

Foreign Direct Investment and Global Supply Chain Reshaping in ASEAN

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Abstract

The intensifying geopolitical tensions between the United States and China have led to **profound changes in global supply chains**, particularly in recent years. Additionally, China's strict Zero Covid policy has further complicated the operations of multinational corporations during the pandemic. These developments have forced companies to rethink their sourcing strategies, diversify their suppliers, and relocate manufacturing to reduce tariff impacts and minimize supply chain risks. This study examines how the trade war and the Zero Covid policy have **accelerated the diversification of foreign direct investment (FDI) flows from the U.S. and China into Southeast Asia**. We analyze FDI data from key ASEAN economies, exploring correlations between the trade war and the evolving FDI patterns of the U.S. and China in the region. Our research finds that neither the trade war nor the COVID-19 pandemic has had a statistically significant impact on the growth and pattern of U.S. FDI into the region. However, there has been **a notable shift in the distribution of Chinese FDI across the region**. This suggests that U.S. government policies aimed at reshaping global supply chains have **partially succeeded—not by altering American manufacturers' supply chains in the region, but by prompting their Chinese counterparts to restructure theirs**.

Literature Review

Determinants of FDI (Nielsen et al., 2017)

- **Traditional Economics Factors:**
 - **Market Size** (Alcantara & Mitsuhashi, 2012; Ngo et al., 2020; Vijayakumar et al., 2010); **Taxes Incentive** (Munongo, Akanbi, & Robinson, 2018); **Labor Condition (Labor cost and Labor skill)** (Kang & Jiang, 2012); **Existing Infrastructure** (Shah, 2014).
- **Institutional Factors:**
 - **Property Rights Protection and Corruption Control** (Du et al., 2008); **Economics & Financial Stability** (Desbordes & Wei, 2017); **Political Stability** (Kim, 2010)
- **Agglomeration Effects:**
 - **Industrial Clusters** (Barrios et al., 2006); **Global Cities** (Hu et al., 2021).
- **Other Factors:**
 - **Liabilities of Foreignness** (Denk et al., 2012); **Specific-industry based characteristics** (Tihanyi et al., 2005).

Crises and Global FDI flow

- Geopolitical tension and global pandemic create **additional constraints for MNEs** regarding their investment overseas (Blanchard et al., 2021; Huang et al., 2023).
- MNEs' responses: **disinvestment, relocation, diversion, or production shift** (Blanchard et al., 2021). => Lead to **deglobalization**.
- Decline of FDI flow (UNCTAD, 2024; Blanchard et al., 2021).
- Reallocation toward domestic market (Ding et al., 2022).

Limitations of prior studies

- Globalization in the past few decades are **profit-driven** => The majority of articles analyze FDI flow and location choices **from economic perspectives**.
- However, the recent trend of deglobalization are actually driven by **geopolitical crises and national security** => new way of analysis and empirical evidences.

Our study's contribution: a look at FDI from both national (ASEAN) and sub-national (Vietnam) level with a primary focuses on the role of geopolitical tension and global crises to FDI flows in these developing economies.

Sample & Data Sources

Sample selection:

- **Major FDI partners:** PR China, Taiwan, Hong Kong, Republic of Korea, Japan, United States, Singapore.
- **ASEAN economies:** Viet Nam, Indonesia, Malaysia, Thailand, Philippines, Cambodia, Myanmar, Singapore.
- **Sample period:** 2012-2023.

Data Collected:

- **Key trade variables:** annual FDI inflow from major FDI partners to each ASEAN countries, adjusted for inflation and trade volume across countries.
- **Other Macroeconomics & Development Indicators:** GDP, Income, Population, Average Schooling Years...

Data Sources: ASEAN Statistics & UNCTAD for ASEAN trade and FDI data, World Bank for other countries trade data as well as macroeconomics and development indicators.

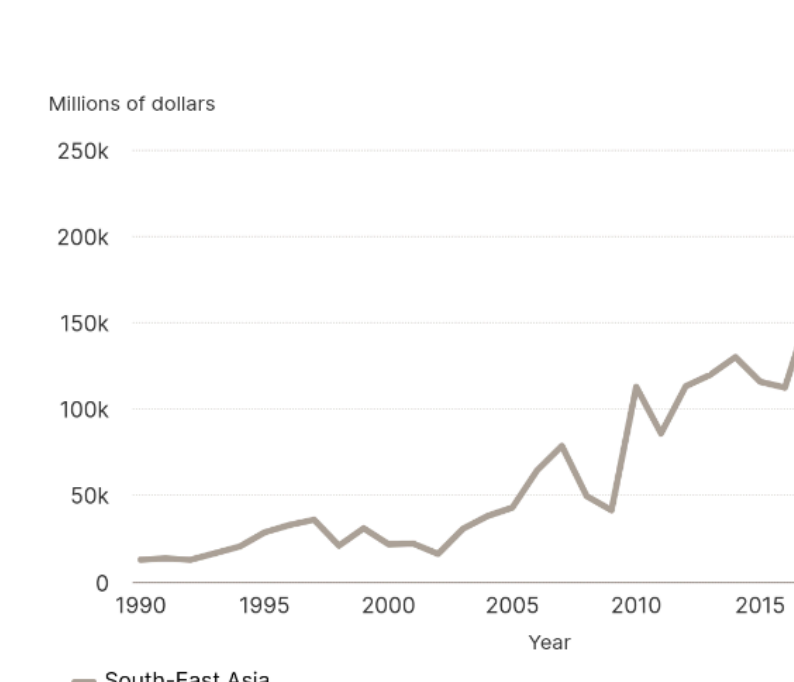
Descriptive Statistics

Table 1: Average FDI inflow annual growth rate in ASEAN and Viet Nam, 2012-2023.

	Average Growth	Pre-2018		Post-2018	
		2012-2017	2018-2023	Trade War 2018-2019	Covid-19 2020-2023
ASEAN	11.11%	11.98%	10.24%	2.95%	13.89%
Viet Nam	8.06%	11.33%	4.79%	6.96%	3.70%

Data source: UNCTAD.

Foreign direct investment flows

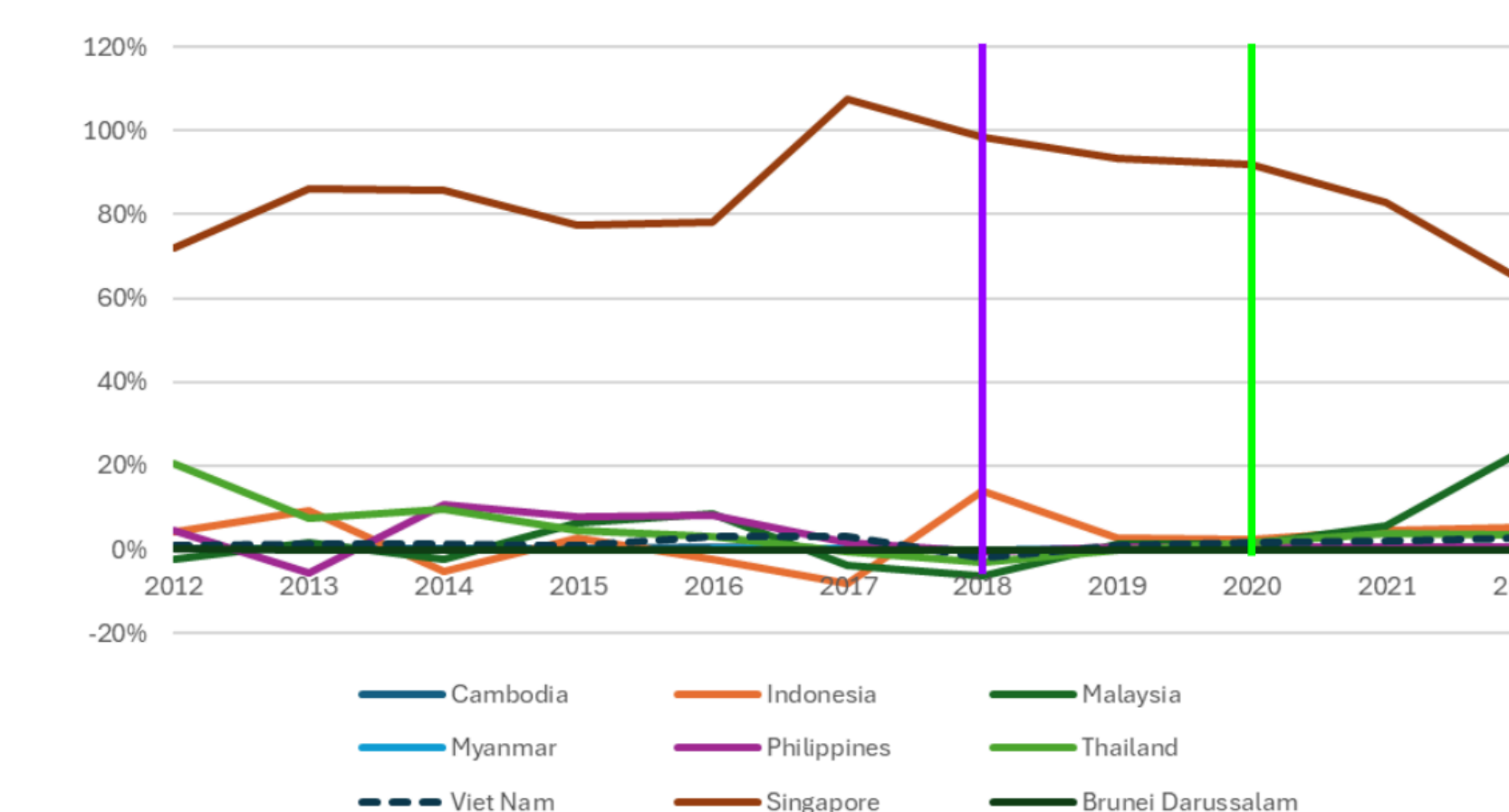


Graph 1 represent FDI inflow into Southeast Asia, 1990-2023. FDI growth **slowed down** between 2015 and 2020, before significantly bounce back in recent years.

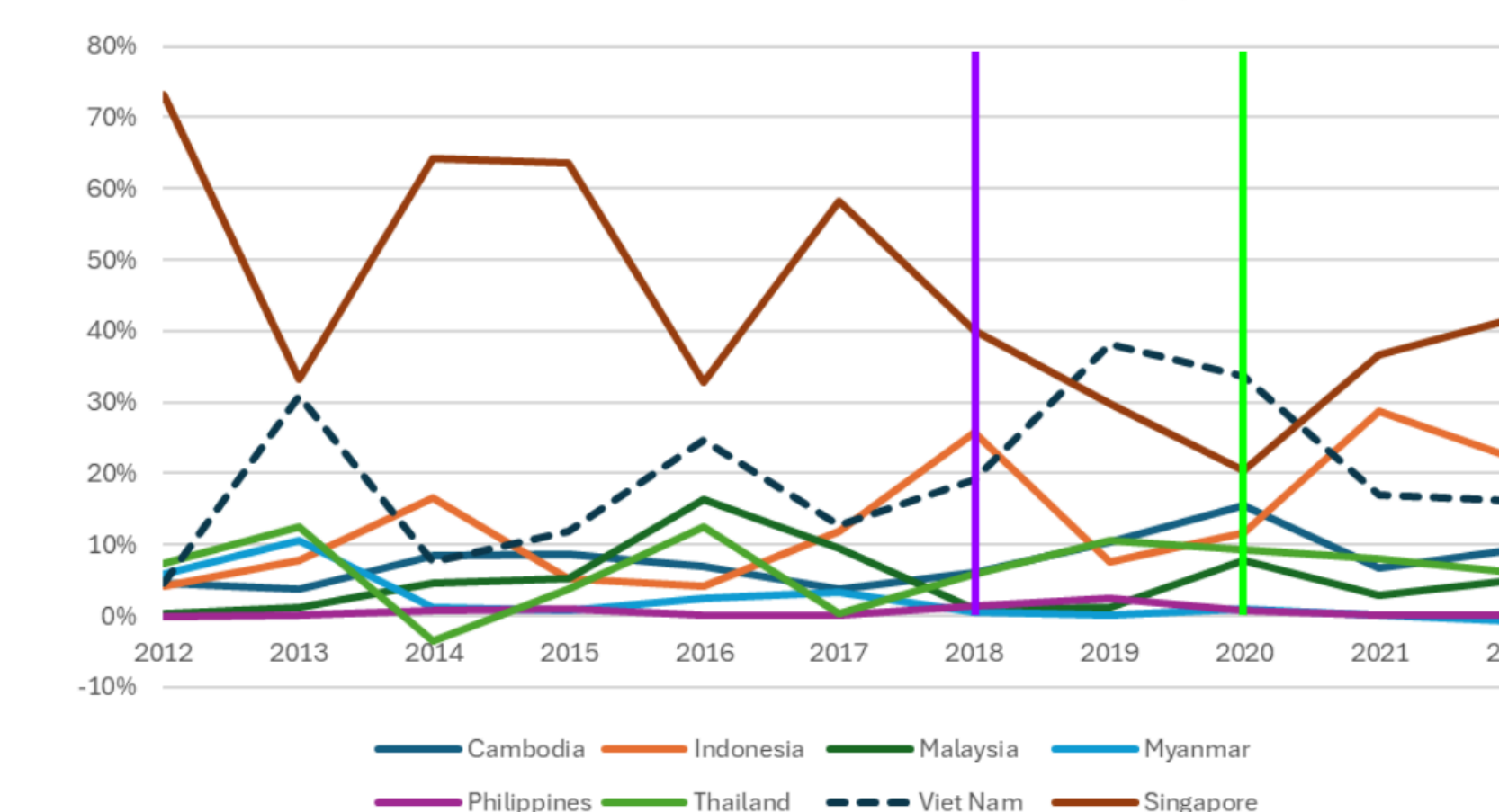
Graphs' note:

- : Trade War begin
- : COVID-19 pandemic begin

Share of FDI outflow from the U.S. to ASEAN economies, 2012-2022



Share of FDI outflow from China to ASEAN economies, 2012-2022



Graph 2 and 3 show share of FDI inflow from U.S. and China into Southeast Asia, 2012-2023. According to the graph, while U.S. share of FDI to Southeast Asia remain relatively stable throughout the period, that from China is relatively fluctuated, which suggest a potential **indirect effect** of the Trade War and COVID-19 pandemic onto the region's FDI pattern, in which trade constraint from the U.S. redirect China's MNE's investing pattern.

Regression Model

Dataset: Panel data for ASEAN (National level).

Main dependent variable: FDI inflow from country k toward location i in year t (total value or as share of GDP).

Main independent variables: dummy variable for Trade War and Covid-19 pandemic.

Control variables: Market size, Education, Trade Intensity at time t-1.

- **Market size:** GDP and Population at i.
- **Education:** Average schooling year at i.
- **Trade intensity:** trade quantity as percentage share of GDP at i.

Method: Fixed-Effect Regression Analysis

- Regression equation:

$$\ln(FDI_{kit}) = \beta_0 + \beta_1 TradeWar_t + \beta_2 COVID_t + \beta_3 \ln(GDP_{it-1}) + \beta_4 \ln(Population_{it-1}) + \beta_5 Mean\ Schooling\ Year_{t-1} + \dots + \varepsilon$$

Control variables

Preliminary Results

- Negative correlation between the two dummy variables and growth of FDI.
- The results are not statistically significant.
- Deeper analysis required to obtain the causal effects.

Limitation

- Lack of certain types of data, especially on the sub-national level and in smaller economies => unable to control for some variables, which lead to potential biases.

Ongoing Effort

- Enhancing the quality of control variables.
- Continue working on Sub-national data for Viet Nam.
- Exploring other proxies to measure the impacts of Trade War/Covid-19.

	Dependent variable:	
	FDI/GDP Share (1)	ln(FDI) (2)
Trade War dummy	-0.133 (0.160)	-0.081 (0.227)
Covid dummy	0.031 (0.133)	-0.199 (0.185)
ln(GDP)	0.522 (0.813)	1.852* (1.120)
ln(Population)	0.512 (3.134)	0.125 (4.402)
Mean Schooling Year	0.0005 (0.006)	-0.006 (0.008)
Trade/GDP Ratio	-0.002 (0.003)	-0.001 (0.004)
Observations	595	557
R ²	0.004	0.022
Adjusted R ²	-0.018	-0.001
F Statistic	0.372 (df = 6; 581)	2.048* (df = 6; 543)

Note: *p<0.1; **p<0.05; ***p<0.01

Conclusion & Future Direction

The analysis show that both the Trade War and COVID-19 pandemic **negatively affected the growth rate of FDI** (represented by ln(FDI)), which **suggest an ongoing pattern of deglobalization**. However, it is important to note that the result are not statistically significant, which suggests potential bias and lack of sufficient control variables to obtain the casual effects. Furthermore, as suggested in the descriptive statistics, the redistribution of FDI across Southeast Asian countries are more significant in China than in the U.S., which suggest a **potential indirect effect** of the Trade War and Covid-19 on the regional FDI pattern that can be further analyzed in future research.

Acknowledgement

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