

ASEAN's Trade and Investment in a Fragmented World

Prepared by Giovanni Donato and Emmanouil Kitsios

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ASEAN's Trade and Investment in a Fragmented World
Prepared by Giovanni Donato and Emmanouil Kitsios*

Authorized for distribution by Corinne Deléchat
May 2026

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Keywords:	ASEAN; Fragmentation; Tariffs; Global Value Chains; Trade; FDI; Difference-in-difference
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GIOVANNI DONATO ^{*} & EMMANOUIL KITSIOS [†]

May 21, 2026

Abstract

This paper examines the short- and medium-term effects of the 2018–19 China-U.S. tariff increases on the trade and investment flows of ASEAN member economies. Using granular trade data, we demonstrate that several ASEAN countries experienced a disproportionate growth in exports of products that were targeted by these tariffs. To further explore the dynamic and often immediate responses of international capital flows to these trade policy shifts, we leverage a novel firm-level FDI database that allows us to identify surges in sectoral investment inflows. Among ASEAN countries, Vietnam stands out as the one where FDI in targeted sectors grew notably faster during 2018–19, likely contributing to its observed export gains over the medium term. At the same time, our analysis reveals that trade gains in targeted products have not universally translated into stronger overall export performance across ASEAN. More generally, while trade reallocation may yield short- and medium-term gains, these gains can be offset over time by the higher long-term aggregate losses associated with trade fragmentation.

Keywords: ASEAN, Fragmentation, Tariffs, Global Value Chains, Trade, FDI, Difference-in-difference

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I. INTRODUCTION

The global trade landscape experienced a marked structural shift during 2018–19, driven by the escalation of China-U.S. trade tensions and the rise in reciprocal ad valorem tariffs, which largely remained in effect and were further intensified in 2025. While these tensions were primarily bilateral in nature, their ripple effects have extended across global value chains (GVCs), reshaping trade and investment patterns well beyond the two principal actors.

ASEAN economies, deeply integrated into the global economy and maintaining robust trade ties with both the Chinese mainland and the United States, have found themselves at the intersection of this trade realignment. This paper examines how ASEAN countries have responded to these shifting dynamics, focusing on the short- and medium-term implications of the 2018–19 tariff escalations.¹ In particular, it explores the extent to which ASEAN economies have served as alternative trade and investment destinations, and how these developments have influenced their broader trajectory of global economic integration through 2023.

A growing body of literature has documented the reconfiguration of trade flows and GVCs in the wake of escalating China-U.S. trade tensions, particularly following the tariff rounds of 2018–19 (Fajgelbaum and others, 2020, Alfaro and Chor, 2023, Freund and others, 2024). From an investment perspective, this period saw growing interest in strategies such as “reshoring,” “nearshoring,” and “friendshoring”, as firms sought to relocate production to countries that are either politically aligned or geographically closer (Gopinath and others, 2025a, Gopinath and others, 2025b). While these shifts in global investment patterns could signal broader fragmentation in foreign direct investment (FDI), current evidence suggests that such fragmentation remains mostly confined to a few strategic sectors (IMF, 2023, Tan, 2024).

Alongside Mexico and South Korea, Vietnam² and Thailand are often cited as “winners” of the first round of China-U.S. trade tensions, having captured market shares previously held by the Chinese mainland while also generating net opportunities instead of simply diverting trade (Fajgelbaum and others, 2024). A key concern in the literature is that much of the observed export growth may reflect trade being rerouted, where firms divert goods through

¹Throughout the paper, “ASEAN” refers to the 10-member ASEAN group covered by the sample period and does not include Timor-Leste that joined as the 11th member on October 26, 2025.

²Schulze and Xin (2025) point out that Vietnam’s success has not been driven uniquely by the tariffs, but also by its prior integration in global value chains following its accession to the WTO in 2007, and openness to FDI since the 1980s. These ongoing processes had already been fueling growth for quite some time before the China-U.S. trade tensions.

ASEAN countries and repackage or relabel them to bypass tariffs, rather than genuine increases in domestic production and exports (Iyoha and others, 2024). However, this interpretation may overlook important shifts in production, as evidence shows that Vietnam’s export gains following the tariffs were linked to real domestic production increases (such as rising female employment) and higher domestic content in US-bound exports, especially in strategic sectors, suggesting trade reallocation rather than simple transshipment (Rotunno and others, 2024, Schulze and Xin, 2025).

There is still no clear consensus on how the 2018-19 China-U.S. tariffs have affected ASEAN countries’ trade and investment flows in the medium term. The renewed surge in global trade policy uncertainty since February 2025 raises the prospect of another wave of production reallocation. Studying the effects of the earlier tariff round can therefore offer valuable insights into how trade and investment might respond to current disruptions.

This paper addresses these questions by combining descriptive analysis with causal inference, using data at different levels of aggregation to first show that ASEAN economies have become increasingly integrated into global trade and investment networks. Building on the framework by Fajgelbaum and others (2024), we extend their 2018-19 analysis to the medium term (2022–2023), using a different dataset that replicates their early findings and shows that ASEAN exports of tariff-targeted goods continued to grow faster than non-targeted goods, both to the U.S. and globally. As in Fajgelbaum and others (2024), these results are consistent with several ASEAN economies supplying substitutes for Chinese goods, and operating along downward-sloping supply curves. This finding also implies that these economies, having become cost-competitive in the production of goods targeted by the tariffs, have also benefited from economies of scale realized in a relatively short period either through domestic policies or increased domestic or international investments.

This motivates our analysis of the impact of tariffs on FDI flows, an area with limited existing evidence. To our knowledge, this paper constitutes the first attempt to identify the causal effects of tariffs on FDI using firm-level data. We leverage the recently released ORBIS Cross-Border Investment database, which captures both greenfield (projects) and brown-field (M&A deals) investments at the NAICS 6-digit business level. Unlike more commonly used databases such as fDi Markets, which focus solely on greenfield investment, ORBIS offers broader coverage that better aligns with official FDI statistics.³

³However, it should be noted that ORBIS data do not account for divestments.

Using a similar identification strategy as in our trade analysis, we find that tariff-driven FDI growth was concentrated in Vietnam and limited to the initial 2018–19 period, possibly suggesting that investors interpreted the tariffs not as a short-term shock, but as a signal of lasting shifts in global trade dynamics. In response, firms acted preemptively to reallocate production and restructure supply chains.

It is important to stress that relative sectoral gains do not necessarily imply aggregate trade gains (especially if countries are initially at full employment). Several ASEAN countries saw no increase in overall exports relative to the pre-tension period, with some early “winners” even facing worsening trade balances. Moreover, any short-term benefits from trade diversion could be undermined by future fragmentation, especially as global demand weakens and friendshoring or nearshoring accelerates.

This is particularly true for export-oriented economies that initially benefited from the tensions but, due to their deep integration in global supply chains, are highly vulnerable to shocks from rising geoeconomic fragmentation, such as commodity price swings, protectionist trade shifts, and weaker external demand (Schulze and Xin, 2025). Although they may gain in the short and medium run, over time both these economies and the global economy as a whole are worse off.

The remainder of the paper is structured as follows. Section II describes the data sources. Section III presents new stylized facts on ASEAN trade, investment, and GVC participation. Section IV outlines the empirical strategy, while Section V reports the main results. Section VI discusses the implications of fragmentation on ASEAN’s overall trade performance, and Section VII concludes.

II. DATA

The empirical analysis draws on monthly trade data from the CEPII-BACI dataset at the HS 6-digit level. Following the aggregation strategy in Fajgelbaum and others (2024), we group observations into four 24-month intervals: 2014–15 and 2016–17 (pre-tension period), and 2018–19 (tension period) and 2022–23 (post-tension period). BACI harmonizes UN Comtrade data by reconciling export and import declarations and adjusting for CIF-FOB discrepancies. Specifically, BACI assigns the export flow from economy A to economy B as the mirror of economy B’s import from A. This feature mitigates distortions due to asymmetric reporting and is particularly valuable for post-COVID data, when freight costs surged. Using

UN Comtrade data as in [Fajgelbaum and others, 2024](#) would have likely caused our results to be biased for the more recent period. Descriptive statistics on trade flows are constructed using bilateral data from the IMF Direction of Trade Statistics (DOTS) and sectoral aggregates from Trade Data Monitor (TDM).

Tariff data are sourced from the replication files of [Fajgelbaum and others \(2024\)](#), which, in turn, build on [Fajgelbaum and others \(2020\)](#) and [Bown, Jung, and Zhang \(2019\)](#) datasets. The analysis uses four sets of product-level (HS6) tariff changes for the 2018–19 period:⁴ U.S. tariffs on the Chinese mainland ($T_{CH,\omega}^{US}$), Chinese mainland’s tariffs on the U.S. ($T_{US,\omega}^{CH}$), U.S. tariffs on third economies ($T_{i,\omega}^{US}$), and Chinese mainland’s MFN tariffs on third economies ($T_{i,\omega}^{CH}$).

The regression sample includes the world’s top-50 exporters (excluding major oil exporters), encompassing the ASEAN-6 economies (listed in Table A.1). Although regression analysis is limited to this sample for statistical reliability, the broader ASEAN region is covered in the stylized facts.⁵

A key contribution of this paper lies in analyzing the impact of tariffs on FDI flows. For this purpose, we employ the recently available ORBIS Cross-Border Investment database, which includes both greenfield and brownfield investments (i.e., projects and M&A deals) at the NAICS 6-digit business level.⁶ Compared to existing, and widely employed, databases such as fDi Markets, ORBIS covers brownfield investments, allowing for a more comprehensive analysis of total investment activity, bringing our aggregate data closer to official bilateral FDI statistics. The dataset also reports both the ultimate and immediate ownership of investors, a crucial distinction for financial centers such as Singapore and Hong Kong SAR that serve as FDI conduits via special purpose entities (SPEs). Appendix Figure A.1 illustrates how materially different the inferred flows can be, underscoring that failing to account for ultimate ownership could potentially lead to misleading biases. Stylized facts on FDI are based on data from the ASEANStats database.

Finally, measures of GVC integration and value-added decomposition are calculated using data from ADB’s Multi-Regional Input-Output (MRIO) tables, following the methodology of [Belotti, Borin, and Mancini \(2021\)](#).

⁴Tariffs are originally reported at the HS10 level and are aggregated to HS6 using dollar-weighted averages based on U.S. Census data.

⁵Given the paper’s focus, results are presented only for ASEAN economies, though estimates for other economies are available upon request.

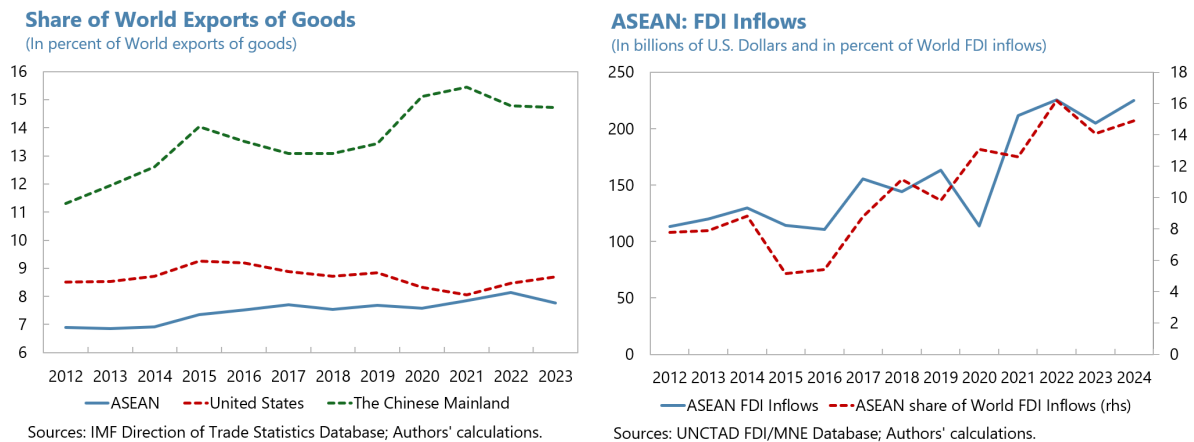
⁶We restrict the sample to completed or presumed-completed transactions.

III. STYLIZED FACTS

In this section, we document novel stylized facts on the evolution of ASEAN's trade and investment flows, as well as the region's shifting position in GVCs. Descriptive evidence reveals that ASEAN countries have become increasingly integrated into global trade and investment networks. At the same time, ASEAN has gained market share in U.S. imports, particularly in tariff-affected sectors such as electrical machinery and electronics, while simultaneously increasing imports from the Chinese mainland in line with the hypothesis of being “connector” economies. Although ASEAN exports' foreign value added (FVA) from the Chinese mainland and the rest of the world has risen, the group's contribution to global value added has also expanded. Notably, a growing share of ASEAN value added is ultimately absorbed by both the U.S. and the Chinese mainland, reinforcing the interpretation that ASEAN economies are not merely transit points but active contributors to production.

Figure 1 (left panel) illustrates the rise in ASEAN's share of world's exports of goods post-2018. Since then, ASEAN has progressively expanded its presence in global trade, and in recent years has approached the United States in terms of its importance as a (goods) exporter. The shift is even more pronounced on the investment side. Inward FDI to ASEAN countries has increased steadily since 2017 (right panel), with a temporary decline in 2020 likely reflecting the global contraction induced by the COVID-19 pandemic. Nevertheless, ASEAN's share of global FDI has continued to rise, reaching nearly 15 percent in 2024.

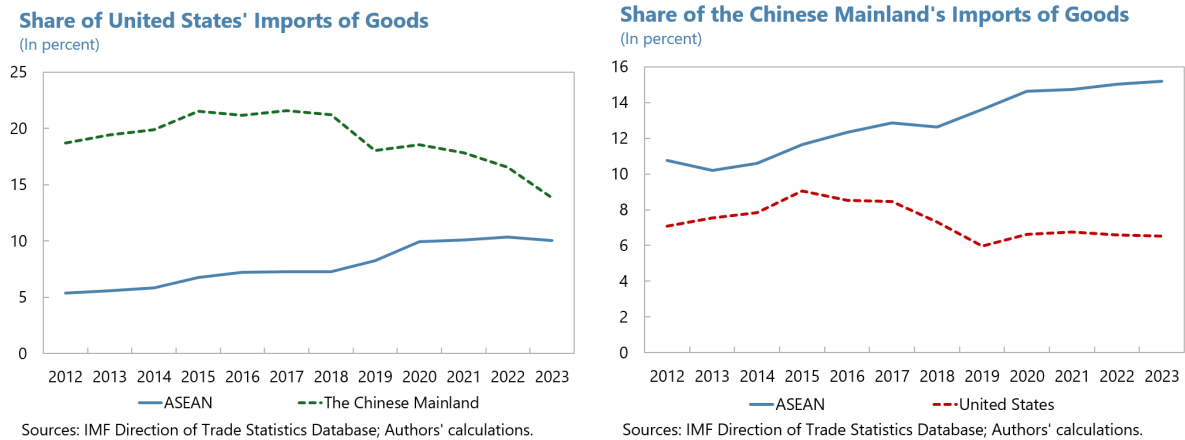
Figure 1. ASEAN Trends in Exports and FDI



Complementing these trends, Figure 2 shows that ASEAN has also increased its share in both the U.S. and Chinese mainland import markets over the same period. In particular, by

2023, ASEAN's share of U.S. goods imports had significantly reduced their difference to the respective Chinese mainland market share.

Figure 2. ASEAN Market Share in Imports of U.S. and Chinese Mainland



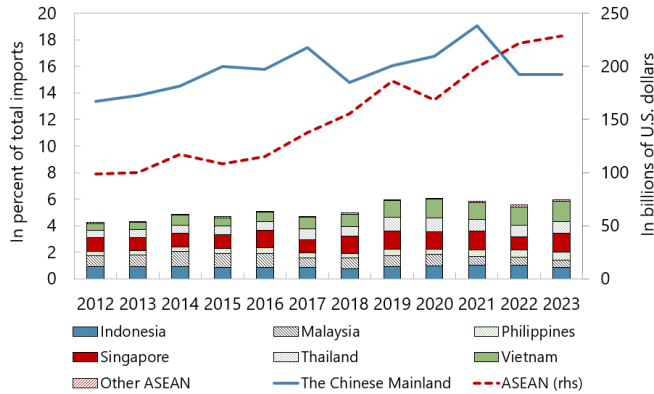
The electrical machinery and electronics sector was among the earliest and most heavily targeted by the initial rounds of U.S. tariffs in 2018-19, beginning with solar panels and washing machines. As shown in Figure 3 (left panel), countries such as Vietnam and Thailand significantly increased their share of U.S. imports in this sector in the aftermath. By 2023, the ASEAN accounted for more than 20 percent of U.S. imports of electrical goods, nearly matching Chinese mainland's share, which had declined from a peak of over 40 percent in early 2018.

At the same time, ASEAN economies have substantially increased their imports from the Chinese mainland in the electrical machinery and electronics sector. This pattern aligns with the characterization of ASEAN as a group of “connector” countries, as defined by [Gopinath and others \(2025a\)](#): non-aligned economies that step in to replace Chinese mainland's declining exports to the U.S. while simultaneously deepening their own import ties with the Chinese mainland.

Figure 3. ASEAN's Electrical Machinery and Electronics Trade Flows

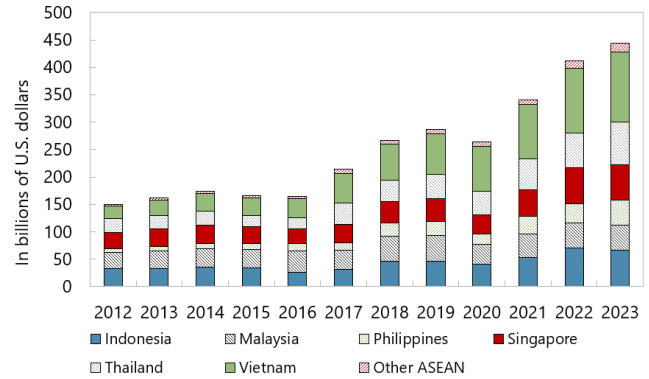
United States: Imports of Electrical

(In percent of total imports; in billions of U.S. dollars)



ASEAN: Imports of Electrical from the Chinese Mainland

(In billions of U.S. dollars)

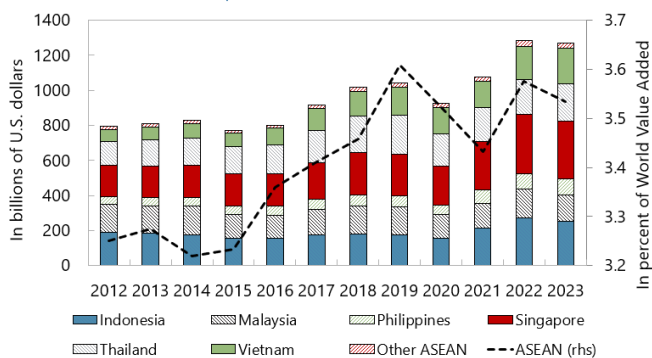


Nevertheless, this pattern does not necessarily imply that ASEAN countries have merely acted as intermediaries, re-routing electrical goods from the Chinese mainland to circumvent U.S. tariffs. The rise in imports from the Chinese mainland may instead reflect an increase in demand for intermediate inputs. At the same time, as shown in Figure 4, while foreign value added (FVA) in ASEAN exports (particularly from the Chinese mainland) has increased, ASEAN's own contribution to global value chains has also grown, with a rising share of its value added ultimately absorbed by both the U.S. and the Chinese mainland, suggesting that ASEAN economies are not just transit hubs but active participants in global production. ASEAN countries thus appear to have expanded domestic production and increased their share of global value added, while simultaneously reconfiguring their position in global value chains through higher FVA in exports.

Figure 4. Foreign and Domestic Value Added in ASEAN's Exports

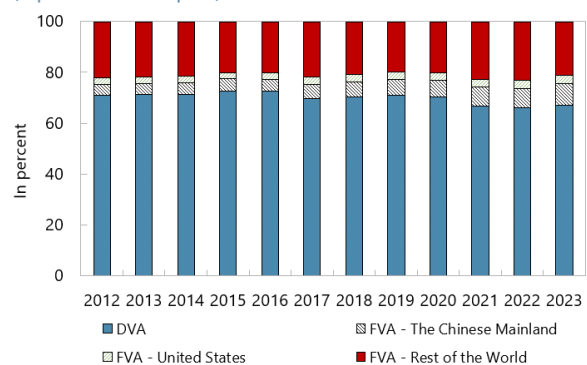
ASEAN: Domestic Value Added Content of Exports

(In billions of U.S. dollars; In percent of World Value Added)



ASEAN: Value Added of Exports

(In percent of Total Exports)

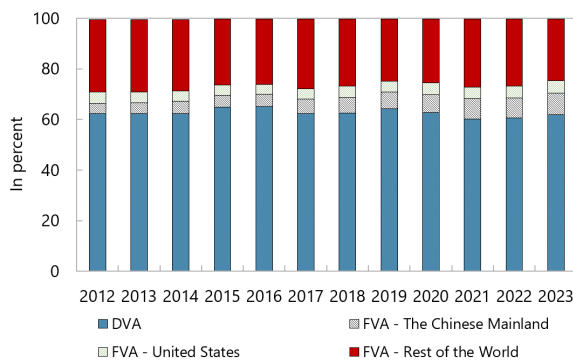


Focusing again on the electronics sector, the average share of foreign value added in ASEAN's exports of electronic goods has remained relatively stable, with a modest increase in Chinese mainland's contribution (see left panel of Figure 5).⁷ However, this regional average masks notable heterogeneity across ASEAN countries.

Figure 5. Foreign and Domestic Value Added in ASEAN's Electronics

ASEAN: Electrical and Optical Equipments

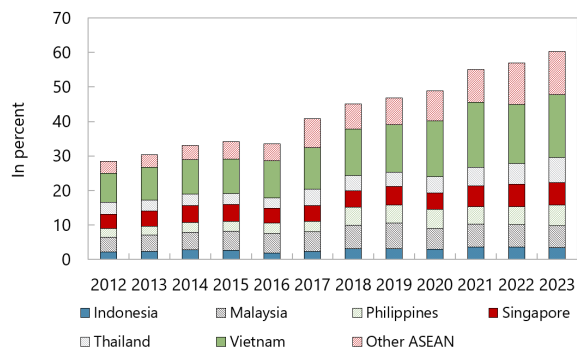
(Value Added of Exports Content; In percent of Total Exports)



Sources: Asian Development Bank; Authors' calculations as in Belotti and others (2021).
Notes: ASEAN countries excluding Myanmar. FVA: Foreign Value Added. DVA: Domestic Value Added.

ASEAN: Foreign Value Added from the Chinese Mainland

(Electrical and optical equipment; In percent of each country's exports)

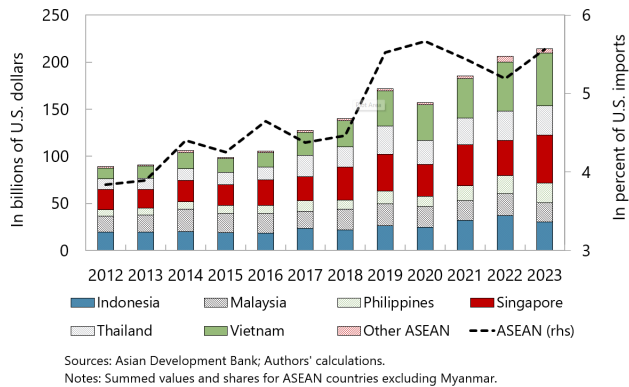
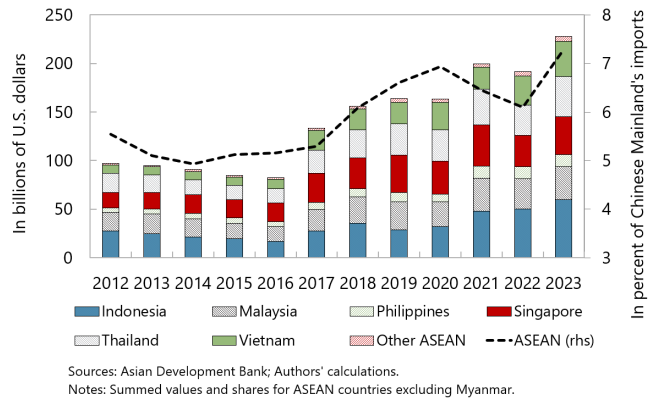


Sources: Asian Development Bank; Authors' calculations.
Notes: Summed values and shares for ASEAN countries excluding Myanmar.

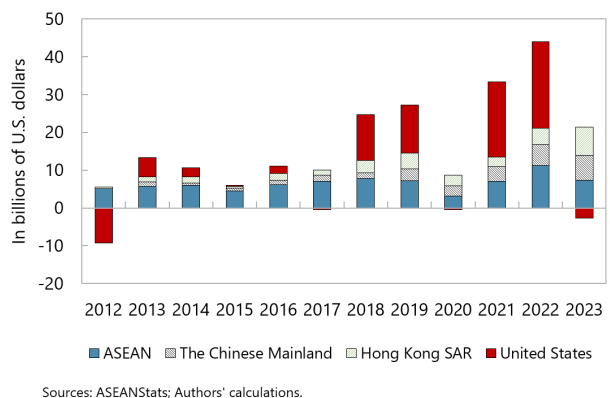
The right panel of Figure 5 presents the share of foreign value added from the Chinese mainland in the exports of electrical and optical equipment for individual ASEAN countries. Vietnam, the Philippines, and Thailand experienced the most significant increases, although not exponential. In particular, Vietnam's share rose from approximately 12 percent in 2017 to 18 percent in 2023. This trend is consistent with the steady increase in imports from the Chinese mainland during the same period, as previously illustrated in Figure 3.

The absorption of ASEAN value added in the final demand of both the United States and the Chinese mainland (as illustrated in Figure 6) has increased in both absolute terms and relative to their total imports, pointing to a deeper integration of ASEAN economies into the trade networks of both major economies.

⁷Note that this sector is not perfectly comparable to the one used in previous figures, as the calculations here rely on the ADB's input–output tables, which differ in sectoral disaggregation from the one provided by the Trade Data Monitor.

Figure 6. ASEAN's GDP Absorption in the U.S. and the Chinese Mainland**ASEAN: ASEAN's GDP absorption in the United States**
(In billions of U.S. dollars; In percent of U.S. Imports)**ASEAN: ASEAN's GDP absorption in the Chinese Mainland**
(In billions of U.S. dollars; In percent of U.S. Imports)

This trend is mirrored on the investment side. As shown in the left panel of Figure 7, FDI inflows from both the U.S. and the Chinese mainland have grown substantially in the post-2018 period. Notably, despite an initial sizable dip in U.S. FDI in 2018, investment has steadily recovered and expanded thereafter. Furthermore, U.S. investments in the manufacturing sector remained resilient, despite the concomitant aggregate divestment, suggesting that some investors anticipated a structural shift and seized emerging opportunities from the outset of the trade tensions.⁸

Figure 7. ASEAN's FDI Inflows from Major Partners**ASEAN: FDI Inflows - Total Activities**
(In billions of U.S. dollars)**ASEAN: FDI Inflows - Manufacturing**
(In billions of U.S. dollars)

⁸Sectoral breakdowns from ASEANStats are available only at a relatively aggregate level. Manufacturing includes, in this case, the electronics sub-sector. It also includes apparel, another sector that saw a staggering increase in exports.

IV. ESTIMATION

Our identification strategy builds on [Fajgelbaum and others \(2024\)](#) and their difference-in-difference (DiD) approach, which is guided by a Ricardian-Armington trade model that allows for downward-sloping economy-specific elasticities. We aim to estimate the short- and medium-term effects of the 2018-19 China-U.S. tariffs on both ASEAN economies' exports and FDI inflows using granular product and industry-level data (as outlined in the Section II).⁹ More specifically, we estimate the effects for the 2018-19 period and compare them with those for the more recent 2022-23 period.

Given the precise structure of our regressions, we estimate each economy's exports to the world and FDI inflows from the world in taxed relative to untaxed products/industries. The following regression is run separately to $n = \text{US, CHN, ROW}$ destinations:

$$\begin{aligned} \Delta \ln X_{i\omega}^n = & \beta_{1i\omega}^n \Delta \ln T_{CH,\omega}^{US} + \beta_{2i\omega}^n \Delta \ln T_{US,\omega}^{CH} + \beta_{3i\omega}^n \Delta \ln T_{i,\omega}^{US} + \beta_{4i\omega}^n \Delta \ln T_{i,\omega}^{CH} + \\ & + \alpha_{ij(\omega)}^n + \Omega^n \text{SIZE}_{i\omega} + \pi^n \Delta \ln X_{i\omega,t-1}^n + \varepsilon_{i\omega}^n \end{aligned} \quad (1)$$

Where $\Delta \ln X_{i\omega}^n$ is the growth rate of bi-annual exports of product ω from origin economy i to destination n . The growth rate for the short-term is the log difference of the 2018-19 period and the 2016/17 period, whereas the one for the medium-term considers the 2022-23 period. The dependent variables are regressed on the four sets of tariff changes as described in Section II.

Furthermore, $\beta_{zi\omega}^n = \beta_{zi}^n + \beta_{zj(\omega)}^n + \Gamma_z^n \text{SIZE}_{zi\omega}^n$ for $z = 1, 2, 3, 4$ identifying the four different sets of tariff changes. The first term identifies exporter-importer fixed effects, the second one importer-sector fixed effects, and the size variables identify the (pre-trade tensions) relative size of the variety's trade flow.

Moreover, $\alpha_{ij(\omega)}^n$ controls for origin-destination-sector fixed effects, whereas the lag of the dependent variable controls for pre-trends. The products in the trade regressions are classified into nine sectors: agriculture, apparel, chemicals, materials, machinery, metals, minerals, transport, and miscellaneous, as in [Fajgelbaum and others \(2024\)](#). However, the FDI regressions will include sectors as defined by the relevant industry at the NAICS 2-digit level.¹⁰

⁹We compare our estimates for the 2018-19 period with [Fajgelbaum and others \(2024\)](#) who analyze the same period

¹⁰Note that for the FDI regressions, the exporter-destination-sector fixed effects non-interacted does not enter the regression. This is due to the different nature of FDI investments compared to trade flows at this level of

We use the estimated betas from Equation 1 (ran separately for the three different export destinations) to predict individual economy i 's export inflows growth of variety ω to the world relative to non-targeted varieties. We then aggregate estimates to obtain economies' individual aggregate relative gains in the following manner:

$$\Delta \ln \widehat{X}_i^{WD} = \sum_{\omega} \sum_{US, CHN, ROW} \lambda_{i\omega}^n (\widehat{\beta}_{1i\omega}^n \Delta \ln T_{CH, \omega}^{US} + \widehat{\beta}_{2i\omega}^n \Delta \ln T_{US, \omega}^{CH} + \widehat{\beta}_{3i\omega}^n \Delta \ln T_{i, \omega}^{US} + \widehat{\beta}_{4i\omega}^n \Delta \ln T_{i, \omega}^{CH}) \quad (2)$$

Where $\lambda_{i\omega}^n$ denotes the share of (pre-tension) export values for continuing products relative to total exports from the origin economy to destination n . We perform a similar regression for FDI inflows from the world as the variable of interest in our second set of results. Standard errors for the economy-specific estimates are constructed by implementing the regression estimation for 50 bootstrap samples and clustered at the product and industry level for the trade and FDI regressions, respectively.

V. RESULTS

The regression analysis is conducted on the entire sample of economies; however, in line with the primary focus of the paper, we report results exclusively for the ASEAN-6 economies, for which data are available.¹¹ Figures 8 and 10 present economy-level growth in exports and FDI inflows, as specified in Equation (2). Here, growth refers to the relative increase in exports of products (FDI inflows) to industries subject to tariffs imposed by the United States or the Chinese mainland, compared to other non-tariffed products (industries) within each exporter (FDI recipient), importer (FDI investor), and sector. The figures indicate which of the ASEAN countries have better exploited global export or investment opportunities in products targeted by the tariffs.

A. Trade

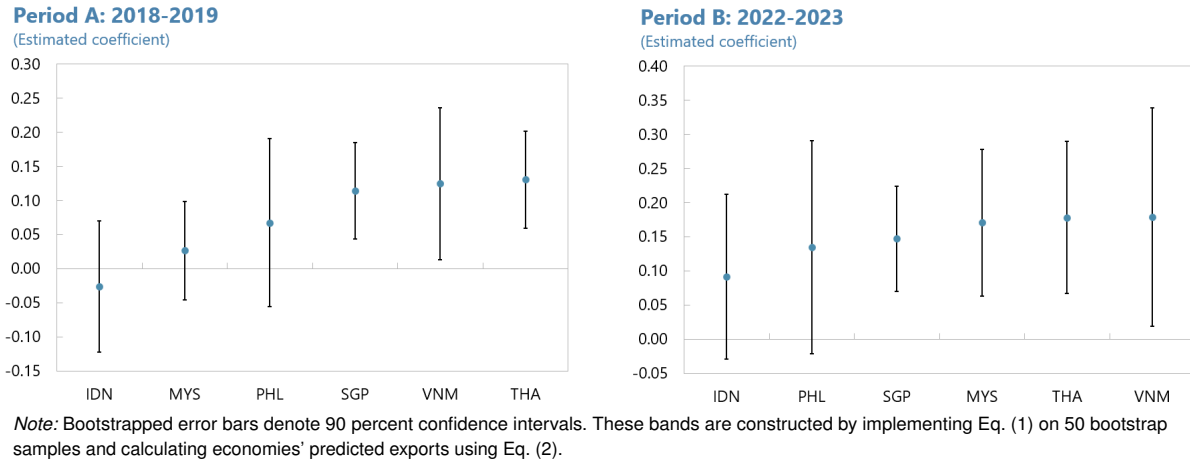
Figure 8 presents the results of Equation (2) for two distinct periods: 2018-19 (left panel) and 2022-23 (right panel) relative to 2016/17. The short-term effects of the tariffs, as captured

disaggregation. Even though we have fewer sectors for products (not including all services, for instance), we also have more consistent flows. Investments, in general, are usually one-and-done.

¹¹Results for the complete sample are available upon request.

in the 2018-19 estimates, closely mirror those reported by [Fajgelbaum and others \(2024\)](#), despite the use of an alternative data source. In particular, Singapore, Vietnam, and Thailand experienced relative export growth of approximately 10 to 15 percent in tariffed products compared to non-tariffed products, indicating substantial relative short-term trade gains effect resulting from the China-U.S. tariff escalation.

Figure 8. Enhanced Relative Gains and Reallocations



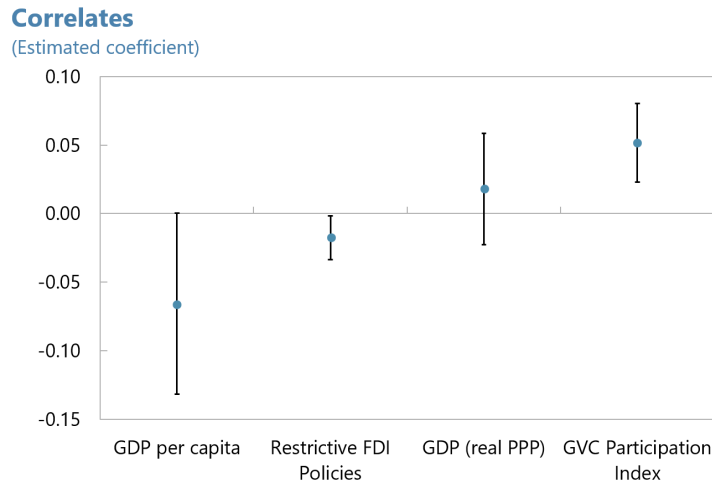
A key contribution of this paper is to document a sustained and even amplified pattern of relative export growth in 2022-23 compared to the pre-tension period, in products targeted by U.S. and Chinese mainland's tariffs. As illustrated in the right panel of Figure 8, point estimates for several ASEAN-6 countries approach a coefficient of 0.18, suggesting an 18 percent relative export growth. This finding suggests a further intensification of the trade reallocation observed in the earlier period. In addition, although the estimates for Indonesia and the Philippines are not statistically significant, they nonetheless show a positive trend.

This evidence suggests that the initial trade diversion (and creation) effects triggered by the China-U.S. tariffs have evolved into more persistent shifts in global production and export patterns, with ASEAN countries increasingly consolidating their position as competitive exporters. Consistent with the findings of [Fajgelbaum and others \(2024\)](#) for the 2018-19 period, we find that for the 2022-23 period, most ASEAN countries not only expanded their exports to the United States, but also increased shipments to other markets (see Appendix Figure A.2, left panel). This indicates that ASEAN exporters are not only substituting for Chinese goods in U.S. markets, but are supplying global demand along downward-sloping supply curves, suggesting capacity expansion and decreased marginal costs.

Together with the evidence presented in Section III, these findings challenge the notion that ASEAN economies have functioned merely as re-routing hubs for Chinese mainland's goods. Rather, they appear to have leveraged productivity gains and scale economies to expand their export base beyond trade diversion alone. Achieving such economies of scale likely required increased investment, either via targeted domestic policies or through inflows of FDI, into the sectors most affected by the reallocation of global trade flows.

To this end, we regress our estimated export gains for all economies in the sample on a set of policy-relevant variables, along with proxies for economic size and level of development as of 2017. As shown in Figure 9, export gains during the 2022–23 period are negatively correlated with restrictive FDI policies and positively correlated with overall GVC integration. These results suggest that economies more deeply embedded in GVCs and with more open FDI regimes were better positioned to benefit from trade diversion. This finding, in particular, underscores the importance of investment openness and supply chain connectivity in shaping trade outcomes - and provides a strong rationale for the investment - focused analysis presented in the following section.

Figure 9. Correlates of Export Growth Gains in Tariff-Targeted Products

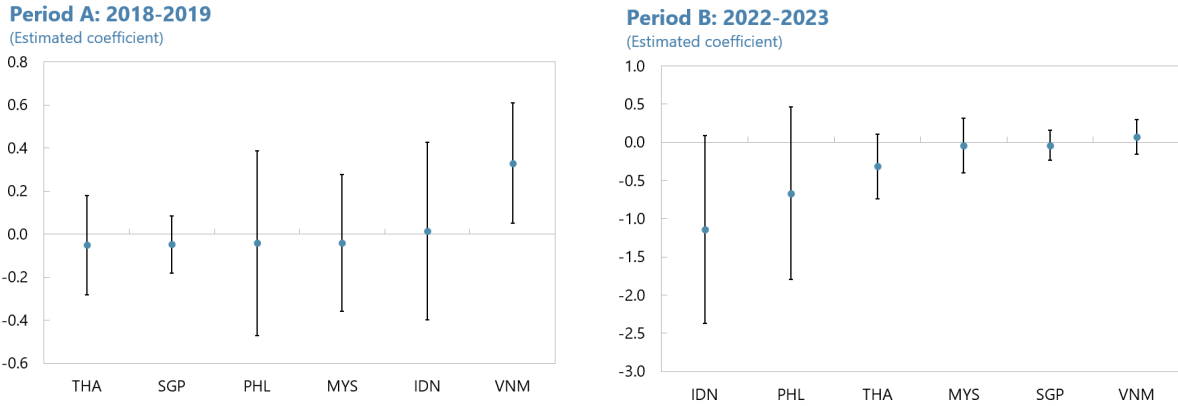


B. Investments

Turning to our FDI regressions, Figure 10 presents the results of Equation (2): the left panel covers the 2018–19 period, while the right panel focuses on 2022–23. The dependent variable is the growth rate of FDI inflows from the world, calculated as the weighted sum of relative inflow growth from the U.S., the Chinese mainland, and the rest of the world, in response to

changes in tariffs on sector ω . In this context, FDI encompasses both greenfield and brown-field investments, capturing the total value of projects and deals.

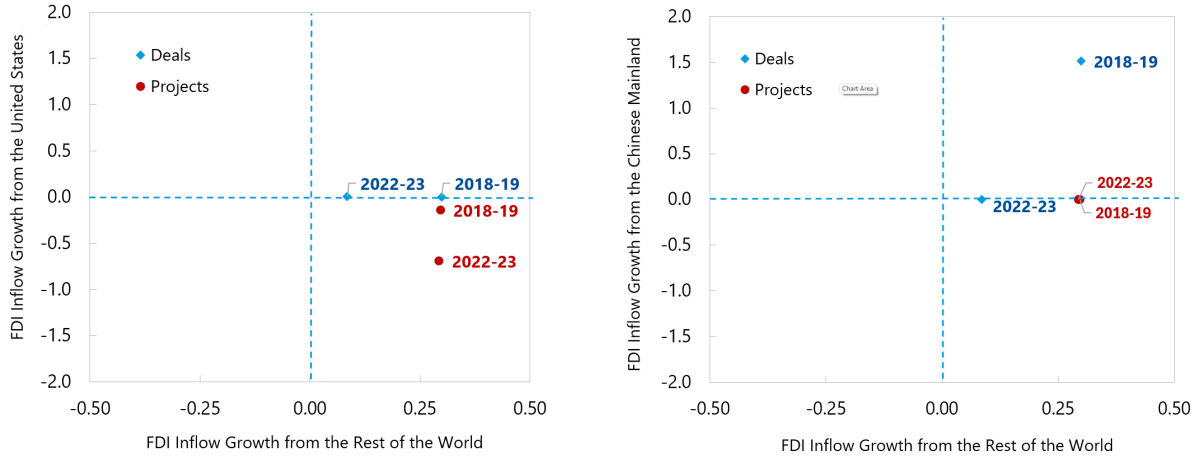
Figure 10. Relative FDI Inflows Growth: Projects + Deals



Note: Bootstrapped error bars denote 90 percent confidence intervals. These bands are constructed by implementing Eq. (1) on 50 bootstrap samples and calculating economies' predicted exports using Eq. (2).

Vietnam is the only country in our sample that experienced a relative increase in FDI inflows in response to higher tariffs. It is important to emphasize that this does not imply an absolute decline in FDI inflows to other ASEAN countries, as discussed in Section III. Rather, Vietnam uniquely recorded a relative increase in investment directed toward firms (at the NAICS 6-digit level) producing goods subject to tariffs imposed by the United States and the Chinese mainland, compared to firms not affected by these trade measures.

The scale of Vietnam's relative increase in FDI is substantial—approaching 40 percent—and is primarily concentrated in the 2018–19 period. One plausible interpretation is that international investors responded promptly to the imposition of tariffs, identifying early Vietnam as a potential strategic beneficiary of shifting trade dynamics under the new tariff regime. Following the initial reallocation of capital, the impetus for continued investment may have diminished. This pattern aligns with the hypothesis that Vietnam expanded its export-oriented production capacity - serving not only the United States but also broader global markets - through a front-loaded surge in FDI inflows. It is also worth noting that Vietnam had favorable preconditions for attracting FDI well before the China-U.S. trade tensions, including FDI incentives introduced in the 2010s (following its 2007 WTO accession), a young and relatively well-educated workforce with high female participation, political stability, and geographic proximity to the Chinese mainland (Schulze and Xin (2025)).

Figure 11. Vietnam's FDI Inflows Growth over time: Projects vs Deals

Note: The graphs plot $\Delta \ln \widehat{X}_i^{US}$ vs $\Delta \ln \widehat{X}_i^{ROW}$ in the left panel, and $\Delta \ln \widehat{X}_i^{CHN}$ vs $\Delta \ln \widehat{X}_i^{ROW}$ in the right panel. The results come from Equation (2) following the FDI regressions on projects and deals separately, without summing up the relative FDI inflows growth elasticities across the three destinations.

A more detailed examination of the results for Vietnam¹², disaggregating elasticities for FDI projects and deals across the three source regions, reveals several noteworthy insights.

Figure 11 reports the coefficients from the same regressions underlying the Vietnam results in Figure 10, but estimated separately on two subsamples: one including only projects and the other including only deals. Additionally, the figure displays the elasticities by destination before aggregation. It is important to note that the simple sum of these coefficients does not correspond to the overall coefficient for Vietnam in Figure 10, as the regressions are conducted on different subsamples. Nevertheless, this decomposition provides useful insights into the sources of Vietnam's relative FDI gains in response to the tariffs, allowing us to distinguish between the underlying patterns of greenfield and brownfield investment.

The positive and statistically significant coefficient observed for Vietnam during the 2018-19 period reflects a combination of increased FDI from the Chinese mainland via mergers and acquisitions, together with increased greenfield investments originating from the rest of the world.

This pattern is not surprising, as the Chinese mainland was already more deeply integrated with ASEAN supply chains before the rise in tariffs. In contrast, international investors from the rest of the world (excluding the United States) likely recognized the shift in Vietnam's comparative advantage, and, consequently, increased investment in new projects.

¹²Given that it is the only economy in our sample with a statistically significant result.

In contrast, the lack of a statistically significant effect of tariffs on Vietnam’s relative FDI inflow growth (across all sectors) during the 2022–23 period appears to reflect the interplay of two offsetting forces. While greenfield investment from the rest of the world increased markedly relative to the pre-tension period, investment originating from the United States declined substantially. This divergence may, in part, be attributable to reshoring incentives introduced under the Inflation Reduction Act of 2022, a major U.S. policy initiative aimed at bolstering domestic manufacturing. These findings underscore the vulnerability of Vietnam’s FDI outlook to evolving U.S. trade policy, suggesting that the imposition of very high tariffs could further dampen U.S. investment and potentially offset gains from other sources.

Another possible explanation is that firms had already planned to invest in Vietnam (especially given its favorable conditions since opening up to FDI and the FDI incentives introduced after its WTO accession) and viewed the tariffs as an irreversible opportunity to accelerate those plans to promptly take advantage of the situation.

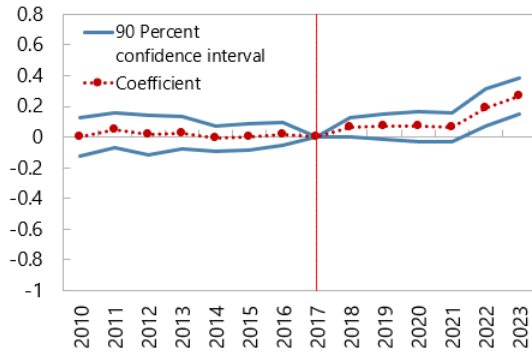
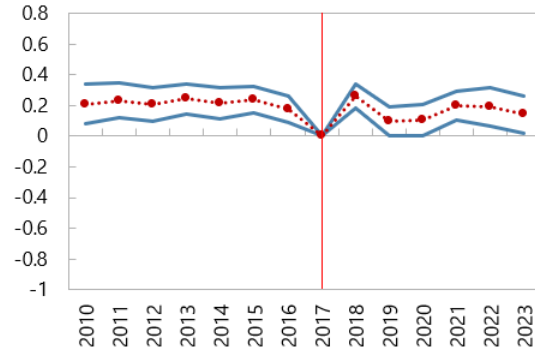
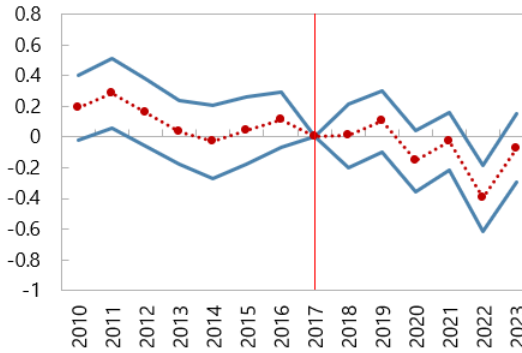
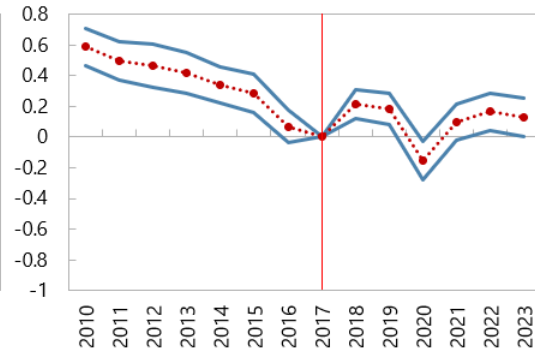
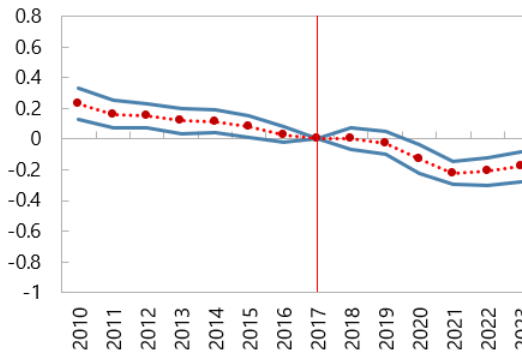
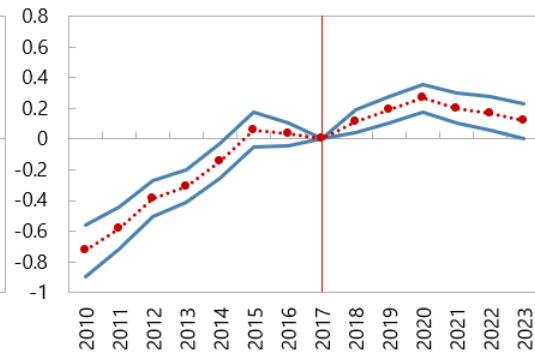
VI. AGGREGATE AND MEDIUM-TERM IMPLICATIONS OF FRAGMENTATION

The preceding section emphasized the relative gains realized by ASEAN countries attributable to the escalation of China-U.S. tariffs. However, sector-level gains do not necessarily imply corresponding increases in aggregate exports. Figure 13 shows how annual export growth of ASEAN members has evolved vis-à-vis the global average and relative to 2017 which is the year before trade tensions escalated between the Chinese mainland and the U.S.

Although several ASEAN-6 countries may be characterized as beneficiaries of the China-U.S. trade tensions, the aggregate export response has been uneven. Vietnam stands out as a clear example of stronger aggregate export growth relative to 2017, whereas Thailand did not experience a comparable pickup and instead shows a relative weakening in export performance compared with both its own pre-2017 benchmark and regional peers.¹³

This divergence between relative export gains and trade performance becomes even more pronounced when examining trade balances of goods. As illustrated in the left panel of Figure 13, the overall ASEAN trade balance strengthened following the tension period, primarily driven by a surplus with the United States that was not fully offset by a deficit with the Chinese mainland. However, this aggregate trend conceals considerable heterogeneity across

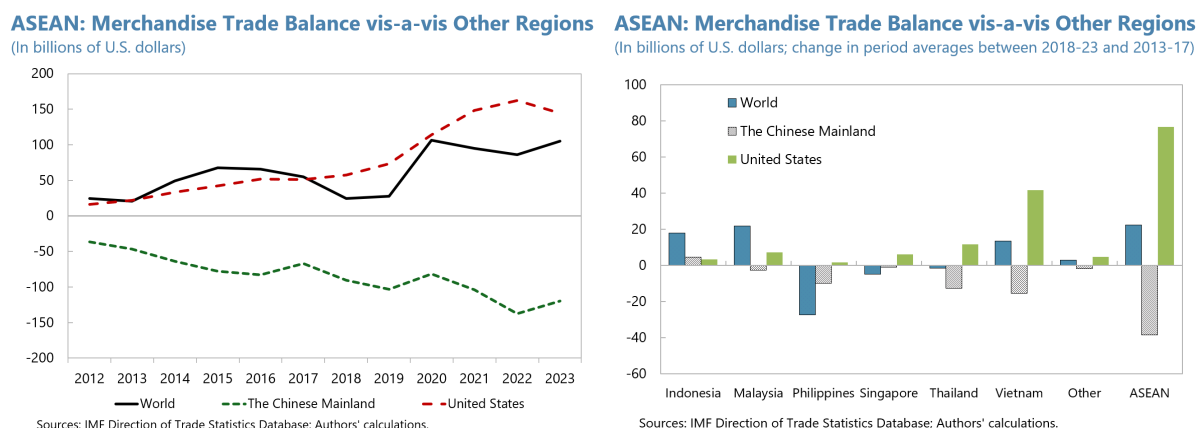
¹³This exercise is purely descriptive and does not aim to draw causal conclusions, as observed patterns may, for instance, reflect pre-existing trends in economies such as Vietnam and Thailand during the early 2010s.

Figure 12. ASEAN-6 Yearly Exports Coefficients (Reference Year: 2017)**Indonesia****Malaysia****Philippines****Singapore****Thailand****Vietnam**

Sources: IMF Direction of Trade Statistics Database; Authors' calculations.

Note: Estimates of the following gravity equation using bilateral imports from DOTS: $I_{ixt} = a_{ix} + \sum_{t=2010, t \neq 2017}^{2023} \beta_t t_i \times \text{ASEAN}_x + t_i + \tau_{ix} + \epsilon_{ixt}$. Where I_{ixt} is log imports of importer i from exporter x in year t for the entire world; ASEAN_x are individual ASEAN-6 exporter dummies; t_i are year FE; β_t are the reported yearly coefficients of ASEAN-6 exporters (2017 omitted year) and τ_{ix} are importer-exporter fixed effects.

economies. Those with relatively stronger sectoral growth in tariff-affected products (notably Thailand and Singapore) did not see an improvement in aggregate trade outcomes, underscoring a disconnect between sector-level export gains and overall trade balance dynamics.

Figure 13. Trade Balances

These findings raise the possibility that economies capitalizing on new export opportunities may have reallocated resources toward sectors in which they developed a comparative advantage under the revised tariff regime. Many Southeast Asian economies intensified their industrial policies during this period, partly driving the shift in comparative advantage. Such reallocation could have come at the expense of previously dominant export sectors, thereby limiting the net gains at the aggregate level. While this mechanism is consistent with observed patterns - where sector-specific gains did not always translate into broader macroeconomic improvements - its empirical validation remains an open question for future research. Moreover, under scenarios of continued global fragmentation, the long-term implications for both ASEAN and the global economy remain uncertain, particularly given the potential for reduced external demand and heightened policy-driven distortions.

VII. CONCLUSION

This paper investigates the short- and medium-term effects of the 2018–19 tariff escalation between the Chinese mainland and the U.S. on trade and investment flows in ASEAN economies. While ASEAN countries are frequently characterized as beneficiaries of these trade tensions, our analysis suggests a more nuanced picture. ASEAN economies have functioned as “connector” countries, substituting for Chinese mainland’s exports to the United States while simultaneously increasing imports from the Chinese mainland. However, concerns persist that some of these gains may reflect transshipment rather than genuine production expansion.

Using a combination of descriptive analysis and causal inference, we find that ASEAN countries not only gained U.S. market share and expanded imports from the Chinese mainland, but also increased exports of tariff-targeted products to third markets. Importantly, the rise in foreign value added in ASEAN exports has been accompanied by a modest but measurable increase in the region's share of global domestic value added, casting doubt on the hypothesis of pure evasive re-routing.

Employing an empirical strategy based on [Fajgelbaum and others, 2024](#), we show that the tariffs had persistent and increasingly positive effects on ASEAN's relative export growth through 2022–23, in tariff-targeted sectors. This pattern is consistent with ASEAN economies operating along downward-sloping supply curves, potentially benefiting from scale economies supported by domestic policy or foreign investment.

To analyze investment dynamics, we leverage a novel firm-level dataset covering both greenfield and brownfield FDI. Our results indicate that the 2018–19 tariffs triggered a significant reallocation of FDI to Vietnam, especially in targeted sectors, driven by Chinese mainland's acquisitions and greenfield projects from the rest of the world (non-U.S. sources). However, this effect dissipated in the 2022–23 period, coinciding with a marked decline in U.S. greenfield investment, possibly reflecting reshoring incentives introduced under the Inflation Reduction Act of 2022.

While some ASEAN countries experienced export growth and trade balance improvements, others saw relative declines. This heterogeneity underscores the importance of understanding the broader macroeconomic implications of trade diversion.

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Supplementary Appendix

APPENDIX A. ADDITIONAL FIGURES & TABLES

Table A.1. List of Economies

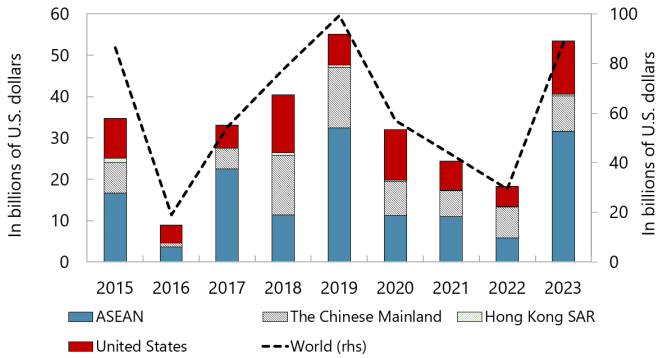
Regression Sample				Other ASEAN
Argentina	Egypt	Korea	South Africa	Brunei Darussalam
Australia	Finland	Malaysia*	Spain	Cambodia
Austria	France	Mexico	Sweden	Lao PDR
Belgium	Germany	Netherlands	Switzerland	Myanmar
Bangladesh	Greece	New Zealand	Thailand*	
Bulgaria	Hong Kong SAR	Peru	Turkey	
Brazil	Hungary	Philippines*	Taiwan POC	
Canada	India	Poland	Ukraine	
Chile	Indonesia*	Portugal	Vietnam*	
The Chinese Mainland	Ireland	Romania	United Kingdom	
Colombia	Israel	Singapore*	United States	
Czech Republic	Italy	Slovakia		
Denmark	Japan	Slovenia		

Notes: * indicates ASEAN-6, together with other ASEAN form the ASEAN. Stylised Facts report data for the entire ASEAN group unless otherwise specified.

Figure A.1. ASEAN's FDI Inflows: Ultimate vs Immediate Investor

ASEAN: FDI Inflows - Projects - Immediate Investors

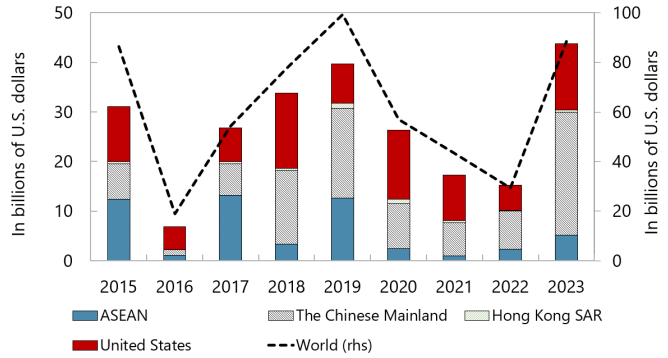
(In billions of U.S. dollars)



Sources: Orbis Crossborder Investment; Authors' calculations.

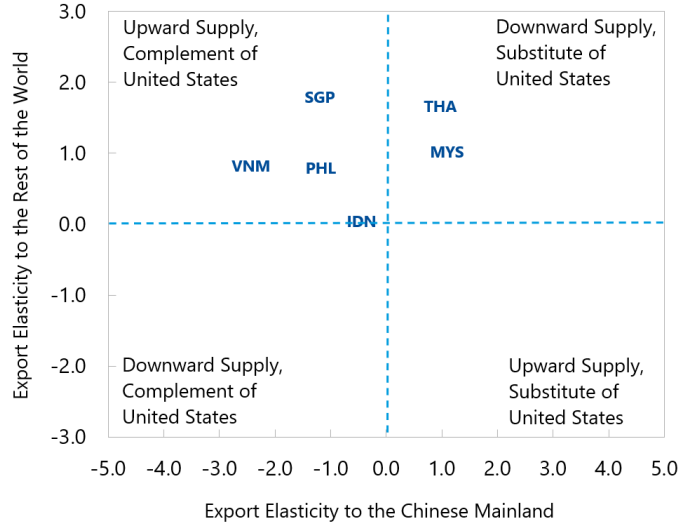
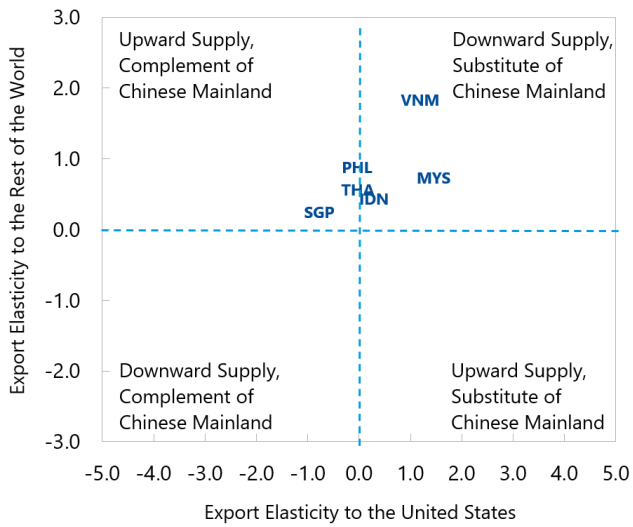
ASEAN: FDI Inflows - Projects - Ultimate Investors

(In billions of U.S. dollars)



Sources: Orbis Crossborder Investment; Authors' calculations.

Figure A.2. ASEAN's Supply Curves





PUBLICATIONS

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Working Paper No. WP/2026/118