



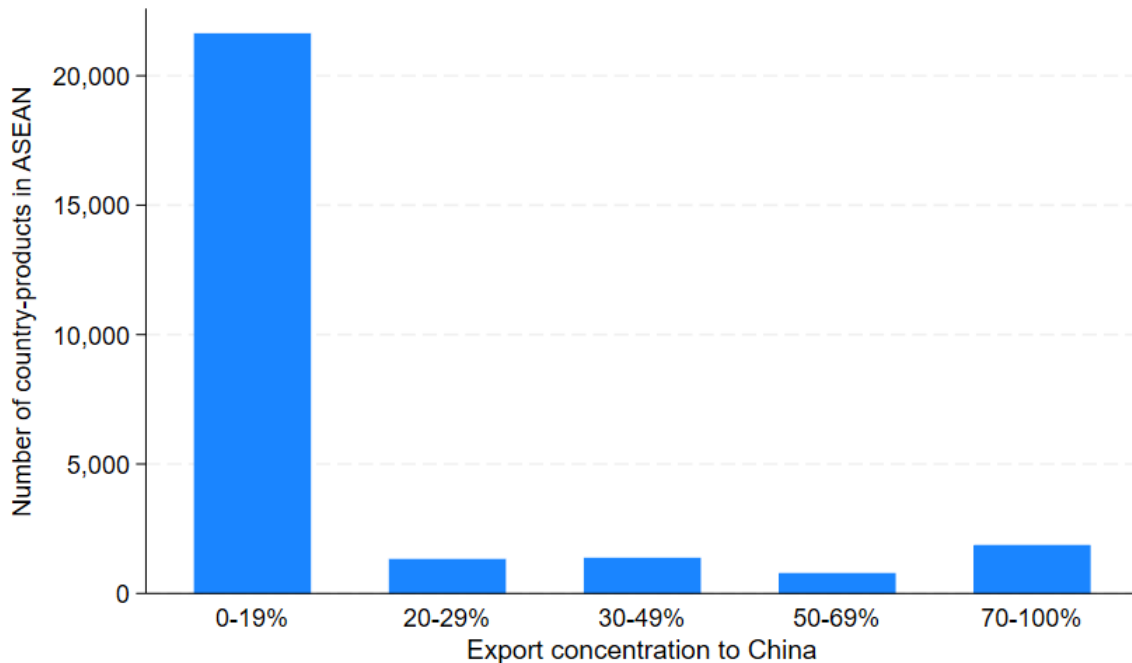
The Risk of De-Risking: Dissecting ASEAN's Exposure Within the Intricate Weave of Global Trade

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Motivation

- De-risking aims to reduce dependency (risk) on China.
- Existing analysis focuses on the **aggregate** industries.
- Very few talked about **individual** products.
- Even fewer assessed **ASEAN's** exposure.

Why would aggregation hide risks?



- Aggregation includes a **wide range** of products.
- 200+ in each sector.
- This is **diversification!**
- How to discuss **risks** when they are diversified?

Different facets of the same issue

- A **specialized** trade ecosystem: 4 billion data for 5,000 products.
- Specialization leads to **concentration** and **interconnectedness**.
- More risks, either **direct dependency risks** or **indirect spillover risks**.
- We were harvesting the “risk premium” of specialization.
- Crucial to use detailed **product-level** trade data to **understand all sorts of risks!**

Case Study 1: Semiconductors

- US-China trade war decreased demand for Chinese electronics, which lowers Chinese demand for semiconductors from ASEAN.
- ASEAN's concentrated semiconductor exports to China took a big hit.

Supply Chain Stage	Locations
Design and Equipment	US, Europe, Korea, Japan
Wafer Fabrication (Fab)	Singapore , Taiwan, Korea, Japan, China
Assembly, Testing, Packaging (ATP)	Malaysia, Thailand, Vietnam , China
Import Intermediates for Manuf.	China, Japan, Korea, India, Indonesia, Vietnam

Singapore, Malaysia, and Thailand were the ASEAN countries that suffered the most from negative spillovers.

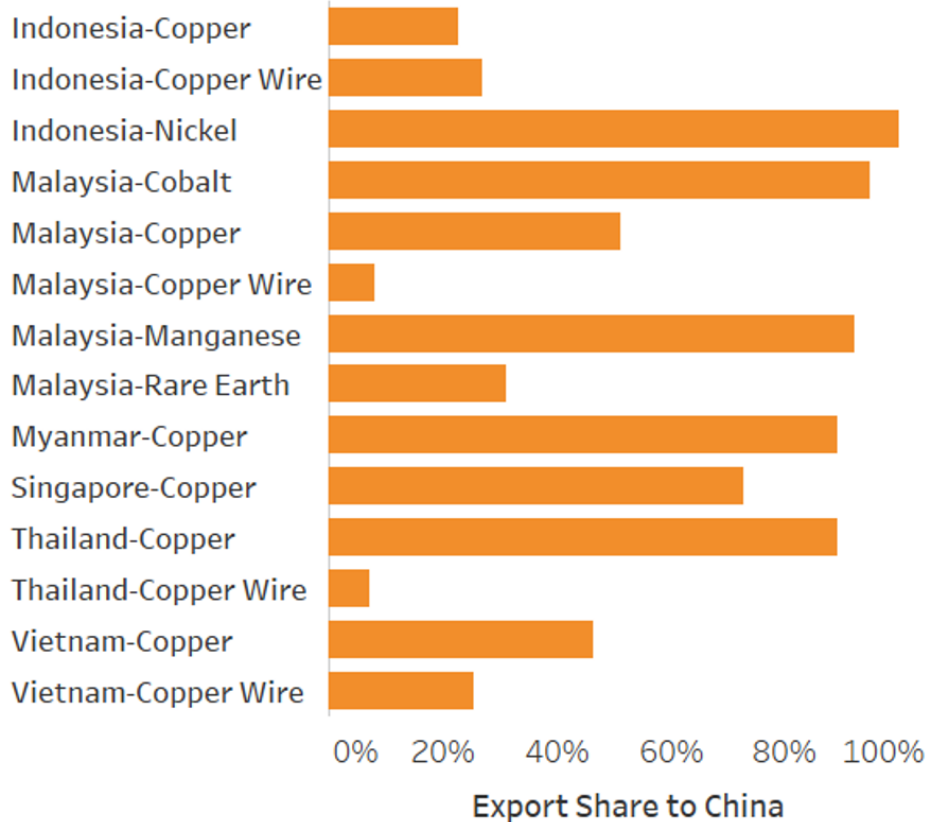
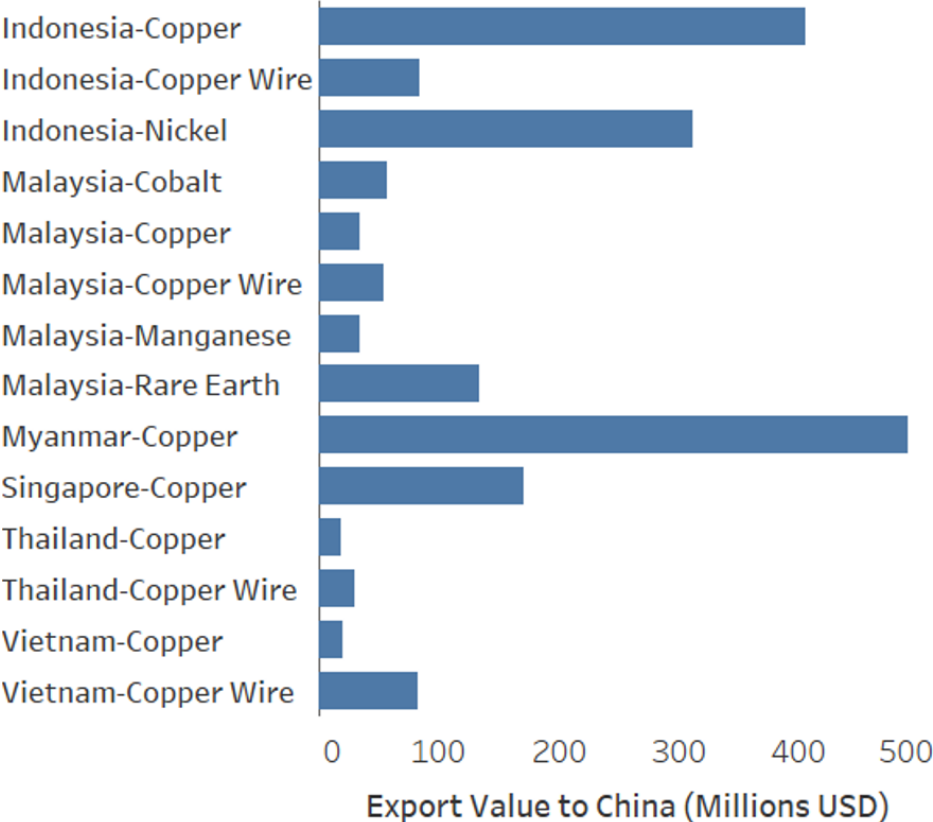
	Processors and Memories Exports from ASEAN to China				Chinese Exports of Electronics to US
	SGP	MYS	THA	VNM	(Billions USD)
2017	23.3	20.6	3.8	4.4	277.6
2018	23.2	28.4	3.0	5.7	291.6
2019	19.5	25.8	1.9	7.8	237.1
Growth 2018-19	-16%	-9%	-37%	+37%	-19%
Concentration	52%	47%	48%	73%	
Supply Chain	Fab	ATP	ATP	ATP	

Case Study 2: Electric Vehicles

- Increasing possibility of trade wars on Chinese electric vehicles (EV).
- Exposure to negative spillovers? ASEAN's concentration in exporting to China.
- Traced the entire EV supply chain in ASEAN at product-level.

Categories	# of products	Concentration	Concentration
		> 50%	> 70%
Electric Vehicles	3	0	0
Batteries	2	1	1
Electric Motors	5	1	0
Semiconductors	2	1	1
Critical Minerals	33	14	7
Others	10	2	2
Total	55	19	11

ASEAN's Exposure in Critical Minerals



Top ASEAN products exposed to negative spillover from EV trade wars

Country	Concentration (%)	Exports to China (Millions USD)	Product (HS 6-digit)
Singapore	47	20,325	Mixed signal IC
Malaysia	30	9,289	Mixed signal IC
Thailand	34	2,122	Mixed signal IC
Myanmar	89	491	Copper
Indonesia	23	406	Copper
Vietnam	44	336	Mixed signal IC
Indonesia	100	311	Nickel
Singapore	73	171	Copper
Malaysia	31	134	Rare earth

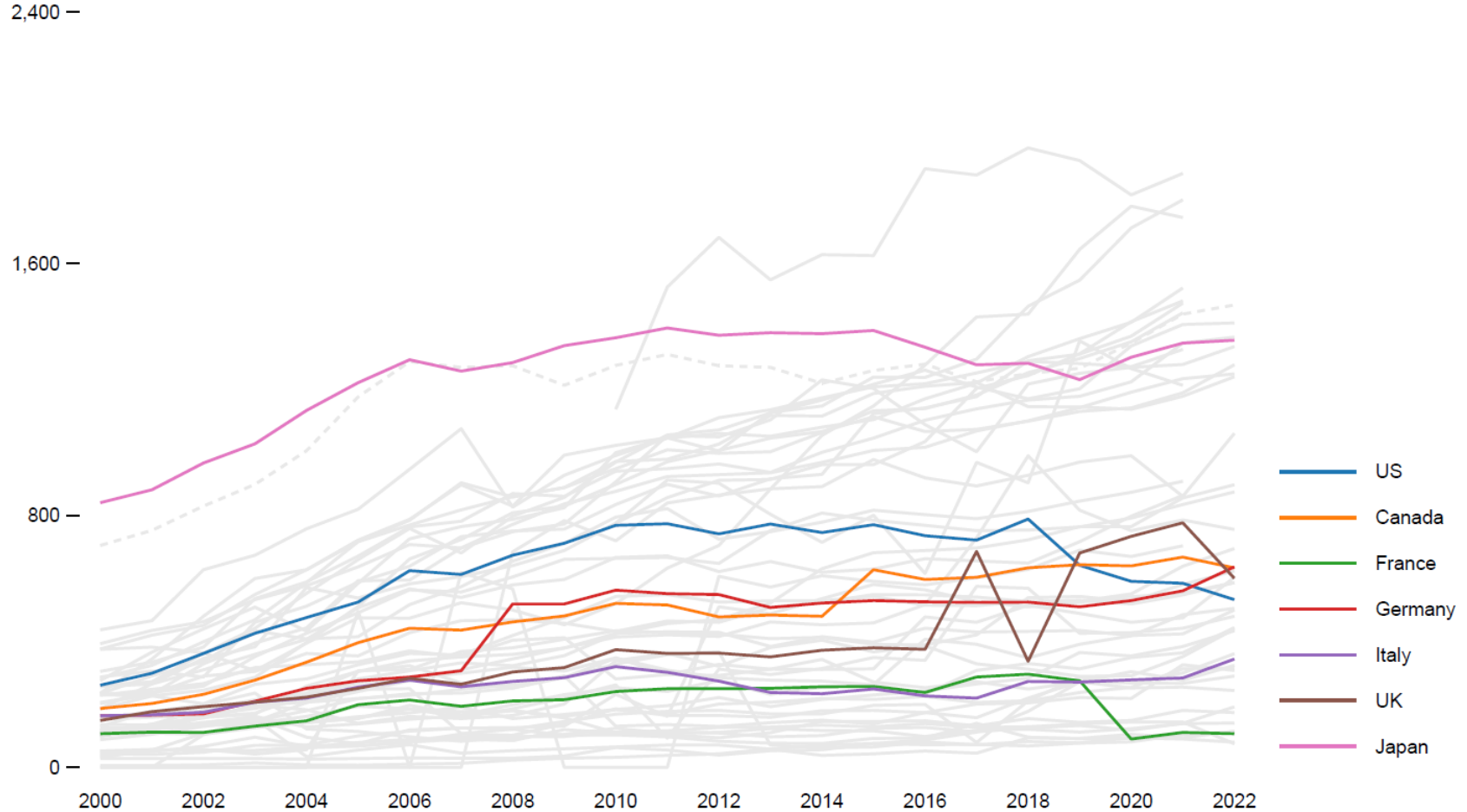
Case Study 3: Textiles

- US-China trade war led to “de-risking”, especially textiles.
- Mexico is a popular near-shoring location for the US.
- Did Mexico import more ASEAN textile products at high risk of negative spillovers? “Gravity” matters!

Year	“High-Risk” Textile Imports From ASEAN	ASEAN’s Share Across All Import Origins
2018	42.0 million	1.0%
2019	22.8 million	0.7%
2020	21.5 million	0.9%
2021	4.2 million	0.3%
2022	6.1 million	0.4%

Number of products with more than 50% import share from China

Data: UN Comtrade.

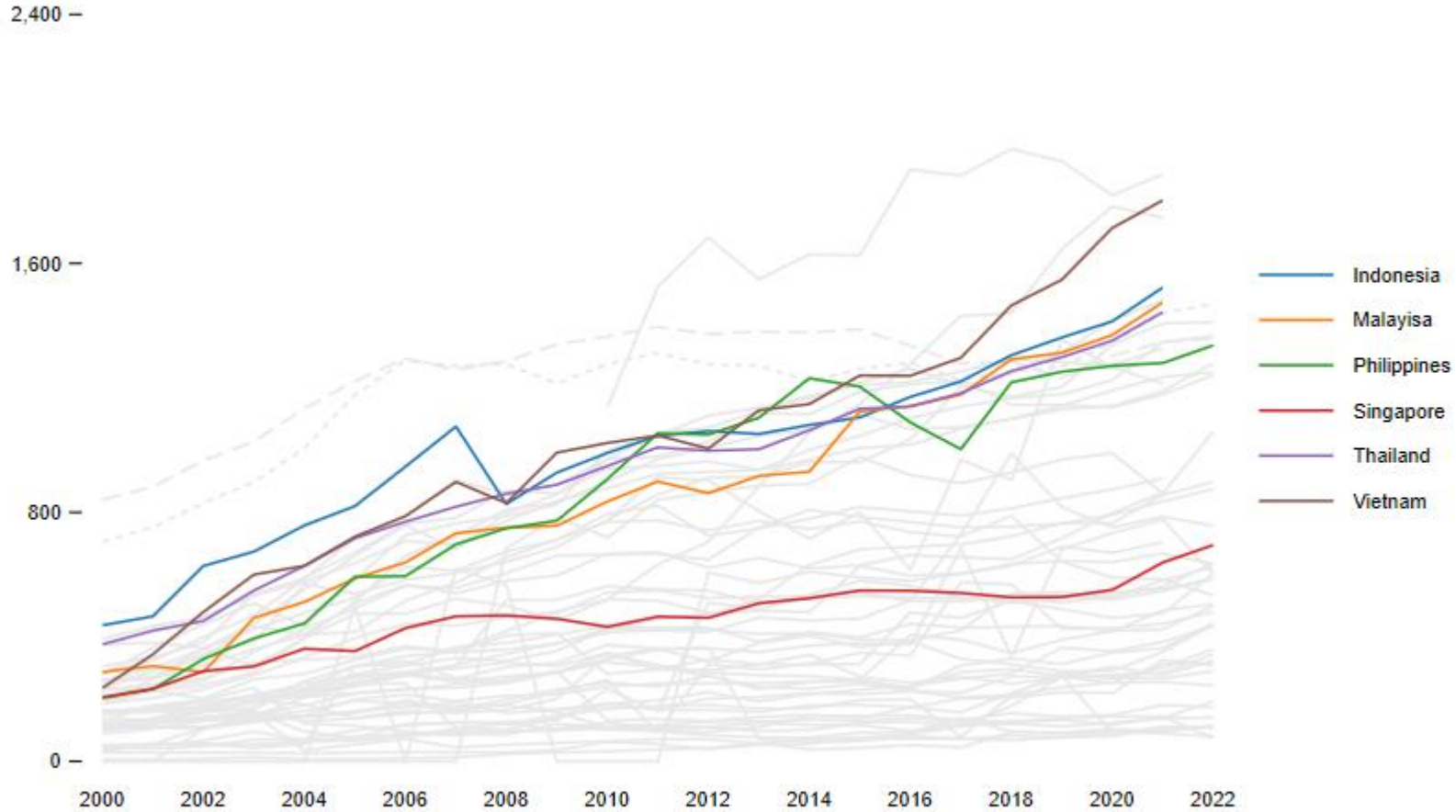


Dissecting ASEAN's Risk Exposure Using Product-Level Data

1. ASEAN countries face heavy concentration in trading with China, compared to other countries. Gravity?
 - **Thousands of products** with China being a dominant partner.
 - Intermediate exports that are of relatively high value.
2. De-risking poses exposure to negative spillover
 - **Hundreds of** ASEAN's intermediate exports .
 - Chemicals, textiles, and metals.

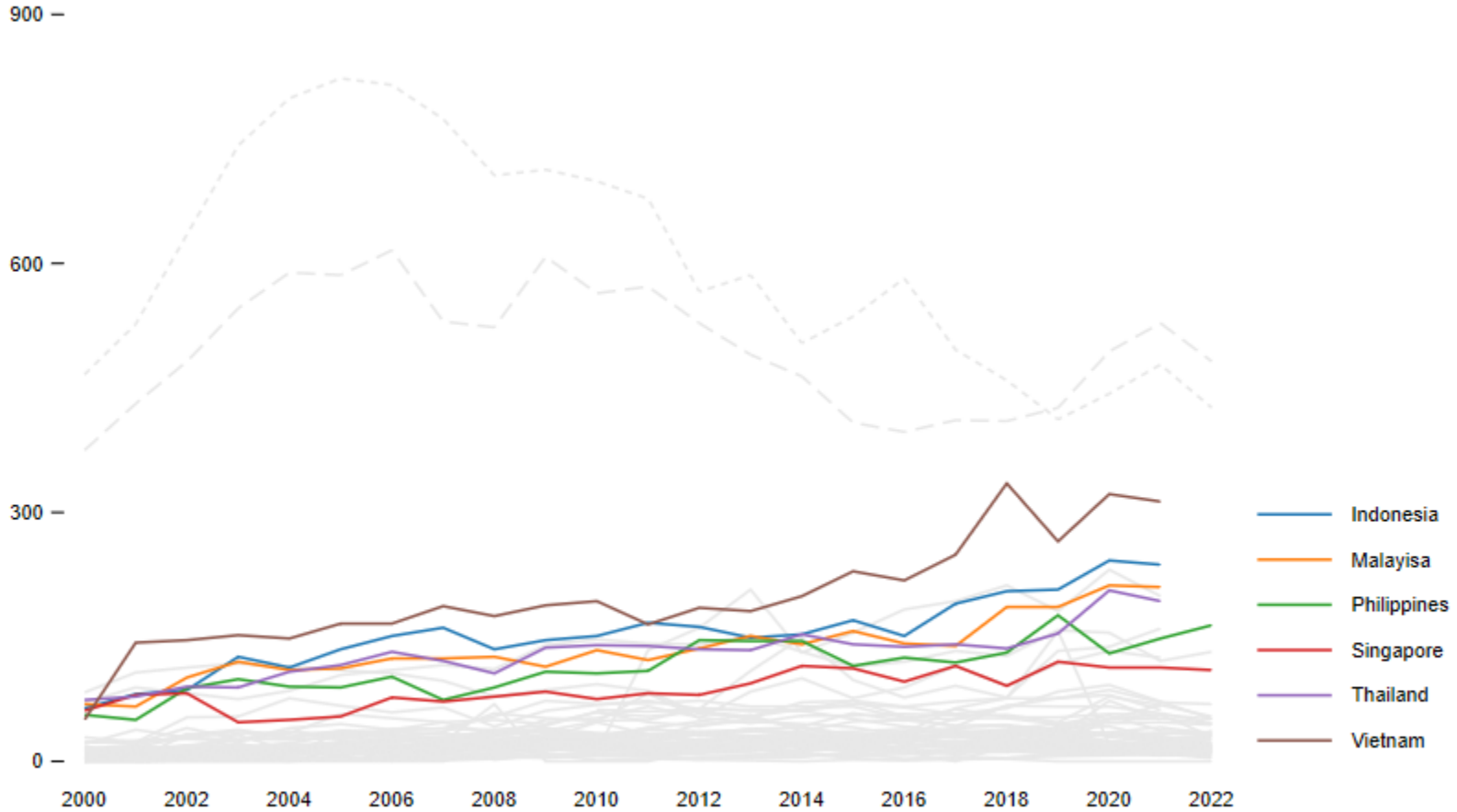
Number of products with more than 50% import share from China

Data: UN Comtrade.

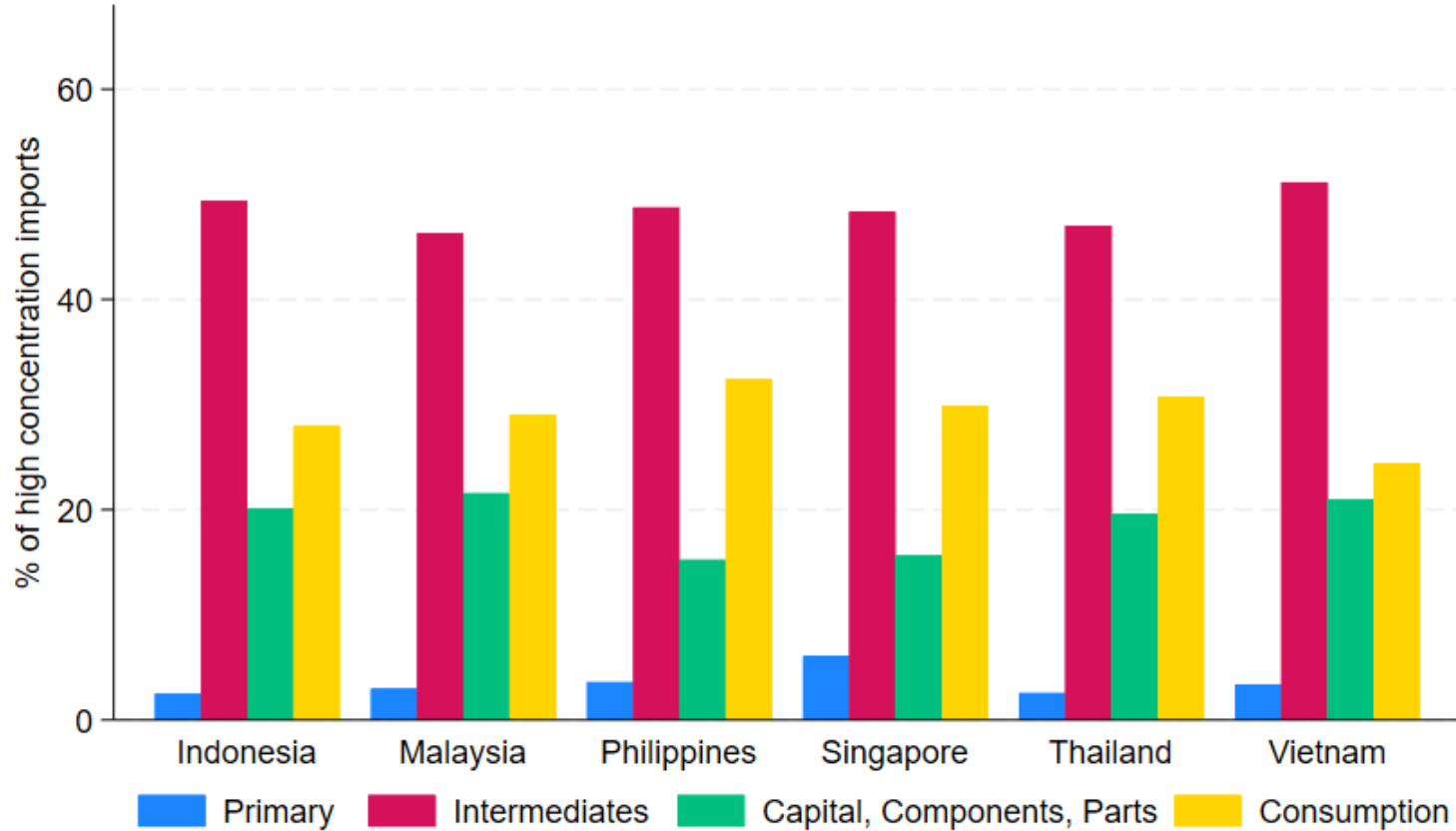


Number of products with more than 50% export share to China

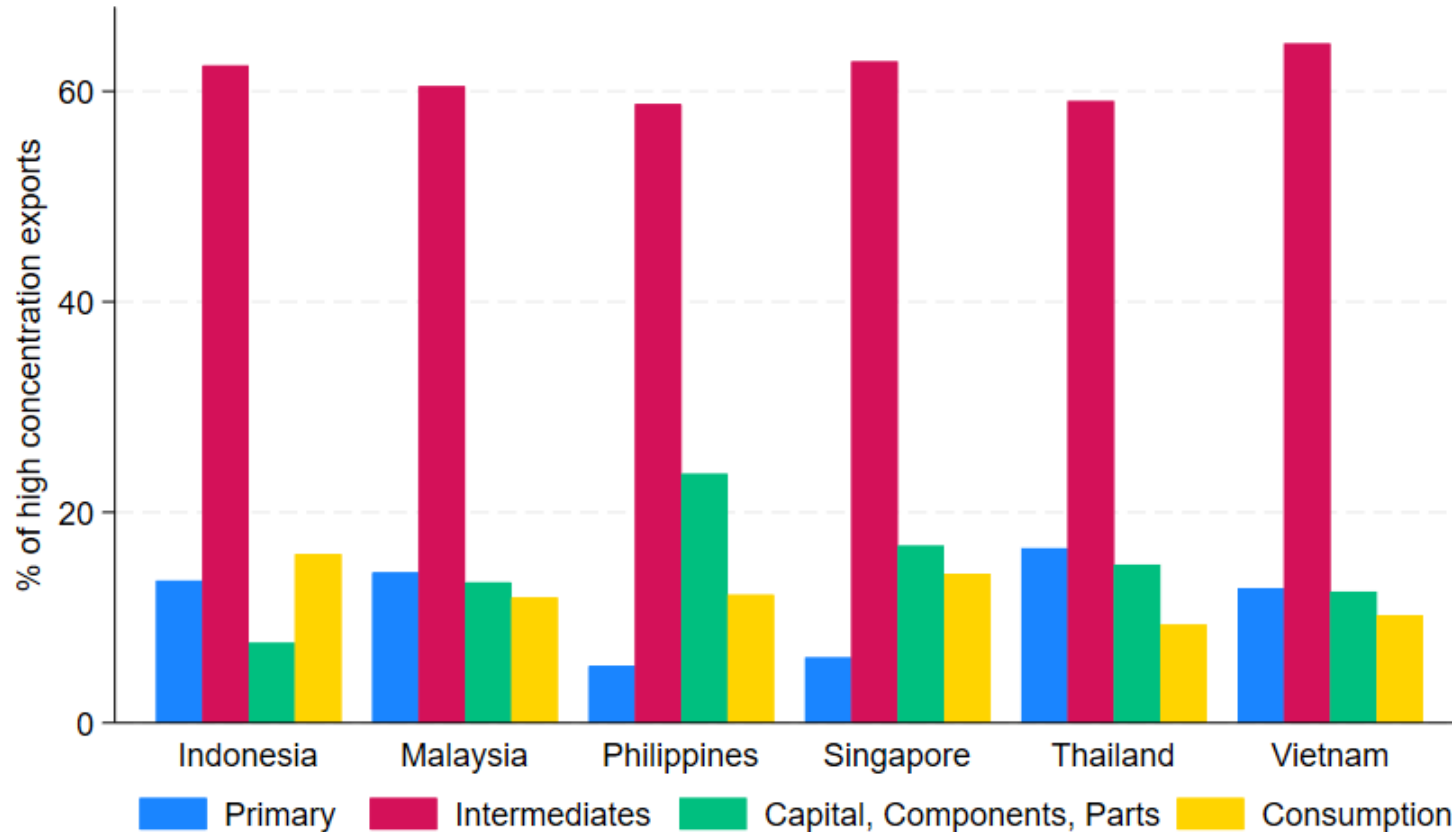
Data: UN Comtrade.



The concentration is mainly associated with intermediates: Imports from China



The concentration is mainly associated with intermediates, especially so for exports to China



More about intermediate exports

- While the number of high-concentration intermediates may be lower, they account for a **significant share of total exports**.
- Suggests that they are of **relatively higher value**.

	# of products with concentration from/to China > 50%		Share of total import or export value	
	Import	Export	Import	Export
Indonesia	1,523	237	27%	13%
Malaysia	1,475	210	17%	4%
Philippines	1,280	148	14%	8%
Singapore	639	113	6%	3%
Thailand	1,444	193	19%	8%
Vietnam	1,803	313	29%	18%

Number of Chinese products potentially exposed to de-risking from G7 countries

	50%	70%
Textiles	496	269
Chemicals	277	163
Machinery	178	90
Fabricated metals	137	70
Electronics	117	65
Manufacturing nec	109	67
Total	1,314	724

Number of ASEAN intermediates that are potentially linked to de-risking from China

	50%	70%	Top ASEAN Suppliers
Chemicals	245	185	SGP, THA, MYS
Textiles	175	132	VNM, THA, IDN
Metals	109	82	IDN, SGP, VNM
Electronics	57	36	VNM, MYS, SGP
Total	586	435	

Concluding Remarks

- Interconnectedness is the defining feature of the world today, unlike the bifurcated system during the Cold War.
- There will always be winners and losers from trade policies.
- Substantial risks for many ASEAN products to lose from the negative spillover effects due to de-risking.
- Critical to identify these products and mitigate negative outcomes.