FOREIGN DIRECT INVESTMENT IN SOUTHEAST ASIA: IS MALAYSIA FALLING BEHIND?

EE 462 Development Macroeconomics

Semester 1/2021

Reference: Athukorala, P-C. and Wagle, S. (2011). Foreign direct investment in Southeast Asia: Is Malaysia falling behind? *ASEAN Economic Bulletin*, *28(2)*, 115-133.

Summary (1)

- What are the motivations of this study?
  - FDI as growth engine in developing countries
  - Trends of decreasing FDI inflows in Malaysia – worry about the country being caught in MIT
  - Loss of Malaysia's relative attractiveness to foreign investors
- What is the objective?
  - to examine patterns and determinants of FDI in Malaysia from a comparative SE Asia perspective
- What is the method and the scope of the analysis?
  - use gravity model to examine FDI flows from OECD countries to 5 ASEAN countries

Summary (2)

- What are the main findings?
  - No evidence that FDI inflows to China has a negative impact on FDI inflows to Malaysia (or other Southeast Asian countries)
  - Indeed, Malaysia benefits from a complementary FDI relationship with China as a favoured location of high-end tasks (usually final assembly) within global production networks.

TABLE I

FDI in ASEAN Countries, 1985–2009

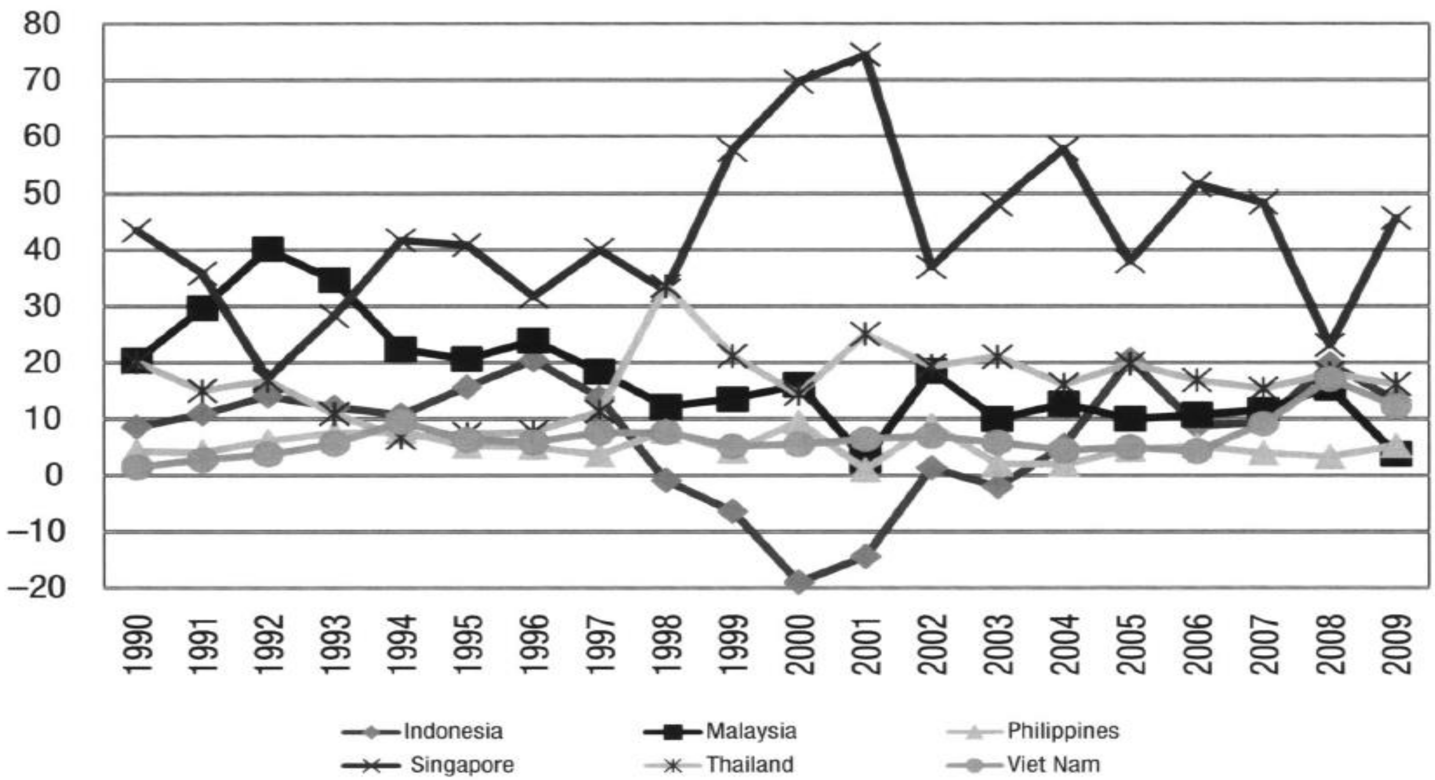
Region/economy	*1985–89*	*1990–96*	*1997–99*	*2000–04*	*2005*	*2006*	*2007*	*2008*	*2009*
(A) Volume, US$ million									
ASEAN-6 total	4,878	18,406	28,485	24,507	40,734	56,408	73,971	47,289	36,806
Indonesia	442	2,518	895	1,160	8,336	4,914	6,928	9,318	4,877
Malaysia	799	4,897	4,311	2,928	4,064	6,060	8,538	7,318	1,381
Philippines	449	1,064	1,416	1,031	1,854	2,921	2,916	1,544	1,948
Singapore	2,427	6,387	12,548	14,188	15,460	29,056	35,778	10,912	16,809
Thailand	744	2,038	5,822	4,584	8,067	9,517	11,355	8,544	5,949
Viet Nam	4	1,005	1,924	1,370	2,021	2,400	6,739	8,050	4,500
(B) Host-country composition (%)									
ASEAN-6 total	100	100	100	100	100	100	100	100	100
Indonesia	9.1	13.7	3.1	–4.7	20.5	8.7	9.4	19.7	13.3
Malaysia	16.4	26.6	15.1	11.9	10.0	10.7	11.5	15.5	3.8
Philippines	9.2	5.8	5.0	4.2	4.6	5.2	3.9	3.3	5.3
Singapore	49.8	34.7	44.1	57.9	38.0	51.5	48.4	23.1	45.7
Thailand	15.2	11.1	20.4	18.7	19.8	16.9	15.4	18.1	16.2
Viet Nam	0.1	5.5	6.8	5.6	5.0	4.3	9.1	17.0	12.2
(C) Percentage of gross domestic capital formation (GDCF)									
ASEAN-6 total	7.4	11.5	18.9	16.0	19.5	22.4	23.9	12.5	9.4
Indonesia	1.8	5.6	0.2	–4.0	12.3	5.6	6.4	6.6	2.9
Malaysia	8.7	19.1	17.0	11.9	14.4	18.6	21.2	16.8	3.5
Philippines	6.8	7.9	9.2	7.1	13.0	17.7	13.8	6.3	8.2
Singapore	31.7	31.5	39.7	56.4	60.0	94.6	89.3	20.8	32.9
Thailand	3.9	4.2	20.5	14.5	15.8	16.4	17.4	11.4	9.2
Viet Nam	0.6	32.7	26.4	12.2	11.6	11.8	24.8	25.5	12.8
Memo items:									
ASEAN share (%) in FDI inflows to,									
Developing countries	4.6	11.6	5.2	4.2	6.5	5.8	5.1	4.6	6.5
Developing countries excluding China	4.7	13.4	5.6	4.5	7.4	6.3	5.4	5.2	7.8
Developing Asian countries	40.4	42.2	28.1	20.1	23.8	26.1	28.6	16.7	15.8
Developing Asian countries excluding China	55.5	67.8	50.2	36.7	41.2	39.4	42.2	27.2	26.7

SOURCE: Compiled from UNCTAD, *World Investment Report* database <www.unctad.org>.

What's the trend of FDI inflows to ASEAN?

Which country is the largest recipient of FDI in the region?

FIGURE 2
Country Composition of FDI in ASEAN, 1990–2009 (%)

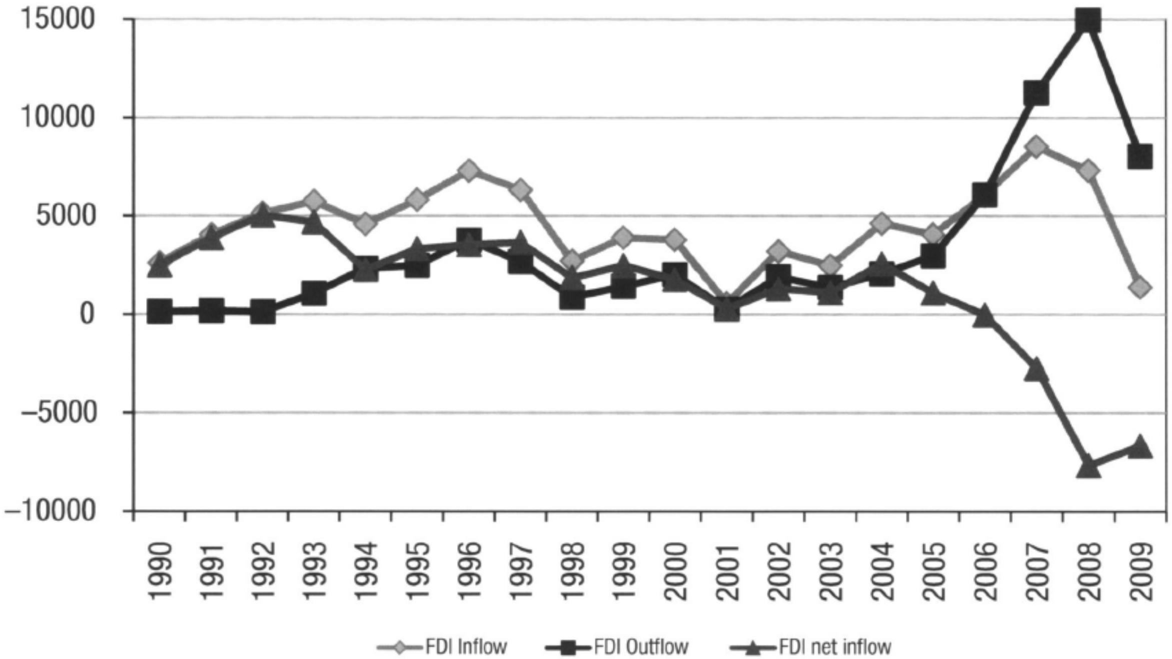


sed on data compiled from UNCTAD, *World Investment Report* database.

Which countries' FDI inflows were affected by the financial crisis in 1997?

Every countries except than the Philippines and Thailand.

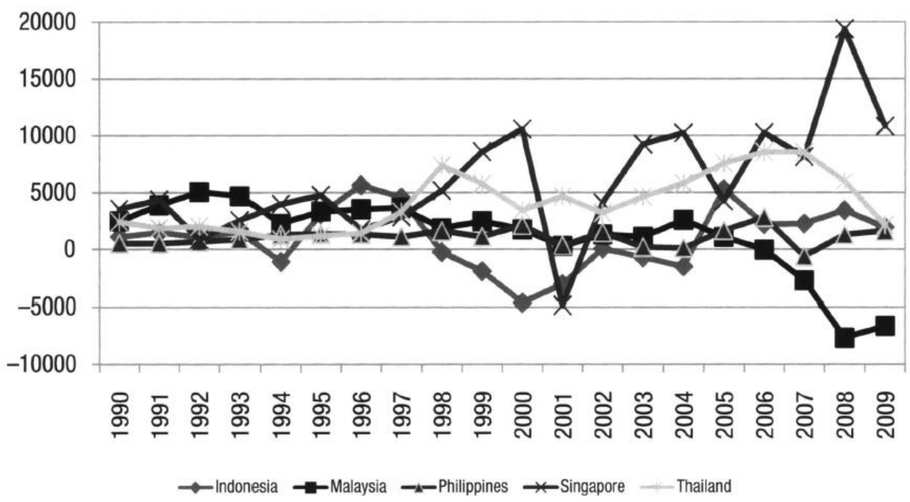
FIGURE 3
FDI in Malaysia: Inflow, Outflow and Net Inflow,[1] 1990–2009



Which explains the decreasing trend of FDI inflow in Malaysia after 2005?

Malaysia is not attractive enough compared to other developing countries. This may stem from the skeptics around NEM (New Economic Model) measures.

FIGURE 4
Net FDI in ASEAN, 1990–2009



After 2005, does net FDI in Malaysia differ from net FDI in other countries? How?

Yes, as it appears to be a decreasing trend after 2005. This is different from Indonesia, Singapore and Thailand (However, it is quite similar to the Philippines.)

Net FDI in Malaysia decreases from 2005 to 2008 then slightly increase in 2009.

This could happen because after 2005, outward FDI from Malaysia has surpassed FDI inflow consistently. Total outflow amounted of $40.4 billion and total inflow amounted of $23.3 billion.

Analysis of the Determinants of FDI

- **What is the hypothesis?**
  - FDI between two countries **increases with joint mass (GDP)** and **decreases with resistance** posed by geographic and policy barriers
  - The standard resistant is distance
- **What are the main variables of interests?**
  - FDI – related regulations and institutions
  - Education level
  - Innovation capability
- **What are other explanatory variables?**
  - FDI to China and (log of Malaysia*Log of FDI into China)

$$
\begin{aligned}
&\textit{Log of (FDI)}_{ijt} \\
&\quad = \beta_0 + \beta_1\,\textit{(Investment Policy)}_{it} \\
&\quad + \beta_2\,\textit{(Education)}_{it} + \beta_3\,\textit{(Innovation)}_{it} \\
&\quad + \beta_4\,\textit{(Governance)}_{it} + \beta_5\,\textit{(Log of Wage)}_{it} \\
&\quad + \beta_6\,\textit{(Log of GDP)}_{it} + \beta_7\,\textit{(Log of GDP)}_{jt} \\
&\quad + \beta_8\,\textit{(Log of Distance)}_{ij} + \beta_9\,\textit{(Colony)}_{ij} \\
&\quad + \beta_{10}\,\textit{(Language)}_{ij} \\
&\quad + \beta_{11}\,\textit{(Log of FDI into China)}_{jt} \\
&\quad + \beta_{12}\,\textit{(Malaysia Dummy)}_{i} \\
&\quad + \beta_{13}\,\textit{(Malaysia * Log of FDI into China)}_{jt} \\
&\quad + \beta_{14}\,\textit{(Inverse Mills Ratio)} \\
&\quad + \textit{Country Dummies} \\
&\quad + \textit{Period Dummies} + \varepsilon_{ij}
\end{aligned}
$$

Why do the authors include FDI into China as another control variable?
Test whether FDI into ASEAN is crowed out by FDI to China
Widespread concern that the emergence of China, an attractive investment location, would erode Malaysia's prospect for attracting FDI ("China Fear").

Estimation Equation

$$
\begin{aligned}
&Log\ of\ (FDI)_{ijt} \\
&\quad = \beta_0 + \beta_1\ (Investment\ Policy)_{it} \\
&\quad + \beta_2\ (Education)_{it} + \beta_3\ (Innovation)_{it} \\
&\quad + \beta_4\ (Governance)_{it} + \beta_5\ (Log\ of\ Wage)_{it} \\
&\quad + \beta_6\ (Log\ of\ GDP)_{it} + \beta_7\ (Log\ of\ GDP)_{jt} \\
&\quad + \beta_8\ (Log\ of\ Distance)_{ij} + \beta_9\ (Colony)_{ij} \\
&\quad + \beta_{10}\ (Language)_{ij} \\
&\quad + \beta_{11}\ (Log\ of\ FDI\ into\ China)_{jt} \\
&\quad + \beta_{12}\ (Malaysia\ Dummy)_{i} \\
&\quad + \beta_{13}\ (Malaysia * Log\ of\ FDI\ into\ China)_{jt} \\
&\quad + \beta_{14}\ (Inverse\ Mills\ Ratio) \\
&\quad + Country\ Dummies \\
&\quad + Period\ Dummies + \varepsilon_{ij}
\end{aligned}
$$

Explain results in Table 2

TABLE 2
Determinants of FDI in ASEAN-5: Regression Results
(Dependent variable: FDI inflow in log)

	(1)	*(2)*
Investment policy	0.032**	0.032**
	(0.009)	(0.009)
Education	–0.052	–0.048
	(0.040)	(0.039)
Innovation	0.012*	0.012*
	(0.006)	(0.006)
Governance quality	–0.148	–0.148
	(0.154)	(0.154)
Monthly wages (log)	2.385***	2.3894***
	(0.508)	(0.511)
Host country GDP (log)	–2.275	–2.453
	(1.648)	(1.712)
Source country GDP (log)	0.227	0.238
	(0.214)	(0.213)
Bilateral distance (log)	–1.154**	–1.128**
	(0.310)	(0.300)

Determinants of FDI in ASEAN-5: Regression Results
(Dependent variable: FDI inflow in log)

	(1)	*(2)*
Common language	1.391**	1.369**
	(0.377)	(0.372)
Colony	0.821	0.838
	(0.546)	(0.528)
FDI into China (log)	0.713***	0.683***
	(0.089)	(0.098)
FDI_China*Malaysia	0.006	0.006
	(0.054)	(0.053)
Inverse Mills Ratio	0.427**	
	(0.146)	
Constant	46.326	50.759
	(42.380)	(43.972)
N	315	315
R-sq.	0.616	0.615

NOTE: Standard errors in parentheses, clustered by host country; * p<0.1, ** p<0.05, *** p<0.01.

Explanation of the results in Table 2

- Investment policy variable is highly significant with FDI inflow
  - 10% increase in investment policy -> an average inflow of over US$34M from an OECD country.
- Innovation variable is significant with positive impact on FDI inflow.
- Monthly wage has highly significant and has positive impact
  - This estimate is consistent with the view that FDI inflow to ASEAN is not determined local advantages.
- The coefficient of the distance variables is negative with highly significant in bilateral distance between host and source can lead to decrease in FDI inflow.
- Sharing a common language has a significant positive impact on FDI inflow.
- The coefficient FDI into China is highly significant with positive relationship that can imply a high complementarity btw China and the major country in Southeast Asia.

What can you say about the openness to foreign equity ownership in Malaysia, compared to other countries?

TABLE 3
Openness on Foreign Equity Ownership (%)

	Mining, oil and gas	*Agri-culture and forestry*	*Light Manu-facturing*	*Telecom*	*Electricity*	*Banking*	*Insurance*	*Transport*	*Media*	*Construction, tourism and retail*	*Health care and waste management*
Indonesia	97.5	72	68.8	57	95	99	80	49	5	85	82.5
Malaysia	70	85	100	39.5	30	49	49	100	65	90	65
Philippines	40	40	75	40	65.7	60	100	40	0	100	100
Singapore	100	100	100	100	100	100	100	47.4	27	100	100
Thailand	49	49	87.3	49	49	49	49	49	27.5	66	49

Source: World Bank (2010).

Comparing to the other major ASEAN economies, Malaysia is very well-opened to Foreign Ownership in light-manufacturing and transport industries as its openness on foreign ownership are both 100% comparing to other sectors that score below 100.

While in Philippines, they are better at, for example, Insurance, and Indonesia is better at Mining. Singapore, as the largest FDI recipient in the region, obviously has 100% openness on foreign equity ownership in nine out of eleven sectors.

- Which countries have "better environment" to start a business?

Singapore

- To start the business
  - required 9 days
  - 4 procedures.
  - 78.9 % ease of establishment

TABLE 4
Indicators of Starting a Foreign Business and Arbitrating Disputes

	Starting a foreign business			Arbitrating commercial disputes		
	No. of procedures	No. of days	Ease of establishment index[a]	Strength of laws index[a]	Ease of process index[a]	Extent of judicial assistance index[a]
Indonesia	12	86	52.6	95.4	81.8	41.3
Malaysia	11	14	60.5	94.9	81.8	66.7
Philippines	17	80	57.9	95.4	87	33.7
Singapore	4	9	78.9	94.9	81.8	93.5
Thailand	9	34	60.5	84.9	81.8	40.8

NOTE: a. The index varies between 0 (worst score) and 100 (best score).

Singapore has the highest percentage among 4 countries in ease of establishment to start a business which accounts 78.9 percent .

- How is Malaysia's investment policy?

While the light-industries are fully open to foreign ownership,

- other sectors still stick to the Bumiputera law that allows the Malay ethnic to have more benefits and rights

- The government-linked companies are also under the dualism policy regimes, which means the national and international laws are separated system. This shows the more difficulty to start a foreign business.

TABLE 5

FDI in Malaysia by industry/sector, 1985–2010[a]

Year	*1985*	*1993*	*1995*	*2000*	*2005*	*2006*	*2007*	*2008*	*2009*	*2010*[c]
(a) Volume, US$ million										
Manufacturing	343	2,226	3,129	6,353	6,894	11,208	16,714	17,033	8,501	4,318
Food	24	72	48	278	385	442	721	803	576	591
Textiles and clothing	13	185	189	312	99	224	424	118	97	42
Paper, printing and Publishing	41	48	39	401	252	188	876	263	147	62
Chemicals and chemicals products	12	685	729	254	454	2,493	1,149	767	2,447	433
Petroleum and gas	0	0	157	618	194	3,118	4,183	794	344	114
Rubber and rubber products	12	15	31	248	204	195	154	208	64	251
Non-metallic mineral products	45	45	501	465	243	318	393	366	1,873	227
Basic Metal products	60	306	189	207	846	743	3,682	7,439	755	557
Fabricated metal products	18	37	114	108	200	361	199	310	400	482
Electrical & electronic products	45	711	948	3,206	3,642	2,733	4,570	5,131	1,386	1,217
Transport equipment	75	123	184	256	374	395	362	834	411	343
Other sectors[b]	43	217	522	2,571	1,306	1,330	1,412	1,092	1,030	1,062
Total	386	2,442	3,651	8,845	8,201	12,538	18,126	18,125	9,530	5,400

What is the pattern of FDI in Malaysia? Which industries play important role? Any change over time?

Every industry experienced a net positive increase in FDI up till the year 2008. After the year 2008, every industries experienced decrease in FDI.

Electrical and electronic products/ Basic metal products are doing the best.

TABLE 5
FDI in Malaysia by industry/sector, 1985–2010[a]

Year	*1985*	*1993*	*1995*	*2000*	*2005*	*2006*	*2007*	*2008*	*2009*	*2010*[c]
(b) Composition (%)										
Manufacturing	88.8	91.1	85.7	71.8	84.1	89.4	92.2	94.0	89.2	80.0
Food	6.1	2.9	1.3	3.1	4.7	3.5	4.0	4.4	6.0	10.9
Textiles and clothing	3.3	7.6	5.2	3.5	1.2	1.8	2.3	0.7	1.0	0.8
Paper, printing and Publishing	10.6	1.9	1.1	4.5	3.1	1.5	4.8	1.5	1.5	1.1
Chemicals and chemicals products	3.1	28.0	20.0	2.9	5.5	19.9	6.3	4.2	25.7	8.0
Petroleum and gas	0.1	0.0	4.3	7.0	2.4	24.9	23.1	4.4	3.6	2.1
Rubber and rubber products	3.1	0.6	0.8	2.8	2.5	1.6	0.9	1.1	0.7	4.7
Non-metallic mineral products	11.6	1.8	13.7	5.3	3.0	2.5	2.2	2.0	19.7	4.2
Basic Metal products	15.4	12.5	5.2	2.3	10.3	5.9	20.3	41.0	7.9	10.3
Fabricated metal products	4.6	1.5	3.1	1.2	2.4	2.9	1.1	1.7	4.2	8.9
Electrical & electronic products	11.5	29.1	26.0	36.2	44.4	21.8	25.2	28.3	14.5	22.5
Transport equipment	19.4	5.0	5.0	2.9	4.6	3.1	2.0	4.6	4.3	6.3
Other sectors[b]	11.2	8.9	14.3	29.1	15.9	10.6	7.8	6.0	10.8	19.7
Total	100	100	100	100	100	100	100	100	100	100