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Regional Integration and Foreign Direct Investment into ASEAN-5: An Augmented Gravity Model Analysis

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Regional integration and capital inflows can be closely related to each other. Enlarged market through regional integration is an attraction for large-scale Foreign Direct Investment (FDI) inflow to take advantage of the opportunities present in the region. The intangibles present in the host countries, the availability of skill set among member countries, investment provision in the agreements and the location of the FDI source countries, among others, play an important role in attracting FDI into the integrated region. The present paper uses a panel data augmented gravity model to study the bilateral FDI inflows into original ASEAN-5 (Association of Southeast Asian Nations) countries after the initiation of trade and investment integration. The dataset for the study consists of 85 bilateral investment country pair for the period 1995-2015 across 14 variables with total data points of 24,990. Estimation techniques such as pooled ordinary least squares, fixed effect with vector decomposition and random effects model are employed to get an efficient estimate. The paper finds that there is a steady increase in FDI inflow into ASEAN countries and ASEAN integration positively influenced FDI inflow into the region. The economic, institutional and infrastructural factors that played an important role in attracting FDI inflow into host countries include per capita income, distance, economic globalization, economic freedom, government integrity in dealing with corrupt practices and telephone density.

Introduction

Association of Southeast Asian Nations (ASEAN) is an important regional cooperation agreement in South East Asia, originally initiated with the purpose of political stability and regional harmony among conflicting nations in the region. Economic cooperation among ASEAN was brought in later to sustain the regional cooperation efforts in terms of more tangible outcomes such as consolidation of the regional market, efficient resource allocation within the region, regionalization of production networks and reap the economies of scale. Fifty years of regional integration along with an outward-oriented developmental strategy transformed ASEAN into a most dynamic region of the world today. ASEAN was the

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6th largest economy in the world in 2016 with a combined Gross Domestic Product (GDP) of $2.55 tn, encompassing 6.2% of the world GDP (ASEAN, 2017a). As the regional integration gets deepened, ASEAN attracted more Foreign Direct Investment (FDI) from the rest of the world ($96 bn in 2016) as well as from within the region (24.7% in 2016). In this backdrop, the present paper looks into the impact of ASEAN regional integration on the bilateral FDI flows of original ASEAN-5 countries using an augmented gravity model approach. The paper is organized as follows: it discusses how FDI fits into Regional Trade Agreements (RTAs), followed by a brief review of the related literature, nature of FDI flows into the ASEAN region and the gravity model analysis of the bilateral FDI flows into ASEAN-5 countries.

Role of FDI in Regional Trade Agreements

The literature on the Multinational Enterprise (MNE) activities showed that international trade and capital movements (horizontal) are substitutes to each other (Markusen and Maskus, 2001). When a country enters into an RTA, the trade and non-trade barriers are eliminated with partner countries, resulting in an outflow of tariff-jumping FDIs to other parts of the world. But this outflow may not happen if the FDI is targeted to exploit intangible assets such as technological and marketing expertise present in the host country. Regional integration enlarges the size of the host market which is an attraction for large-scale FDI inflow. The source of the FDI is important as sometimes the increases in intra-regional investment may lead to a reduction in foreign investment from outside the region if they are a substitute for each other. Similar to trade, the formation of Free Trade Agreement (FTA) can cause both investment creation and investment diversion. If an RTA causes a shift from lower-profitability investments to higher-profitability investments within the region, investment creation happens, and if there is a shift away from higher-profitability external investments to lower-profitability internal investments, investment diversion happens.

When two countries agree to form FTA, fall in trade cost benefits vertical FDI and there will be a less tariff-jumping incentive for horizontal FDI. The skill level present in the RTA partners is a very important determinant of the FDI flows. FTA should have a positive effect on FDI where the difference in skill level among the member countries is large and should have a negative effect on FDI when the difference in skill level is small. In addition to this, factors such as the scope of the RTA, the degree of liberalization, complementarity of members relative to non-member countries, exclusive investment chapters and whether trade and FDI are substitutes or complements influence the quantum of FDI flow from home country to host country.

Literature Review

There were a large number of studies that looked at the impact of RTAs on FDI inflows into the host country, its determinants, magnitude and location (Blomström and Kokko, 1997; Globerman, 2002; Dee and Gali, 2003; and Jaumotte, 2004). Blomström and Kokko (1997) contended that FDI depends on the environmental change brought about by the regional investment agreements, the locational advantage of the country or region and the

competitiveness of local firms in the integrating region. The size of the RTA positively influences the FDI inflows into a country, but educated and financially developed countries receive more shares (Jaumotte, 2004). There is complementarity of trade and investment and more plurilateral or multilateral agreements covering both trade and investment needed to attract FDI (Chaisrisawatsuk and Chaisrisawatsuk, 2007).

Many studies also looked into various determinants influencing FDI inflow into an RTA. Countries with high per capita income or growth rates attract more FDI (Worth, 1998) while FDI gains are increasing with the market size of the RTA partners and their proximity to the host country (Medvedev, 2006). The type of regional provisions of an RTA is important in getting more FDI (Velde and Bezemer, 2004), while the effects of investment-related provisions in RTAs decide the quantum of FDI flow (Velde and Fahnbulleh, 2003). Countries that are more open and whose factor proportions differ more from those in the source country are likely to benefit more from an RTA (Daude *et al.*, 2005).

Baltagi *et al.* (2005) studied the impact of RTAs on FDI between the member countries of the European Union and 10 Central and Eastern European countries and found strong evidence between RTA and FDI. Kubny *et al.* (2008) examined the emerging area RTAs such as MERCOSUR, ASEAN, SAARC, and SADC and found that country-specific factors were more important as a stimulus to FDI than regional integration *per se*. Tayyebi and Hortamani (2005) studied FDI flows into EU and ASEAN+3 and found that there is investment creation in both blocks. North American multinationals have engaged in locational reshufflings post-NAFTA, whereas Latin American FDI is still engaged in market-seeking investments with some rationalization in MERCOSUR. Witkowska (2007) examined the RTA-FDI relationship in EU, NAFTA and AFTA under the process of globalization and found simultaneous liberalization of goods and FDI happening.

The gravity model is widely used to understand the FDI inflows into an RTA (Otsubo and Umemura, 1998; Brenton *et al.*, 1999; Görg and Greenaway, 2002; López and Orlicki, 2005; Park and Park, 2007; Talamo, 2007; and Paez, 2008). Reform-creating RTA membership, larger market size, better-skilled labor, and lower trade costs all contribute positively and significantly to inward FDI stock (Park and Park, 2007). Based on FTAA and the EU-MERCOSUR agreement, López and Orlicki (2005) found that regional integration agreements, in general, induce higher FDI inflows into host member countries. RTAs in the region foster trade and divert FDI in the Andean Community of Nations (ACN) despite investment protection (Paez, 2008), whereas corporate governance is an important determinant of FDI flows (Talamo, 2007).

FDI inflow into ASEAN countries after the regional integration was subjected to many empirical studies (Uttama, 2005; Liu, 2006; Davies *et al.*, 2007; Ismail *et al.*, 2007; Kim and Oh, 2007; Nathalie *et al.*, 2007; Gander *et al.*, 2009; and Karimi *et al.*, 2009). Uttama (2005) found a strong support to the horizontal model in favor of the Knowledge-Capital (KC) model. Ismail *et al.* (2007) found the determinants of FDI in Southeast Asia. Nathalie *et al.* (2007) in their paper found that aggregate FDI and trade are complementary in nature in

Southeast Asia. Kim and Oh (2007) found that a regional FTA would increase regional openness. Karimi *et al.* (2009) found that Singapore is the most attractive destination for investment among ASEAN countries. Liu (2006) showed that the formation and implementation of RTAs have an important impact on the changes of FDI in China. Davies *et al.* (2007) highlighted the controversies in the literature due to differences in datasets and said they can be resolved by using panel fixed effects with vector decomposition estimation technique.

Better institutions have overall a positive and economically significant effect on FDI (Daude and Stein, 2007); particularly institutional factors such as the unpredictability of laws, regulations and policies, excessive regulatory burden, government instability and lack of commitment play a major role in deterring FDI. Kreinina and Plummer (2008) studied the effect of regional economic integration on FDI flows towards EU, NAFTA, MERCOSUR, and ASEAN, and found that regional integration has had a positive and significant effect on FDI and investment creation exceeds investment diversion. Ismail (2009) found that apart from the traditional variables, other macroeconomic factors such as lower inflation rate, slightly higher exchange rate and good management of the government budget are very important in attracting FDI into the host country. Ismail *et al.* (2009) examined the two main effects, namely, the effects of regional economic integration, intra-regional and extra-regional FDI flows and found that ASEAN-5 invested in each other less than they invested in the new ASEAN members. Also, the US and Japan invested more in ASEAN-5 than in the new ASEAN member countries.

Bassem and Samir (2015) estimated the impact of the recent economic crisis on FDI and the success of the RTAs using a static and dynamic gravity model for 14 investment partners and 39 host countries during the period 1990-2011. The study looked into the endogenous nature of the effects of integration and the existence of the dynamic effect. Kawai and Naknoi (2015) strongly argued for greater integration between ASEAN and rest of Asia while deepening its internal integration and maintaining ASEAN centrality. Hoang and Bui (2015) found out the market size, trade openness, quality infrastructure, human capital, labor productivity are the main factors that have positive impacts on FDI inflows.

FDI Inflows and Intra-ASEAN FDI

Southeast Asia has emerged as one of the most dynamic regions of the world in terms of economic activity and the ASEAN countries received net FDI inflows worth $96 bn, in the year 2016. The important sources of ASEAN FDI include US, Japan, China, Hong Kong, Korea, Australia, and India. The cumulative FDI for the period 2010-2016 showed that US was the largest contributor with $89 bn followed by Japan ($87.44 bn), China ($37.80 bn) and Hong Kong ($30.98 bn). FDI from India for the period is showing a declining trend in the recent years ($1.05 bn in 2016) (ASEAN, 2017b).

Table 1 provides the details of FDI inflows into ASEAN from the world and intra-ASEAN FDI. Singapore is the largest recipient of FDI from the world, followed by Indonesia, Malaysia, Vietnam, and Thailand. The less developed regions of ASEAN such Brunei,

Cambodia, Lao PDR and Myanmar received relatively insignificant FDI inflows. With regard to intra-ASEAN FDI receipt, Indonesia was getting the maximum FDI, followed by Singapore, Malaysia, and Vietnam. The share of intra-ASEAN FDI in total FDI is higher for relatively

Table 1: Total and Intra-Regional FDI Received by ASEAN Countries

Host Country	World		ASEAN		Intra-ASEAN FDI Share in Total FDI	
	2016	Total 2012-16	2016	Total 2012-16	2016	For the Period 2012-16
Brunei Darussalam	–150.44 [–0.16]	2,179.34 [0.37]	–64.66 [–0.27]	136.68 [0.13]	42.98	6.27
Cambodia	2,279.67 [2.36]	8,539.2 [1.45]	635.77 [2.65]	2,255.53 [2.08]	27.89	26.41
Indonesia	3,649.08 [3.77]	79,683.36 [13.53]	9,230.93 [38.55]	47,852.27 [44.07]	252.97	60.05
Lao PDR	1,075.69 [1.11]	3,789.13 [0.64]	196.64 [0.82]	734.66 [0.68]	18.28	19.39
Malaysia	9,880.80 [10.22]	53,552.77 [9.09]	1,890.28 [7.89]	11,857.2 [10.92]	19.13	22.14
Myanmar	2,989.48 [3.09]	10,735.28 [1.82]	1,682.89 [7.03]	5,935.16 [5.45]	56.29	55.29
Philippines	7,933.06 [8.20]	26,043.59 [4.42]	533.98 [2.23]	831.84 [0.77]	6.73	3.19
Singapore	53,912.20 [55.74]	310,469.7 [52.71]	5,775.60 [24.12]	28,149.9 [25.92]	10.71	9.07
Thailand	2,553.17 [2.64]	43,135.87 [7.32]	1,759.85 [7.35]	1,489.66 [1.37]	68.93	3.45
Vietnam	12,600.00 [13.03]	50,868.08 [8.64]	2,306.61 [9.63]	9,348.29 [8.61]	18.31	18.38
ASEAN	96,722.73 [100.00]	588,996.3 [100.00]	23,947.91 [100.00]	108,591.2 [100.00]	24.76	18.44

Source: Computed from ASEAN Economic Progress, 2017

less developed countries of the group, namely: Indonesia, Thailand, Myanmar, Brunei, and Cambodia. A large proportion of the intra-regional FDI originated from Singapore which was getting large FDI from the rest of the world.

Generally, FDI flows into those sectors which have high growth potential, greater efficiency and comparative advantage. The large sectoral inflow of FDI into ASEAN shows the most competitive sectors of the region. The cumulative FDI inflow into ASEAN countries for the period 2012-2016 showed that financial and insurance sector got maximum FDI from the world, followed by manufacturing, wholesale and retail trade, repair of motor vehicles and motorcycles, and real estate. Intra-ASEAN FDI was primarily going to sectors such as manufacturing, financial and insurance services, real estate, and agriculture. The sectors that recorded large share of intra-ASEAN investment are agriculture, real estate, manufacturing, administrative and support services, human health and social work, accommodation and food service.

Data and Methodology

The gravity model framework was used to understand the effect of regional integration on the bilateral FDI inflows of ASEAN countries. The gravity model which was traditionally used to explain bilateral trade flows is extended to investment flows as gravity model variables exert great influence in attracting FDI in the host countries. The basic gravity model uses variables such as GDP, Per Capita Income (PCI), distance and regional dummy and a positive and significant coefficient of RTA dummy means enhanced FDI due to RTA. The theoretical basis for a gravity model of FDI was proposed by Head and Ries (2008); since then, a number of papers have used the model for explaining FDI flows.

The basic gravity model can be stated as follows:

$$\ln(1 + FDI_{ijt}) = \beta_0 + \beta_1 \ln(GDP_{it}) + \beta_2 \ln(GDP_{jt}) + \beta_3 \ln(PCI_{it}) + \beta_4 \ln(PCI_{jt}) + \beta_5 PCI\ Diff_{ij} + \beta_5 \ln(Dis_{ij}) + \beta_6 ASEAN_{ij} + u_{ijt} \quad ...(1)$$

where

FDI_{ijt} = FDI inflow to host country '*i*' from source country '*j*' in time '*t*'.

GDP_{it} = GDP of host country in time '*t*'.

GDP_{jt} = GDP of source country in time '*t*'.

PCI_{it} = Per capita income of host country in time '*t*'.

PCI_{jt} = Per capita income of source country in time '*t*'.

$PCI\ Diff_{ij}$ = Difference in per capita income of host and source countries.

Dis_{ij} = Geographical distance between host country and source country.

$ASEAN_{ij}$ = Dummy if host and source country belong to ASEAN.

U_{ijt} = Error term.

There is an estimation problem in taking log FDI as the dependent variable as many observations will have zero values or negative values (net outflows). In order to overcome this problem, the dependent variable is expressed as $\ln(1 + FDI)$, as suggested by Eichengreen and Irwin (1995) in their treatment of zero trades. In this way, large values of FDI, $\ln(1 + FDI) \approx \ln(FDI)$. GDP of the host country and source country represent economic mass in the gravity model and are expected to have a 'positive' sign. The sign of the difference in GDP per capita is unclear, depending on whether FDI flows are vertical or horizontal in nature. The coefficient of the distance term is expected to have 'negative' sign as greater distance between host and source country makes the supervision and management of FDI difficult and hence discourage it. A positive and significant coefficient for the ASEAN dummy reveals ASEAN integration encourages increased FDI inflow among member countries.

To improve the explanatory power of the basic gravity model, it was augmented by introducing institutional and infrastructural variables such as globalization index, economic freedom, telephone density and government integrity to see their effect on the bilateral FDI. Blonde and Stein (2007), Anghel (2005) and Bénassy-Quéré *et al.* (2007) have discussed and explored in some detail the importance of institutional variables in determining FDI flows and Hur *et al.* (2007) have analyzed the importance of institutions in the case of M&A deals. The variables used in the study to represent institutional variables are economic globalization, composite economic freedom index, investment freedom index, government integrity index and corporate tax structure in the host country. The infrastructural development in the host country is represented by the telephone density in that country. If a country scores a higher point in the economic globalization index, then it can attract higher volumes of FDI. In the same reasoning, higher scores in the composite index of economic freedom, which take information from trade freedom, investment freedom, government integrity index and others, also encourage the enhanced flow of FDI into the host country. A higher value for telephone density shows the level of infrastructural development in the country and well-developed quality infrastructure attracts more FDI into the country. On the contrary, a higher corporation tax imposed by the host country acts as a deterrent in attracting FDI into the host nation.

The augmented model used in the study is represented as follows:

$$\begin{aligned}\ln(1 + FDI_{ijt}) = {} & \beta_0 + \beta_1 \ln(GDP_{it}) + \beta_2 \ln(GDP_{jt}) + \beta_3 \ln(PCI_{it}) \\ & + \beta_4 \ln(PCI_{jt}) + \beta_5 \ln(dpcgdp) + \beta_6 \ln(Dis_{ij}) + \beta_7 \ln EcoGlo_{it} \\ & + \beta_8 \ln EcoFree_{it} + \beta_9 \ln InvtFree_{it} + \beta_{10} \ln GovtIntigrity_{it} + \beta_{11} \ln Tel_{it} \\ & + \beta_{12} \ln CorpTax_{it} + \beta_{13} ASEAN_{ij} + u_{ijt} \qquad \ldots(2)\end{aligned}$$

where

$EcoGlo_{it}$ = Economic globalization in host country in time 't'.

$EcoFree_{it}$	=	Economic freedom in host country in time *'t'*.
$InvtFree_{it}$	=	Investment freedom in host country in time *'t'*.
$GovtIntegrity_{it}$	=	Government's approach to corrupt practices in host country in time *'t'*.
Tel_{it}	=	Telephone density in the host country.
$CorpTax_{it}$	=	Corporation tax imposed by the host country.

The dataset for the analysis consists of 85 bilateral investment country pairs collected for a period of 21 years. The host countries of FDI are five major economies of ASEAN, namely, Indonesia, Malaysia, Philippines, Singapore and Thailand. Source countries of FDI are selected based on the volume of investment flowing into ASEAN from the prominent countries. These include Japan, US, Canada, France, Germany, Italy, Netherlands, UK, China, India, Korea, Hong Kong, Taiwan and five members of ASEAN, namely, Indonesia, Malaysia, Philippines, Singapore and Thailand. Each ASEAN member has 17 bilateral country pairs and the data is collected for 21 years from 1995 to 2015. There is a total of 1,785 bilateral investment flow against which information is also collected on 14 variables and the total data points of 24,990 are used in the study.

Data for the model is collected from diverse sources. GDP and per capita income of the host and source country are obtained from the *World Development Indicators* (WDI) of the World Bank. The distance between the host and source country and countries with continuous border is taken from the database maintained by Jon Haveman. Globalization index is taken from KOF database. KOF maintains data for three forms of globalization, namely, economic globalization, social globalization and political globalization and a composite index of globalization index. The study considers economic globalization index from the KOF database. Data for economic freedom is collected from the database maintained by the Heritage Foundation. Heritage Foundation constructs economic freedom index for different countries in the world on various parameters. The study considered only economic freedom, investment freedom and government integrity for the selected countries. Telephone density of the host country is collected from the database of WDI of the World Bank. Corporation tax imposed by host countries is collected from KPMG's corporate and indirect tax rate survey 2017. Three different panel data estimation techniques were used, namely: Pooled Ordinary Least Squares (POLS), Fixed Effect with Vector Decomposition (FEVD) and Random Effects Model to get an efficient estimate.

Results and Discussion

The results from the POLS method of the augmented model show that important variables are significant and show expected signs (Table 2). GDP and per capita income of the source

Table 2: Results of the Augmented Gravity Model

Independent Variable	Pooled OLS		Fixed Effect		Random Effect	
	Coefficient	Std. Error	Coefficient	Std. Error	Coefficient	Std. Error
GDP Host	0.3378	(0.1835)	–3.4343***	0.2279	0.0891	0.2211
GDP Source	0.5601***	(0.0645)	–1.4396***	0.1027	0.3784***	0.1236
PC Host	–0.2220	(0.2045)	4.4907***	0.2700	0.1163	0.2373
PC Source	0.6469***	0.0569)	2.4122***	0.0906	0.6264***	0.1105
PCDiff	0.1202***	(0.0502)	0.0184	0.0441	0.0604	0.0827
Distance	–1.0644***	(0.0977)	0.2260***	0.1018	–0.8965***	0.2036
Eco.Globalization Index	–1.0171	(0.7321)	–0.9497	0.6405	–2.0116***	0.7072
Eco. Freedom	10.4474***	(1.8102)	11.6992***	1.5848	12.1347***	2.0458
Govt. Integrity	–1.5691***	(0.3243)	–1.4730***	0.2838	–1.5523***	0.3165
Invt. Freedom-	–0.8987***	0.3665	–1.7180***	0.3226	–1.5239***	0.3741
Telephone	–0.9767***	(0.1695)	0.4343***	0.1501	0.6010***	0.1786
Corporation Tax	0.4096	0.7102	–0.2389	0.6220	0.4068	0.6431
ASEAN Dummy	0.2309	(0.1941)	0.4968***	0.1702	0.0198	0.4177
Constant	–50.9996***	10.7395	36.3635***	10.1163	–42.6741***	11.5038
Adj. R^2	29.80		0.4626		0.2939	
$F(13, 1771)$	59.25		$F(14,1770)$	110.69		

Note: *** indicates the variable is highly significant at 1% level of significance.

country and per capita income difference have positive and highly significant influence on the FDI inflow into the host countries. One unit change in the GDP of source country increases FDI in the host country by 0.56. Also, increase in per capita income in the source country increases FDI flow in the host country. As expected distance is negatively related, while economic globalization has a negative coefficient and is not significantly impacting the FDI inflow. Other significant variables which have a significant impact on the FDI inflow into the host countries include economic freedom, government integrity, investment freedom and telephone density. Corporate tax has a positive but insignificant influence on the FDI inflow. The noticeable result from the model is the RTA dummy which is positive but not significant which shows that the ASEAN integration is not a significant factor attracting inward FDI into ASEAN-5 countries.

The results of fixed effect gravity model show that GDP host, GDP source, per capita income host, per capita income source, distance, economic freedom, government integrity,

investment freedom, telephone density and ASEAN dummy are highly significant in explaining FDI inflow in ASEAN (Table 2). The coefficients of the GDP variables are negative and of per capita income are positive showing that the per capita income of the host and source countries are significant in determining the investment flows. There is the marked deviation in the sign of the distance variable showing more investment are coming from the far away rich economies than the nearby poorer countries. EU, US and Japan continues to be the dominant source of FDI to ASEAN and intra-ASEAN FDI is not very substantial over the period of time.

The positive coefficient of economic freedom explains the well-documented relationship between this variable and FDI. If a country is well-integrated into the global economic structure with a relative ease of the movement of resources, commodities and capital, they tend to attract more foreign capital. Countries with greater economic freedom with less policy-led distortions in the market and larger mobility can attract more investment. The coefficient of telephone density is positive and coefficients of government integrity and investment freedom are negative in this model. The striking feature of the model is that ASEAN dummy is positive and significant, emphasizing the favorable impact of ASEAN integration in attracting FDI.

According to the results of random-effects model, variables such as GDP source country, per capita income of the source country, distance, economic globalization, economic freedom, investment freedom, government integrity and telephone density are highly significant in explaining FDI inflows into ASEAN. But economic globalization, investment freedom and government integrity have a negative sign showing the inverse relationship between these variables and FDI in the model. An interesting result of the model is that ASEAN dummy is not significant even though it has a small positive coefficient.

Hausman Specification Test

Hausman specification test is used for model selection between fixed effects model and random effects model of panel data estimation. When the null hypothesis is accepted, there is no systematic difference in the coefficients and the random effects model is preferred. When the null hypothesis is rejected, specific effects are correlated to explanatory variables and the fixed effects model is preferred over random effects model. Higher Hausman value means selection of fixed effects model over the random effects model.

$$H = (b - B)'[(V\_b - V\_B)\ \hat{}\ (-1)](b - B)$$

$$= 601.22 > \text{table value } (27.688) \qquad \text{Prob.} > \text{chi2} = 0.00$$

where

b is the coefficient vector from the consistent estimator;

B is the coefficient vector from the efficient estimator;

V_b is the covariance matrix of the consistent estimator; and

V_B is the covariance matrix of the efficient estimator.

The computed H value is higher than the table value suggesting selection of fixed effects model over random effects model.

The analysis of results reveals that augmented gravity model gives better parameters and economic relationship between variables with higher coefficient value and expected signs. Among the alternative estimation techniques, the FEVD gives high coefficient for ASEAN dummy which is highly significant at 1% level. The Hausman's specification test for model selection validates this.

Conclusion

The results of the study are in tune with the general consensus found in the literature that regional economic integration positively influences the FDI flow into the union. There is a steady increase in FDI flow into ASEAN countries with Singapore receiving the largest share and Indonesia, Malaysia, Vietnam and Thailand improving their shares recently. The US, Japan and China are the major source of FDI to the ASEAN countries, while there is a steady improvement in intra-ASEAN FDI share. The service sector is the major recipient of FDI, followed by manufacturing; and within service sector, financial services, trade/commerce and real estate are attracting more FDI. Indonesia, Singapore, Malaysia and Vietnam are the major recipients of intra-ASEAN FDI. But more than three-fourths of the intra-ASEAN FDI is originating from Singapore and acting as a driver of ASEAN development. FEVD proved to be a better method of estimation as compared to other methods with better parameters and established relationships. Hausman specification test validates the model selection.

A positive and highly significant ASEAN dummy emphasizes that ASEAN regional integration positively influences FDI inflow into the region. The important factors influencing FDI in the host country are per capita income, distance, economic globalization, economic freedom, government integrity in dealing with corrupt practices, and telephone density. Tariff levels are low in ASEAN and tariff-jumping FDI is a remote possibility. The FDI entering into ASEAN countries are mainly due to better infrastructure, institutional quality and policy coherence and to take advantage of the dynamic gains present in the region as a result of integration.❖

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