Applied Economics Journal 17 (2): 1-11

ISSN 0858-9291

Look East Policy: Southeast Asian Economic Integration of India

*Hemanta Saikia** Department of Economics, Hemo Prova Borbora Girls' College, India

Abstract Economic reorganization and liberalization had paved India's rapid future economic growth and international economic relations by adopting a "Look East Policy" to pursue economic integration with Southeast Asia. This paper examines a number of measures to promote economic cooperation between India and Southeast Asia. The analytical results show that foreign exchange reserve and foreign direct investment (FDI) of India were interrelated. There was a considerable contribution of foreign exchange reserve on FDI of India from 1991 to 2008. A closer economic tie with Southeast Asia requires a greater effort by India's to further liberalize trade and investment.

Keywords: economic integration, regional, trade, growth

JEL Classification: F15, P25, F13, R11

* Corresponding author: Hemanta Saikia, Department of Economics, Hemo Prova Borbora Girls' College, Raidongia Gaon, Kamarbondha Ali, Golaghat, 785625, India. Tel: +919435150739, E-mail: hemantaassam@yahoo.com

Introduction

After the economic crisis in 1997, Southeast Asia has been the fastest growing region of the world. It appears to be a mounting identification of larger economic harmonization and cooperation among the major Asian countries to augment Asia's role in world affairs. Regional economic integration has been adopted as a strategy for development in different parts of the world since 1990s followed by the formation of single market by the European Union and NAFTA. With the rising esteem of regional economic integration worldwide, more than half of the world trade is now conducted among the members of regional trading arrangements on preferential basis. In this regard, Southeast Asian countries have recognized this potential of regional economic integration which is clear from numerous free trade arrangements (FTAs), especially ASEAN. At the same time, the economic reorganization and liberalization have paved India's rapid future economic growth and international economic relations.

India has adopted "Look East Policy" (LEP) since 1991 to promote an economic integration with Southeast Asia. This provides an opportunity to economic transformation and growth to its lagging regions particularly the Northeast states which can help India to shape an Asian economic community. The LEP has made Southeast Asia region become the Indian's largest trade partner which brings several economic problems and prospect to India in general and Northeast region in particular. In this regard, policy makers concerned with the idea of opening a land road from the Northeast to the booming markets of Southeast Asia via Myanmar and China. This would enable the region to carry out a major industrialization driven by tapping the markets of East and Southeast Asia (Barua and Das, 2008). However, the present scenario of LEP of India is informal and back behind in many sides. The Policy did not find Japan on its radar and failed to improve India's economic ties with it. Trade with Japan actually declined dramatically dropping its share to one-third of its level of 7% in 1993. This was the biggest failure of the Policy. Following the reforms, however, the dedicated policy instruments of LEP should have succeeded in attracting Japanese FDI to India but that did not happened.

Foreign exchange reserve and FDI are the key components in context of liberalization and regional integration in any country. In the situation, LEP may be a way to capture FDI and foreign exchange reserve in India. In this study, a time series analysis is used to determine the relative inter-relationship between foreign exchange reserve and FDI of India. In this study, the cointegration analysis is used to determine the inter-relationship. The new paradigm of development in the light of the international trade outcome of India is also presented. The findings could be useful to the policy makers to rethinking the LEP in a new direction considering the foreign economic relations and profitability. The first section of the paper will mostly dealt with the trade structure of India and its direction for assessing the potentiality of LEP in forming the Southeast Asian economic integration. Next, the paper will examine the inter-relationship between the foreign exchange reserve and FDI of India. Finally, a future prospect of regional cooperation by India in the eve of LEP and its challenges will be presented.

Overview

LEP was launched in 1992 just after the end of the cold war, following the collapse of the Soviet Union. After the start of liberalization, it was a very strategic policy decision taken by the government in the foreign policy. Earlier, India's interaction with ASEAN in the cold war era was very limited. India declined to get associated with ASEAN in the 1960s when full membership was offered even before the grouping was formed. India became a sectoral dialogue partner with ASEAN in 1992, a full dialogue partner in 1995, a member of the ASEAN Regional Forum (ARF) in 1996, and a summit level partner (on par with China, Japan and Korea) in 2002.

From the 1991, being a founder member of the General Agreement on Tariffs and Trade (GATT), India became a signatory to the WTO agreements. The booming East and Southeast Asian countries were the natural choice for India in its search for market access and technological cooperation through foreign investment. India has a comparative advantage in many new products as is shown by her rising trade structure in East and Southeast regions. India is one of the fast growing countries in the world with the rate of more than 8%. Large population of India provides market to the countries of the world. At the same time, the value of imports has increased because of rapid industrialization and policy of import liberalization within the country. However, the exports have not grown well due to primary product base, increased domestic consumption and inadequate export promotion measures. After 1970-1971 sharp increase of export and import is observed. Imports have grown faster than exports causing trade deficit. Asia & Oceania (e.g. China, Hong Kong, Japan, Singapore) is a major trading region for India – 55% of total exports was made to this region followed by West Europe (e.g. U.K., Germany, Belgium, Italy), and America (particularly North America).

India has entered into the second phase of the Policy which is the development of India's remote Northeast region. India's search for a new economic relationship with Southeast Asia is no longer driven by consideration of globalization, but to facilitate development of the Northeast by increasing its connectivity to the outside world. Northeast region is no longer in isolation and remoteness but prosper with business opportunities knocking at the door. There are examples of moves towards achieving the declared objectives: redefining of Asian Highways - AH-1 AH-2 and AH-4 to provide India easier road connectivity with the neighboring countries, restoring Stilwell road connecting Arunachal Pradesh with Myanmar, holding of Thailand and India ministerial level Northeast Business Summit followed by Thailand ministerial visits to NER and showcasing Northeast India Trade & Investment Opportunity Week at Bangkok, setting up of Tourism Desk at the Embassy of Thailand and India Desk at Thailand's Board of Investment.

FDI is considered to be the most attractive type of capital flow for emerging economies as it is expected to bring latest technology (Georgios, 1997). However, India has only very recently emerged as a destination for FDI since the pre-reform years were marked with a sharp antipathy toward foreign capital. This is despite 14.5% decline in global FDI inflows from US$ 1,940.9 billion in 2007 to US$ 1,658.5 billion in 2008. India also ranked 9th in global FDI inflows in 2008. In the UNCTAD Survey of year 2008-2010, China is the most preferred investment destination, followed by India, the United States, the Russian federation and Brazil. Robust economic growth, an improved investment environment and opening up of critical sectors (e.g. tele-communications, civil aviation, refineries, construction) facilitated FDI inflows into India. There is the prospect of heavy FDI inflow to India through the opening up of the East Corridor of India in the eve of the LEP.

Methods and Data

In this study the cointegration analysis is used to determine the relative inter-relationship between foreign exchange reserve and FDI of India. Augmented Dickey-Fuller (ADF) test is used to determine the stationarity of the variables, i.e. foreign exchange reserve x_t and FDI y_t. The regression equations for ADF tests are as follows:

$$\Delta x_t = \alpha 1 + \beta_1 + \gamma_1 x_{t-1} + \delta 1 \Delta x_{t-1} + \varepsilon 1t$$

$$\Delta y_t = \alpha 2 + \beta_2 + \gamma_2 x_{t-1} + \delta 2 \Delta x_{t-1} + \varepsilon 2t$$

where the $\varepsilon 1t$ and $\varepsilon 2t$ are the white noise error terms; $\Delta x_t = x_t - x_{t-1}$ and $\Delta y_t = y_t - y_{t-1}$

The optimum lag is determined through Akaike information criterion. The estimated regression equation for the ADF tests involving 2nd difference series for x_t and y_t as shown in the following:

$$\Delta^2 x_t = \alpha 3 + \beta_3 + \gamma_3 x_{t-1} + \delta_{3t} \Delta x_{t-1} + \varepsilon_{3t}$$

$$\Delta^2 y_t = \alpha 4 + \beta_4 + \gamma_4 x_{t-1} + \delta_{4t} \Delta x_{t-1} + \varepsilon_{4t}$$

where the ε_{3t} and ε_{4t} are the white noise error terms.

The Johansen cointegration is used to test the cointegration which states that two variables are cointregated when the linear combination of two non-stationary variables is stationary. After evaluating the Johansen cointegration test, Vector Error Correction (VEC) model is used to evaluate the stability of the models and the cross equation shocks on the endogenous variables. The estimating VEC model is considered as:

$$\Delta x_{1,t} = \alpha 1 (x_{2,t-1} - \beta x_{1,t-1}) + \varepsilon_{1,t}$$

$$\Delta y_{1,t} = \alpha 2 (y_{2,t-1} - \beta y_{1,t-1}) + \varepsilon_{2,t}$$

The right-hand side variable is the error correction term. In long run equilibrium, this term is zero. However, if the long run equilibrium is deviated, the error correction term will be non-zero and each variable adjusts to partially restore the equilibrium relation. The coefficient measures the speed of adjustment of the i-th endogenous variable towards the equilibrium.

The analysis is based on secondary data which are used to study the macroeconomic perspective of the study and also for cointegration analysis between foreign exchange reserve and FDI of India. Secondary data is collected from the publications of various organizations, i.e. Planning Commission of India, EPW Research Foundation, UNDP, IMF, World Bank, Directorate of Economics and Statistics and Reserve Bank of India (RBI). Data were processed and tabulated and then analyzed using statistical and econometrics tools. In this study the yearly time series data of foreign exchange reserve and FDI inflow from 1990-1991 are adjusted with the index numbers of 1993-1994 and are accordingly tested for their possible non-stationarity. The log values of the variables are used to run ADF.

Results

The time plot of the foreign exchange reserve and FDI variables over the periods concerned is presented in Figure 1.

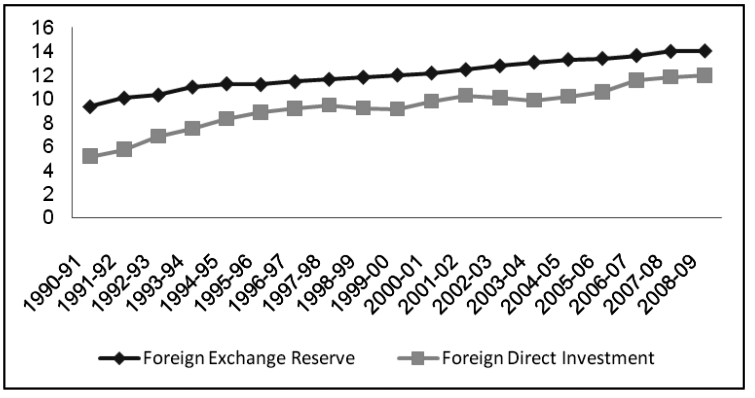

Figure 1 Time series plot of foreign exchange reserve and FDI of India

It is observed that foreign exchange reserve has been increasing over the periods especially after 2006-2007 followed by the FDI and that both the series exhibits stochastic trends. These features of the series are pointer of their non-stationarity of foreign exchange reserve and FDI which is also reflected by their respective correlograms presented in Figure 2 and 3.

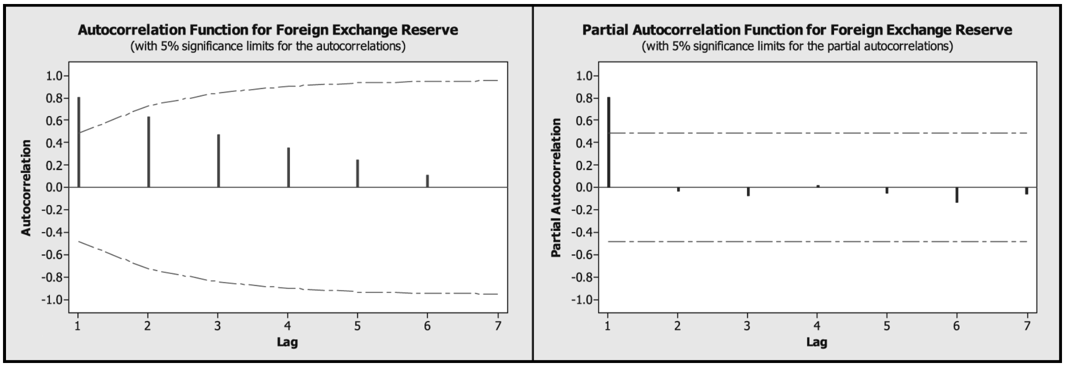

Figure 2 Correlograms of foreign exchange reserve

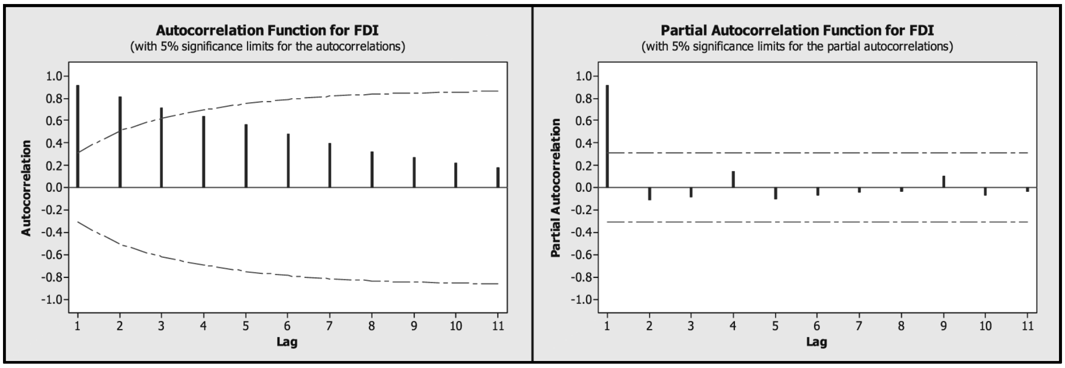

Figure 3 Correlograms of FDI

The correlograms that Autocorrelation Function (ACF) exhibits dying out patterns of spikes and the Partial Autocorrelation Functions (PACFs) contains only one significant spike which replicates the non-stationarity patterns of the series. The results of the ADF tests for the presence of unit root test in the series concerned are presented in Table 1.

Table 1 ADF Unit Root Tests on X_t and Y_t in India

Variable	Null hypothesis	Lag length (based on AIC)	ADF test statistics	Prob*	Test critical values 1%	5%	10%
X_t	X_t has a unit root (intercept)	2	-0.970042	0.7372	-3.92035	-3.06558	-2.67345
$\Delta^2 X_t$	$\Delta^2 X_t$ has a unit root (intercept)	1	-4.715931	0.0025	-3.95914	-3.08100	-2.68133
Y_t	Y_t has a unit root (intercept)	0	-2.394443	0.1568	-3.857386	-2.9369	-2.66055
$\Delta^2 Y_t$	$\Delta^2 Y_t$ has a unit root (intercept)	1	-3.571725	0.0205	-3.920350	-3.08100	-2.6813

Note: * MacKinnon (1996) one-sided p-values

The ADF test results shows that Y_t and Y_t at levels are non-stationary because the null hypothesis of unit roots is accepted at 1% level of significance with intercept in maintained equations. But the 2nd differencing of the series is stationary. Thus, the X_t and Y_t attains stationarity at their first differencing and both are integrated of order 1, i.e. both series are I(1).

Based on the Johansen cointegration test, it is found that the Indian foreign exchange reserve and FDI are integrated of order 1, i.e. both series are I(1) (Table 2 and 3).

Table 2 Unrestricted cointegration rank test (Trace)

Sample (adjusted): 1932-1940, 1947-1992

Included observations: 55 after adjustments

Trend assumption: Linear deterministic trend (restricted)

Series: X_t and Y_t

Hypothesized no. of CE(s)	Eigen value	Trace statistic*	0.05 critical value	Prob**
None***	0.433165	49.14436	54.07904	0.0042
At most 1	0.177584	19.05691	35.19275	0.7836
At most 2	0.112791	8.694964	20.26184	0.7644
At most 3	0.043411	2.352233	9.164546	0.7071

Note: * Trace test indicates no cointegration at the 0.05 level of significance

** MacKinnon-Haug-Michelis (1999) p-values

*** Denotes rejection of the hypothesis at the 0.05 level of significance

Table 3 Unrestricted cointegration rank test (Maximum Eigen value)

Hypothesized no. of CE(s)	Eigen value	Max-Eigen statistic*	0.05 critical value	Prob**
None***	0.433165	30.08745	28.58808	0.0319
At most 1	0.177584	10.36195	22.29962	0.8059
At most 2	0.112791	6.342731	15.89210	0.7486
At most 3	0.043411	2.352233	9.164546	0.7071

Note: * Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level of significance

** MacKinnon-Haug-Michelis (1999) p-values

*** denotes rejection of the hypothesis at the 0.05 level of significance

In Table 4, the results from VEC model with x_t as dependent variable show that $\hat{\beta}_{11}$ is significant and greater than zero. $\hat{\beta}_{11} > 0$ indicates that foreign exchange reserve positively related to the one period lagged value of the foreign exchange reserve itself. The VEC model based on Granger Causality/ Block Exogeneity Wald test shows insignificant inter-relationship between FDI and foreign exchange reserve. This thus implies that FDI did not cause foreign exchange reserve in India.

Table 4 Vector error correction estimates

Sample (adjusted): 4 88

Included observations: 85 after adjustments

Standard errors in ( ) & t-statistics in [ ]

Cointegrating eq:	CointEq1	
$x_t(-1)$	1.000000	
$y_t(-1)$	-1.351538	
	(0.01279)	
	[-105.660]	
C	-436.7707	
Error correction:	D(Xt)	D(Yt)
CointEq1	-0.434531	-0.289992
	(0.10260)	(0.05668)
	[-4.23518]	[-5.11612]
$D(x_t(-1))$	0.944538	0.042139
	(0.05201)	(0.08243)
	[0.00729]	[2.36733]
$D(x_t(-2))$	0.164260	0.168376
	(0.12902)	(0.07128)
	[1.27315]	[2.36228]
$D(y_t(-1))$	0.100166	0.610149
	(0.30572)	(0.00889)
	[0.32765]	[-2.34882]
$D(y_t(-2))$	1.113655	-0.254691
	(0.02601)	(0.15801)
	[-0.00779]	[-1.61188]
C	13.10815	19.70286
	(5.83644)	(3.22436)
	[2.24592]	[6.11063]
R-squared	0.894475	0.993452
Adj. R-squared	0.856151	0.948734
Sum sq. resids	372.00	257.05
S.E. equation	28.98537	16.01307
F-statistic	10.29307	6.562260
Log likelihood	40.6759	35.2381
Akaike AIC	9.639433	8.452661
Schwarz SC	9.811855	8.625083
Mean dependent	23.19294	17.01647
S.D. dependent	36.12326	18.47472
Determinant resid covariance (dof adj.)		1450.7
Determinant resid covariance		1253.3
Log likelihood		740.1167
Akaike information criterion		17.74392
Schwarz criterion		18.14624

Considering Y_t as dependent variable, $\hat{\beta}_{21}$ and $\hat{\beta}_{22}$ are statistically significant and the lagged structure are consistent. The significant F-statistics indicates that the estimated equation is a good fit and free from autocorrelation. Here, variable $\hat{\beta}_{21}$ is significant and greater than zero implying that one period lagged FDI caused current FDI inflow. Based on Granger Causality/Block Exogeneity Wald test, on the other hand, it is found that the foreign exchange Granger caused FDI in India.

The condition of the stability of the VEC model is evaluated by examining the characteristics roots of the following model:

$$A(L)\,y_t = \alpha_1 + \sum_{i=1}^{2} \gamma_{1i}\, y_{t-2} + u_{1t}$$

$$B(L)\,y_t = \alpha_2 + \sum_{i=1}^{2} \gamma_{2i}\, y_{t-2} + u_{2t}$$

The results indicate that no root lies outside the unit circle and thus VEC satisfies the stability condition (Table 5).

Table 5 VEC stability condition
Endogenous variables: X Y
Exogenous variables: C
Lag specification: 1 2

Root	Modulus
0.957570	0.957570
0.115617 - 0.698786i	0.708286
0.115617 + 0.698786i	0.708286
0.385115 - 0.259944i	0.464634
0.385115 + 0.259944i	0.464634
-0.404348	0.404348

Conclusion and Recommendations

A broader regional economic integration in Asia within the Indian framework could be an engine of growth for participating countries. India and Southeast Asian countries need to deepen their ongoing cooperation further and cooperate in shaping towards creation of an integrated Asian market. This could emerge as the third pole of the world economy after NAFTA and the EU.

The whole stochastic analysis reflects that a rise in foreign exchange reserve would cause a rise in FDI of India. Thus there is considerable contribution of foreign exchange reserve on FDI in India from 1991 to 2008. On the other hand, one period lagged FDI also helps the current period FDI sustain itself and reduce the pressure of other non-economic factors. In this regard, the current economic structure or foreign policy of India can help to encourage a more foreign exchange followed by FDI fascinated by LEP. However, closer economic ties with Southeast Asia require greater effort on India's part to liberalize trade and investment.

The rise of India has introduced new dynamism in the process of Southeast Asia's economic integration and in moving toward an Asian economic integration. India initially chose to focus on ASEAN. During the process of a closer economic integration, India faces the hurdles of lack of significant market for most Southeast Asian economies, insurgency problem, delayed infrastructural development, inefficient bureaucracy, and complex socio-cultural and ethnic frameworks. India-ASEAN economic relations improved over the years, leading to multifaceted institutional arrangements being developed by the two sides. For this, the central government and various state governments of the region must adopt a proactive role by providing infrastructure, political stability and good governance. There have been high expectations that further reforms to India's investment regime will lead to a significant rise in foreign direct investment, which in turn will have a positive impact on India's economic growth. In spite of that, free trade and a more foreign investment have a close association with India's effort to reform its political, institutional and economic institutions. The LEP is an integral part of India's reform package, and its implementation has resulted in the reorientation of India's foreign economic policy.

References

Barua. A. and S. K. Das. 2008. "Perspectives on Growth and Development in the Northeast: The Look East Policy and Beyond." **The Journal of Applied Economic Research** 4 (2): 327-350.

Georgios, K. 1997. "Economic Integration and Convergence: Lessons from Asia, Europe and Latin America." **Journal of Economic Integration** 12 (4): 34-35.