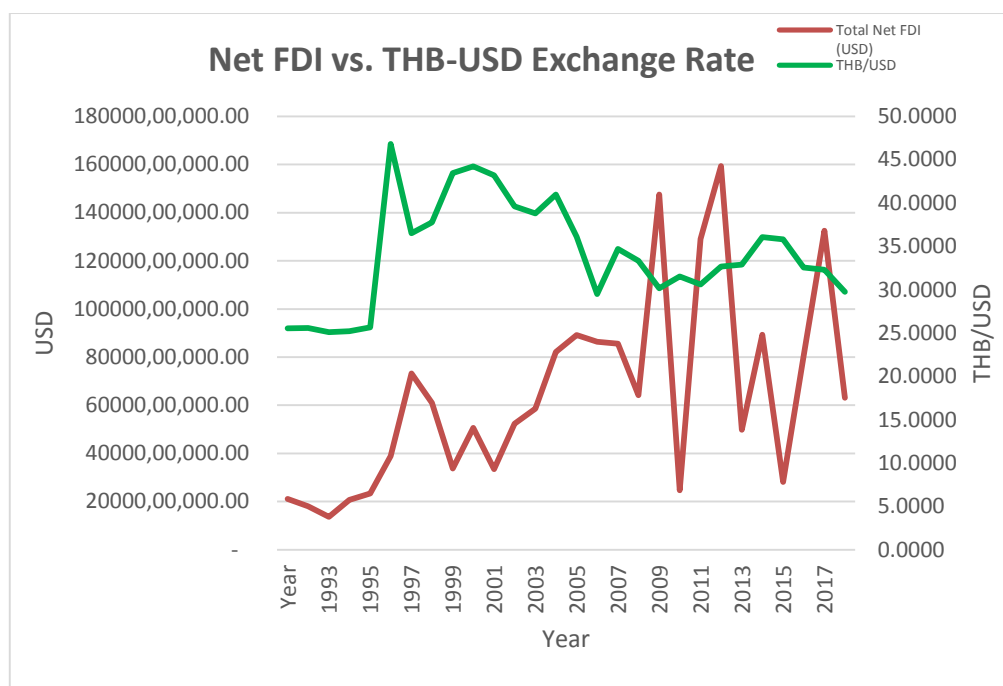
Figure 4. Thailand Net FDI vs. Thailand Exchange Rate

Looking at Figure 5 and Figure 6 below, we find that Thailand's long-term interest rates were falling faster as compared to Malaysia's 20-year bond yields. From 2008 till 2009, Malaysia's long-term interest rate was on its declining trend as a result of global financial crisis and the net FDI was also seen moving in the same direction. Malaysia net FDI hit the lowest point in 2009 with registered value of RM5.04 billion. In terms of variability, it is quite obvious from the line graph that Thailand net FDI has higher degree of dispersion than Malaysia. In other words, FDI volatility is more prevalent in Thailand following its political and economic uncertainty.
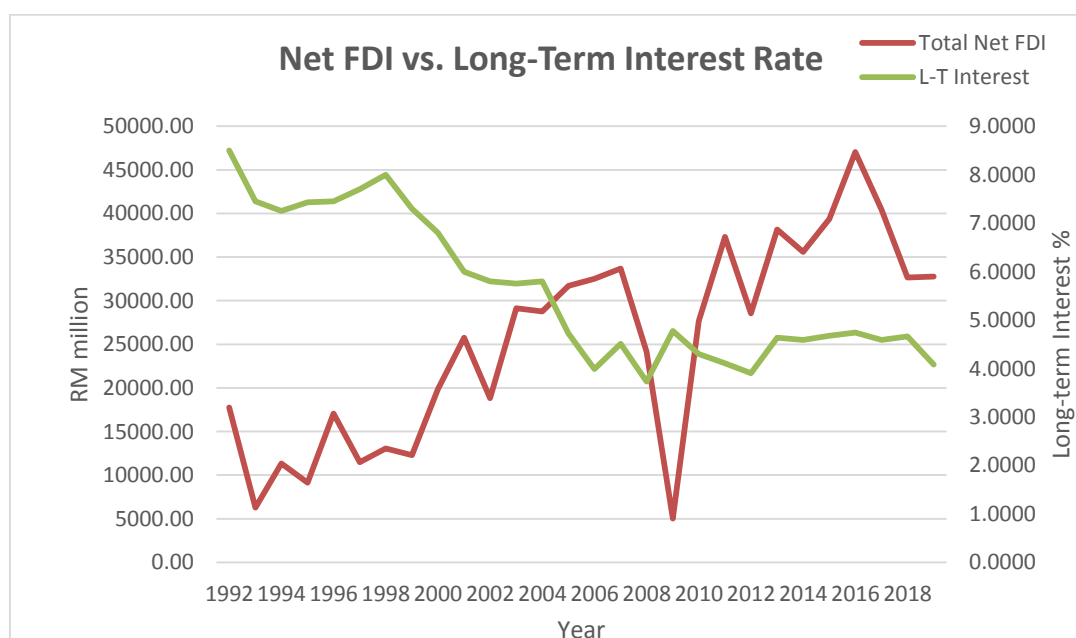
Figure 5. Malaysian Net FDI vs. Malaysian Long-Term Interest Rates
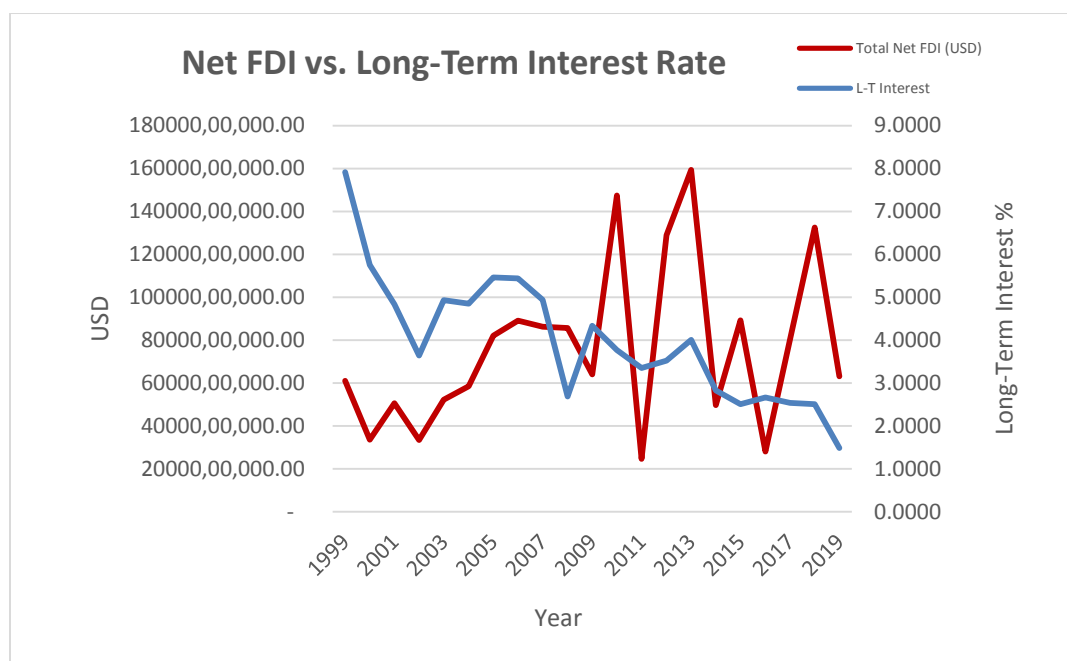
Figure 6. Thailand Net FDI vs. Thailand Long-Term Interest Rates

Looking at the descriptive statistics summary in Table 1 below, we find that the size of Thailand economy is larger than Malaysia as shown by their real GDP values. On average basis, Malaysia's long-term interest rate is somewhat higher than its counterpart. In terms of variability, the distribution of Thailand's long-term interest rate is slightly more spread out than Malaysia as indicated by their individual standard deviations. This finding provides a clear evidence that Thailand's financial markets are relatively more volatile in spite of a series of new economic measures introduced by its central bank recently.

Table 1. Descriptive Statistics of Net FDI, Real GDP, Exchange Rate and Long-Term Interest Rate

Variable	Mean	Std. Deviation	Max	Min
Malaysia Net FDI (RM mill)	25,262	11,495	47,025	5,040
Thailand Net FDI (USD mill)	6,463.76	4,026.18	15,935.96	1,366.44
Real GDP (RM billion)	612.28	380.49	1420.49	214.32
Real GDP (USD billion)	253.68	134.62	520.00	111.45
Exchange Rates (RM/USD)	3.4045	0.6110	4.486	2.5279
Exchange Rates (THB/USD)	34.16	6.17	46.80	25.11
Msia Long-Term Interest Rates (%)	5.62	1.48	8.50	3.73
Thai Long-Term Interest Rates (%)	4.00	1.49	7.92	1.49

Table 2 below reveals some degree of consistency on the preliminary findings for both countries. There are significant positive correlations between net FDI and real GDP for both Malaysia and Thailand. There are also positive correlations between net FDI and the exchange rates, but it is only statistically significant in the case of Malaysia. As anticipated, the long-term interest rates for both countries are negatively correlated with their

net FDI. Hypothetically, lower long-term interest rate is preferred by foreign investors as they need to finance their capital spending at cheaper cost.

Table 2. Pearson Correlation Coefficients (N=28)

Ho: Rho = 0.00 (p-value)

Variable	Net FDI (Malaysia)	Net FDI (Thailand)
Net FDI	1.00	1.00
Real GDP	0.7436 (<0.0001)	0.5202 (0.0045)
Exchange Rate	0.6489 (<0.0015)	0.0301 (0.8788)
Long-Term Interest Rate	-0.7254 (<0.0001)	-0.1265 (0.5845)

4.2   OLS Regression Analysis

The study employs OLS regression as a baseline analysis that examines the validity of the three estimated models and their goodness of fit. Table 3 presents the empirical results from the first model and the t values on the Net FDI support that the estimates are statistically significant for both Malaysia and Thailand. With respect to Malaysia, the coefficient of determination or the adjusted R-squared is above 50% level suggesting a fairly acceptable goodness-of-fit. Yet, the Thailand model does not seem to fit well due to its low adjusted R-squared. By looking at the p-values, the anticipated positive relationship between FDI and real GDP involving the two countries have also been proven.

Table 3. Model 1 Parameter Estimates

Dependent Variable: Real GDP

Malaysia/Variable	DF	Parameter Estimate	Standard Error	t value	Pr > t
Intercept	1	-9.773	120.11	-0.08	0.9358
Net FDI	1	24.623	4.341	5.67*	<0.0001*
R-Squared	0.553	Adj R-Squared	0.535		
Thailand/Variable	DF	Parameter Estimate	Standard Error	t value	Pr > t
Intercept	1	141255	42432	3.33	0.0026
Net FDI	1	17.393	5.600	3.11*	0.0045*
R-Squared	0.271	Adj R-Squared	0.243		

*significant at 5% level

From the statistical results of long-run regression, we do see the significant influence of FDI only on the Malaysian exchange rate. Positive parameter estimate of net FDI signifies that any increase in FDI will trigger an increase in demand for RM, which in turn will strengthen the value of RM against other foreign currencies. From the p-value of 0.0015, the Malaysia model has been statistically proven but it is not the case for the Thailand model. However, the adjusted R-squared are rather low for both countries staying below 50% level and it is most definite that the statistical properties in this Model 2 need to be examined further.

Table 4. Model 2 Parameter Estimates

Dependent Variable: Exchange Rates

Malaysia/Variable	DF	Parameter Estimate	Standard Error	t value	Pr > t
Intercept	1	2.5571	0.2505	10.21	<0.0001
Net FDI	1	0.00003	0.000008	3.72*	0.0015
R-Squared	0.421	Adj R-Square	0.390		

Thailand/Variable	DF	Parameter Estimate	Standard Error	t value	Pr > t
Intercept	1	33.85	2.274	14.86	<0.0001
Net FDI	1	0.00004	0.0003	0.15	0.8788
R-Squared	0.0009	Adj R-Square	-0.0375		

*significant at 5% level

A steady and continuous growth in net FDI will most definitely benefit the local financial markets, which ultimately influence the prevailing market interest rates in the money market. Using 20-year Treasury Bond as the benchmark for long-term interest rate, the Malaysia model reveals that a significant negative relationship between its net FDI and the long-term borrowing rate. The Thailand model, on the other hand, produces the opposite results. There is an absence of statistical significance between its net FDI and the long-term interest rates. Similar to Model 1, the Malaysia model presents a fairly credible results with its adjusted R-squared standing at approximately 51%. This value suggests that about 51% of total variations in long-term interest rate is being explained by the net FDI.

Table 5. Model 3 Parameter Estimates
Dependent Variable: Long-Term Interest Rates

Malaysia/Variable	DF	Parameter Estimate	Standard Error	t value	Pr > t
Intercept	1	7.9794	0.4817	16.57	<0.0001
Net FDI	1	-0.00009	0.00001	-5.37*	<0.0001
R-Squared	0.526	Adj R-Square	0.508		
Thailand/Variable	DF	Parameter Estimate	Standard Error	t value	Pr > t
Intercept	1	4.3734	0.7475	5.85	<0.0001
Net FDI	1	-0.00004	0.00008	-0.56	0.5845
R-Squared	0.016	Adj R-Square	-0.035		

*significant at 5% level

4.3 Engle-Granger Cointegration Test

As mentioned earlier, the OLS regression only provides the basic information on the theoretical relationships involving the observed variables in those three models. As such, Engle-Granger two steps procedure is deployed to further investigate the stipulated hypothesis. All the basic requirements for this cointegration test must be satisfied before we move further. First, all data series must undergo Augmented Dickey-Fuller test (or unit root test) and they are required to be integrated at first difference or I(1). The same test is applied to the residuals of the long-run regression at level and the test results must prove that they have no unit root. Next, a cointegrating regression analysis is employed to estimate those three theoretical models. The detailed results are presented in Table 6, Table 7 and Table 8 below.

Table 6. Model 1 Parameter Estimates
Dependent Variable: Real GDP (RGDP)

Malaysia/Variable	DF	Parameter Estimate	Standard Error	t value	Pr > t
Intercept	1	43.14412	14.1875	3.04	0.006
ldFDI	1	1.6835	1.54949	1.09	0.289
lr	1	0.0853	0.05765	1.48	0.153
ldRGDP	1	0.0637	0.22613	0.28	0.780
Thailand/Variable	DF	Parameter Estimate	Standard Error	t value	Pr > t
Intercept	1	12497	5670.38	2.20	0.0383
ldFDI	1	1.03325	1.10258	0.94	0.3589
lr	1	0.05071	0.05065	1.00	0.3276
ldRGDP	1	0.17489	0.2180	0.80	0.431

*significant at 5%

Table 6 does not provide the satisfying results as there is an absence of both short-run and long-run relations involving the net FDI and the real GDP in the two countries. Meanwhile, Table 7 shows that there is a significant long-run causality in both Malaysia and Thailand as indicated by their lag-one residual (denoted by lr) or the error-correction term.

The short-run causality, however, is found to be non-existence in both countries. It is interesting to note that higher speed of adjustment is noticeable on the Malaysia model indicating that RM-USD exchange rate returns to its equilibrium level at a faster rate than its counterpart.

Table 7. Model 2 Parameter Estimates
Dependent Variable: Exchange Rate (ER)

Malaysia/Variable	DF	Parameter Estimate	Standard Error	t value	Pr > t
Intercept	1	0.0491	0.0875	0.56	0.5825
ldFDI	1	-0.000004	0.000008	-0.46	0.6523
lr	1	-0.6279	0.2440	-2.57*	0.0212*
ldER	1	0.3472	0.2542	1.37	0.1922
Thailand/Variable	DF	Parameter Estimate	Standard Error	t value	Pr > t
Intercept	1	0.40948	0.99948	0.41	0.6860
ldFDI	1	-0.00005509	0.000206	-0.27	0.7923
lr	1	-0.38458	0.18156	-2.12*	0.0457*
ldER	1	-0.13713	0.20426	-0.67	0.5090

*significant at 5%

The effect of net FDI on Malaysian long-term interest rate is found to be rather weak as compared to Thailand. We find that there is an absence of short-run dynamics in the two countries but the presence of long-run causality is strong and significant in the case of Thailand. The error correction term of the Thailand model is significant

at 10% level (due to one-tail test) and there is an approximately 31% speed of adjustment towards equilibrium made by its long-term interest rate in the system. This is considered a relatively fast adjustment process possibly due to some positive investor sentiment in Thailand's financial markets.

Table 8. Model 3 Parameter Estimates
Dependent Variable: Long-Term Interest Rates (LTIR)

Malaysia/Variable	DF	Parameter Estimate	Standard Error	t value	Pr > t
Intercept	1	-0.15784	0.10176	-1.55	0.1352
ldFDI	1	-0.0000025	0.000012	-0.20	0.8413
lr	1	-0.13976	0.11532	-1.21	0.2384
ldLTIR	1	-0.15289	0.1931	-0.79	0.4369
Thailand/Variable	DF	Parameter Estimate	Standard Error	t value	Pr > t
Intercept	1	-0.28953	0.21621	-1.34	0.2005
ldFDI	1	0.00001035	0.000038	0.27	0.7899
lr	1	-0.31339	0.1943	-1.61*	0.1276*
ldLTIR	1	-0.14078	0.21983	-0.64	0.5316

*significant at 5%

There are some interesting findings discovered from this cointegration test. Firstly, the empirical findings from Model 2 reveals a significant long-run relationship between net FDI and exchange rates in both countries. Secondly, model 2 is a
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unidirectional model and there is a negative relationship between net FDI and exchange rate. This suggests that any increase in net FDI over a given time period will subsequently strengthen Malaysia and Thailand exchange rates

Table 9. Test of First and Second Moment Specification (White test)

Model	Chi-Square	Prob > ChiSq
Model 1 (Malaysia)	4.89	0.8436
Model 1 (Thailand)	6.22	0.7178
Model 2 (Malaysia)	5.26	0.8109
Model 2 (Thailand)	4.68	0.8616
Model 3 (Malaysia)	7.64	0.5709
Model 3 (Thailand)	7.66	0.5691

From the diagnostic perspective, we observe no issue of heteroscedasticity and autocorrelation in all the models. Those high p-values from White test in Table 9 above strongly supports our null hypothesis of homoscedasticity. Similarly, the diagnostic results from Durbin-Watson tests in Table 10 point towards the acceptance of our null hypothesis on the absence of serial correlation between the residuals.

Table 10. Autocorrelation Tests

Details	Model 1 (Malaysia)	Model 1 (Thailand)	Model 2 (Malaysia)	Model 2 (Thailand)	Model 3 (Malaysia)	Model 3 (Thailand)
Durbin-Watson D	2.144	1.814	2.112	2.045	1.954	1.899
Pr < DW	0.5845	0.2648	0.5414	0.5472	0.3977	0.4073
Pr >DW	0.4155	0.7352	0.4586	0.4528	0.6023	0.5927
No. Observations	26	26	19	26	26	19
1st Order Autocorrelation	-0.078	0.077	-0.087	-0.049	-0.002	-0.014

5.0 CONCLUSION

This study contributes to the literature by providing systematic evidence on the impact of net FDI in Malaysia and Thailand on their real GDP, exchange rates and long-term interest rates over the observed period. There are some important findings stemming from this study. First, the results from long-run regression show that there is a strong positive correlation and significant relationship between net FDI and real GDP in both countries. In explaining this empirical evidence, one must understand that an increase in net FDI also signifies

an increase in aggregate investment, which at the later process translates into growth in national income. The empirical findings from this study are consistent with the work of earlier researchers (Stoneman, 1975; Sandalcilar & Altiner, 2012). From the error-correction models, our finding is consistent with the work of Jarita (2007) as well as Haddad and Harrison (1993) where there is an absence of significance relation between net FDI and real GDP for both countries over long-run and short-run. However, a significant equilibrium relationship between net FDI and exchange rate is observed for both Malaysia and Thailand, but there is an absence of short-run dynamics between them. With regards to the relationship between net FDI and long-term interest rates, only Thailand demonstrates a negative significant equilibrium relationship. This could be due to the fact that Thailand's debt market has been experiencing downward movement of its long-term interest rates since 2013. Foreign investors see this market situation as an opportunity for them to lock their capital spending at lower cost.

In sum, this study sheds some light on the importance of investment policies that could attract quality FDI into a country and ultimately sustain its economic growth. For emerging economies like Malaysia and Thailand, a sustainable economic growth which is driven by a steady increase in positive net FDI would reflect investor confidence and conducive business environments. The ministry of international trade, for instance, must be tasked with devising strategic investment policies that would entice quality investment into export-driven sectors, particularly in manufacturing and services industries. For this reason, government must hold a very clear objective of optimizing existing economic resources by promoting operational efficiencies at all levels.

Following intense competition among ASEAN member countries in attracting quality FDI, a new dynamic methodological approach is deemed necessary. Enlarging the sample size and employing a more robust technique in model estimation are considered plausible. Expanding the country-specifics and combining this net FDI with other relevant macroeconomic variables will not only improve the existing model but also help contribute towards better understanding and development of new knowledge in international business. It is hoped that future studies will into this suggestion so that a new perspective or a new approach can be established and deliberated to

policy makers and international business community.

6.0   REFERENCES

Bacha E L (1974), "Foreign Capital Inflow and the Output Growth Rate of the Recipient Country", *Journal of Development Studies*, 10 (3), 374-381.

Bende-Nabende A, Ford J and Slater J (2001), "FDI, Regional Economic Integration and Endogenous Growth: Some Evidence from SouthEast Asia", *Pacific Economic Review*, 6(3), 383-399.

Bergstrand, J. H. (1990) The Heckscher-Ohlin-Samuelson model, the linder hypothesis and the determinants of bilateral intraindustry trade. *Economic Journal* 100, 1216–29.

Blomstrom M, Lipsey R, and Zejan M (1992), "What Explains Developing Country Growth?", NBER Working Paper No. 4132, *National Bureau of Economic Research*, Cambridge, Mass.

Borensztein E, De Gregorio J and Lee J W (1998), "How Does Foreign Direct Investment Affect Economic Growth?", *Journal of International Economics*, 45(1), 115-135.

Chakraborty C and P Basu (2002), "Foreign Direct Investment and Growth in India: A Cointegration Approach", *Applied Economics*, 34 (9), 1061-1073.

De Mello Jr Luiz R (1999), "Foreign Direct Investment in Developing Countries and Growth: A Selective Survey", *The Journal of Development Studies*, 34(1), 1-34.

Goh, S. K., K. N. Wong, and S. Y. Tham. (2013), Trade linkages of inward and outward FDI: Evidence from Malaysia. *Economic Modelling* 35, 224–30.

Haddad, M. and Harrison A (1993), "Are There Spillovers from Direct Foreign Investment?", *Journal of Development Economics*, 42(1), 51-74.

Hejazi, W., and A. E. Safarian. (2001), The complementarity between U.S. foreign direct investment stock and trade. *Atlantic Economic Journal* 29 (4), 420–37.

Jackson, S and Markowski S (1995), "The Attractiveness of countries to Foreign Direct Investment: Implications for the Asia-Pacific region", *Journal of Trade*, 29(5), 159-179.

Jarita, D. (2007), "Malaysian Foreign Direct Investment and Growth: Does Stability Matter?", *Journal of Economic Cooperation Among Islamic Countries*, 28(2), 83-98.

Leinbach, T.R., Oii, J.B., Ahmad, Z., & Lockard, C.A. (2020, March 26). Malaysia/Facts, Geography, History & Points of Interest. Retrieved from https://www.britannica.com/place/malaysia/economy

Mansfield E and Romeo A (1980), "Technology Transfer to Overseas Subsidiaries by US-Based Companies.

Ouyyanont, P. (2017). *A Regional Economic History of Thailand*. Chulalongkorn University Press.

Pradhan J P (2002), "Foreign Direct Investment and Economic Growth in India: A Production Function Analysis", *Indian Journal of Economics*, 82(327), 582-586.

Prebisch R (1968), "Development Problems of the Peripheral Countries and the Terms of Trade", in Theberge J D (Ed.) Economics of Trade and Development, Wiley, New York.

Saltz S (1992), "The Negative Correlation Between Foreign Direct Investment and Economic Growth in the Third World: Theory and Evidence", Rivista Internazionale di Scienze *Economiche e Commerciali*, 39, 617-633.

Sandalcinar, A.R., & Altiner, A. (2012). Foreign Direct Investment and Gross Domestic Product: An Application on ECO Region. *International Journal of Business and Social Science*, 3(22), 189-198.

Singer H (1950), "The Distributions of Gains Between Investing and Borrowing Countries", *American Economic Review*, 40(2), 473-485.

Stoneman, C., (1975),"Foreign capital and economic growth," *World Development*. (1) 11-26.

Uttama N (2005), "Foreign Direct Investment in ASEAN Countries: An Empirical Investigation", Paper Presented at the 7th Annual Conference of the European Trade Study Group (ETSG), September 8-10, University College, Dublin, Ireland.

Walter Enders (1995), Applied Econometric Time Series, John Wiley & Sons, Inc., USA.

Weisskof T E (1972), "The Impact of Foreign Capital Inflow on Domestic Savings in Underdeveloped Countries", *Journal of International Economics*, 2(1), 25-38.