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THE CHINA WASH:

Tracking Products To Identify Tariff Evasion Through Transshipment

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1. INTRODUCTION

Since Trump placed punitive tariffs on China in 2018, imports from Mexico and Vietnam have soared. Their growth has raised concerns about Mexico and Vietnam being major hubs for the illegal transshipment of imported goods from China (Reuters 2019, Lawder 2024, Jones, Murray and Fray 2024).

To combat transshipment, the U.S. government imposes severe penalties on guilty parties, including steep fines and potential prison time for companies evading duties (Rocafort 2020). The investigative process, under the Enforce and Protect Act (EAPA), allows interested parties to file a complaint if they believe importers are evading antidumping or countervailing duties. The EAPA, however, does not cover the special 301 duties on China — nor is there a well-identified group of import-competing firms that is materially interested in complaining about tariff evasion for security reasons.

Despite concerns about transshipment in the wake of U.S.-China trade tensions, there are currently few good estimates of how much transshipment is occurring and how it has changed following US tariffs on China. One exception is Iyoha et. al. 2024, which examines U.S. trade with Vietnam, using product-level and firm-level imports from China and exports to the U.S. The authors assume that if a firm imports a specific 8-digit product from China and exports the same product to the U.S. within the same quarter then it is transshipped. For comparison, they also examine product-level data (excluding the with-in firm requirement) that moves through Vietnam within the same quarter. They estimate that 16.1 percent may have been rerouted using product-level data, but only 1.8 percent of trade may have been rerouted using firm-product data in 2021. The firm-product data will underestimate transshipment if goods pass through more than one firm, as is likely.[1] However, the product-level data could be an overstatement if some of the imports from China are for domestic consumption. The results hence offer a good range for the extent of transshipment. There is also a huge difference in the change in transshipment over time: the product-level data show a four percentage-point increase from 2018 to 2021 while the firm-level data record only a 0.4 percentage point increase.

[1] An episode of Planet Money, August 23, 2024, for example, highlighted a Chinese company that transshipped steering hoses for automobiles through Thailand to evade the 301 tariffs on China. Three companies were involved: Sunsong, the Chinese company that was exporting to the US before tariffs were implemented; Imperial Cable, the manufacturer in Thailand that replaced China in the U.S. market; and Virion, the company importing hoses from China in Thailand. Further investigation showed that Virion and Imperial Cable were run and owned by the same people and located in the same building; forensic analysis found that the hoses from Sunson and Imperial Cable were materially identical.

This paper complements the analysis of Iyoha et al 2024 and develops a new methodology to estimate the products most likely subject to transshipment using widely available product-level data. Where they assume that the minimum of Vietnam's imports from China and Vietnam's exports to the U.S. in a narrowly defined product (and firm) is transshipped, the proposed methodology uses changes in bilateral trade flows to identify trade patterns that are consistent with transshipment.

Transshipment is defined as likely in a country-product under the following conditions (detailed in the next section): (i) A 301 tariff is in place giving incentive for transshipment to avoid the tariff. (ii) The country replacing China in the US market is expanding imports from China. (iii) China remains a growing import source for the rest of the world. (iv) The country imports sizable volumes from China.

Using these conditions to identify potential transshipment shows that transshipment increased following the imposition of U.S. tariffs on imports from China in 2018 but has come down in recent years. Very little transshipment through Vietnam is observed in 2017 before tariffs were implemented on China. After 2018, transshipment is estimated to rise to 7.5 percent of the value of Vietnam's exports to the United States in 2020 and then begin to decline. In contrast, the share of transshipment from China through Mexico rises over time but never exceeds 1.5 percent of Mexico's exports to the U.S. since tariffs were implemented. By the end of the period, for each country, the total value of transshipment is estimated to be around $5 billion, suggesting that roughly 1.25 billion in tariff revenue was avoided.

For both Mexico and Vietnam, the greatest transshipment is estimated to occur in machinery (HS84) and electronics (HS85). These are also the categories where China's market share in the US has declined most sharply.

For Vietnam in 2020, the year transshipment peaked, the product estimated to account for the largest share of transshipment is solar panels (HS854140). U.S. imports of solar panels from Vietnam grew from $535 million in 2016 to $2.5 billion in 2020. Meanwhile Vietnam's imports of solar panels from China increased from $93 million to $3.4 billion. Over this period China's share of world solar panel imports increased from 31 percent to 41 percent, while Vietnam's oscillated between 1 and 2 percent.

For Mexico, transshipment has been increasing through 2022, and the top product was static converters (HS850440). U.S. imports of static converters from Mexico grew from $832 million in 2016 to nearly $2 billion in 2022. Meanwhile, Mexico's imports of converters from China increased from $1.1 billion to $1.8 billion. Over this period, China's share of world imports increased from 34 to 37 percent,

while Mexico's declined from .6 percent to .5 percent.

U.S. data on transshipment of goods subject to countervailing and antidumping duties record several other countries that have been conduits for transshipment in the past. The methodology is applied to estimate transshipment from 15 of those partners with available data from 2017 and 2022-23. Although U.S. imports from countries like Singapore, Malaysia, and Turkey have grown more slowly than from Mexico and Vietnam, a greater share of exports from these countries is consistent with goods transshipped from China. Again, machinery and electronics are the most common industries where transshipment is likely to be occurring.

From a policy perspective, the methodology can be used to detect products where transshipment is highly likely in order to identify products for investigation when there is no U.S. competitor. It can also be used to calibrate claims about the extent of transshipment that is occurring.

2. DATA AND METHODOLOGY

The aim is to identify products where goods are shipped from China to a third country and reexported to the United States with little additional transformation. Product-level data are used because they are less likely to be subject to significant transformation if they enter and exit in the same product category. The trade data are from UN Comtrade at the HS 6-digit level, roughly 5000 products.

Transshipment of a specific product through a third party is defined using the following four criteria:

i. There is a 301 tariff on the product. This condition ensures transshipment is to avoid tariffs.
ii. In the product, China's share of U.S. imports declines, China's share of third-country imports increases, and the third country's share of U.S. imports rises. This rule ensures China is being replaced by the third country in the US market and China is increasing its share of the third country market.
iii. China's share of rest of the world imports grows faster than third-country share of rest of the world imports in the product. This condition ensures we exclude products where the third country is becoming a more competitive supplier to other countries.
iv. Third-country imports from China are greater than or equal to 75 percent of U.S. imports from the third-party. This rule ensures that the third party is importing a significant amount from China.

Once the codes are identified, transshipment is defined as the minimum of China's exports to the third country or third country exports to U.S. The intermediary cannot transship greater quantities than it exports to the U.S. or more than it imports from China.[2]

The conditions above could underestimate the total share of transshipped products if transshipment also occurs in products where the country exports sizable volumes of the product. In this case, condition iv will be violated — that is, the volumes transshipped from China may be below 75 percent of those exported to the U.S. Alternatively, transshipment may be more prevalent in products where imports from China equal or exceed exports to the U.S. As a robustness, we show that these more liberal or conservative estimates lead to similar patterns over time and do not change the estimates that higher volumes are transshipped through Vietnam than Mexico. Even under the liberal definition, at most 10.8 percent of trade is transshipped through Vietnam in 2020.

To the extent that some transformation occurs within the product code, this method could overestimate illegal transshipment. Such overestimation could occur in cases where the same product before and after transformation is in the same 6-digit code. However, even in this case, while the conditions may not capture illegal transshipment, they would capture products with value added that is primarily from China.

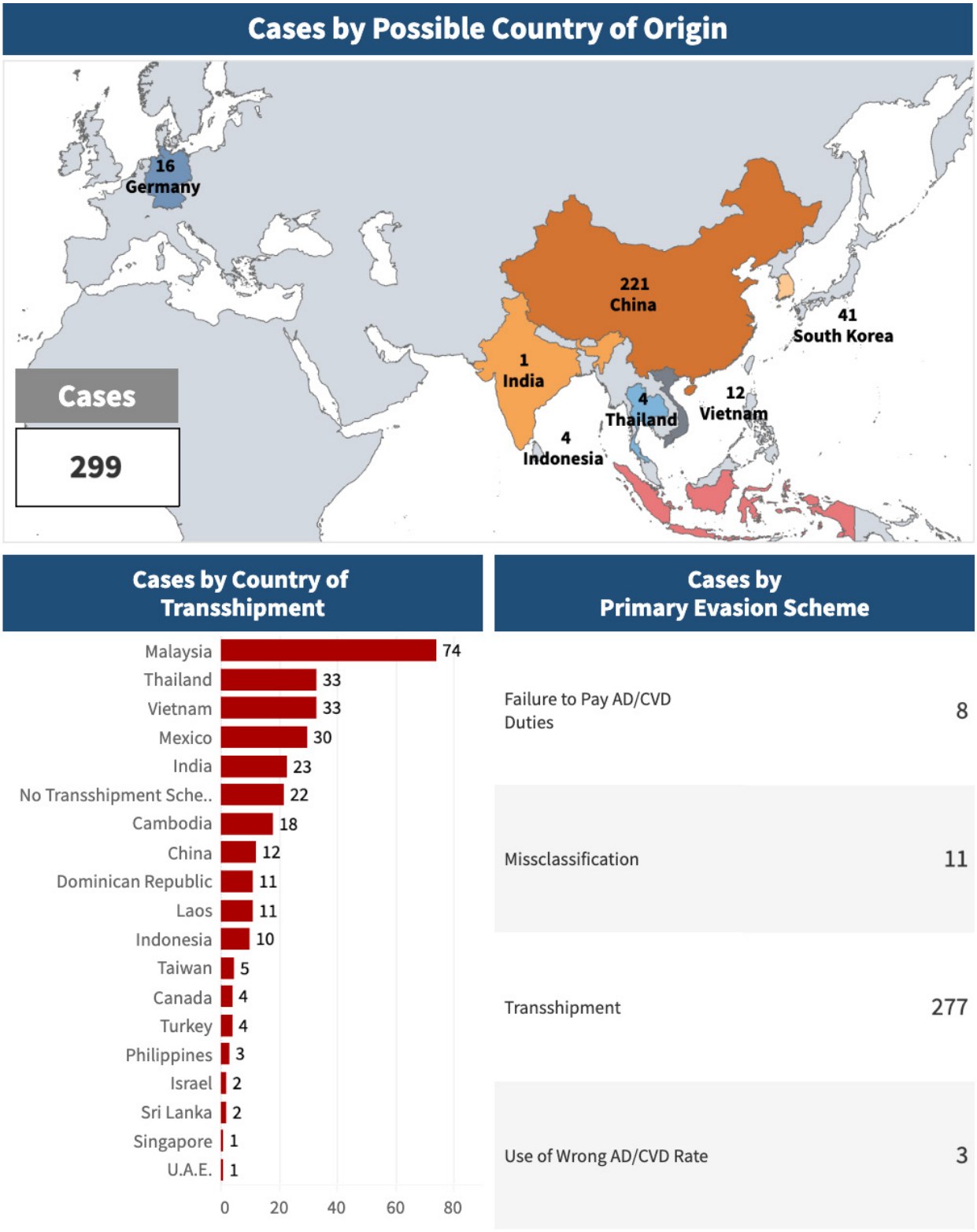
While rhetoric about transshipment has focused on Mexico and Vietnam, other countries can also serve as hubs. This possibility makes stopping transshipment like a game of whack-a-mole. If there is more scrutiny on Mexico and Vietnam, exporters can simply switch to a different intermediary.

One way to identify alternative transshipment countries is to use existing data on investigations on evasion of contingent protection. EOPA gathers and records data on transshipment of goods subject to antidumping and countervailing duties. Seventy percent of the cases pertain to goods shipped from China and 43 percent of the investigations are on steel products (Figure 1).

For the countries on the list, except for Taiwan, which does not have independent data and Laos which does not have data for 2022, we use the same criteria and examine trade from 2017 to 2022. A product is considered transshipped if conditions i-iv above hold over this long period.

[2] Freund et al 2024 show that across countries, between 2017 and 2022, growth in 6-digit imports from China is correlated with growth in 6-digit exports to the US. They also find that 2-digit imports from China are correlated with 6-digit exports to the US, suggesting a role for increased integration with China through supply chains.

Figure 1: Data on transshipment cases by country of origin and country of transshipment

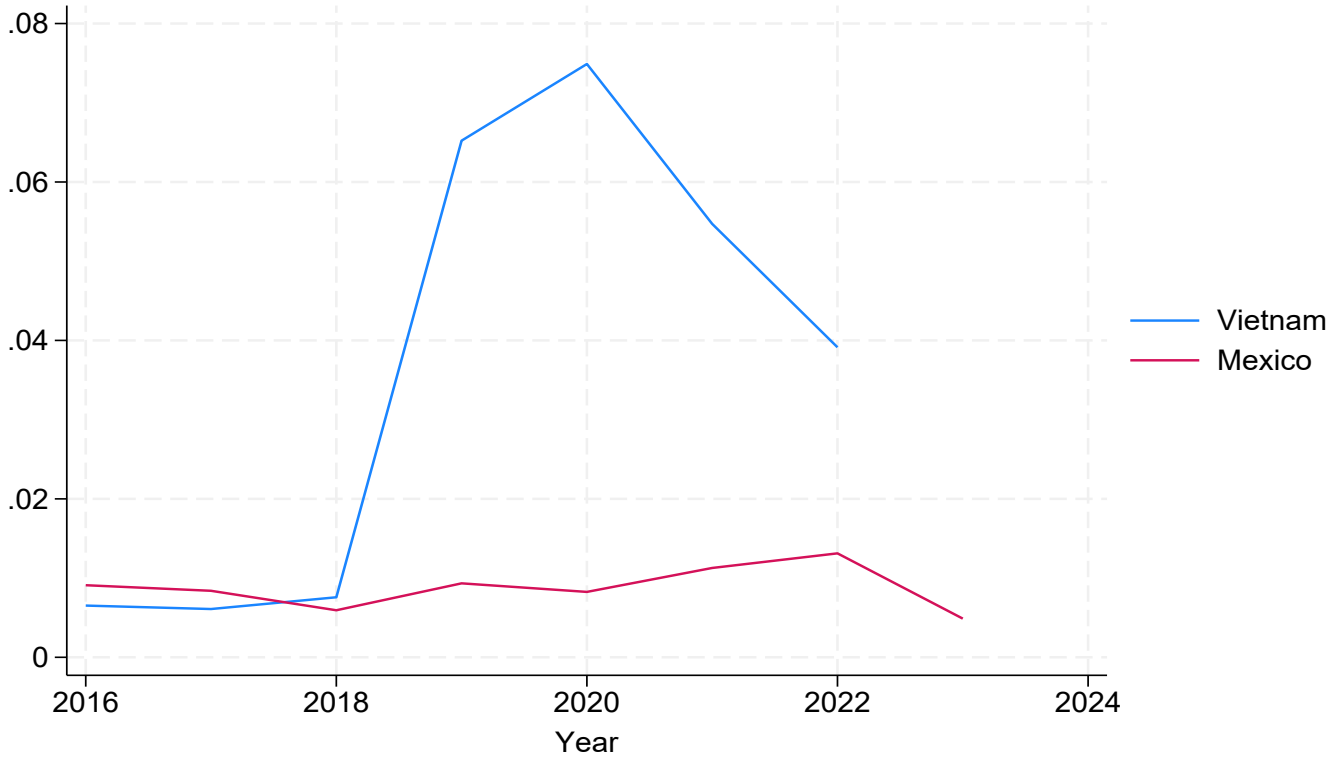


Source: EAPA Case Management System. Data as of 8/28/2024.

3. RESULTS

Using the methodology described above, Figure 2 shows the share of imports from Mexico and Vietnam that are estimated to have been transshipped from China. For Vietnam, transshipment peaked in 2020 at over 7 percent of imports. For Mexico, the maximum is in 2022 but remains around 1 percent.

Figure 2: Share of imports estimated to be transshipped through Mexico and Vietnam



Note: trade data for Vietnam not available for 2023

Figure 3 shows the value of transshipped trade. By 2022, although Mexico has a smaller share of trade consistent with transshipment, similar quantities are estimated to be transshipped through Mexico and Vietnam because Mexico has much larger overall trade volumes.

Figure 4 records the industries where transshipment is most prevalent, using the year when the share transshipped was at its maximum level for each country. For both Mexico and Vietnam, most of the transshipment occurs in Machinery/Electrical.

Figure 3: Total imports estimated to be transshipped from Vietnam and Mexico

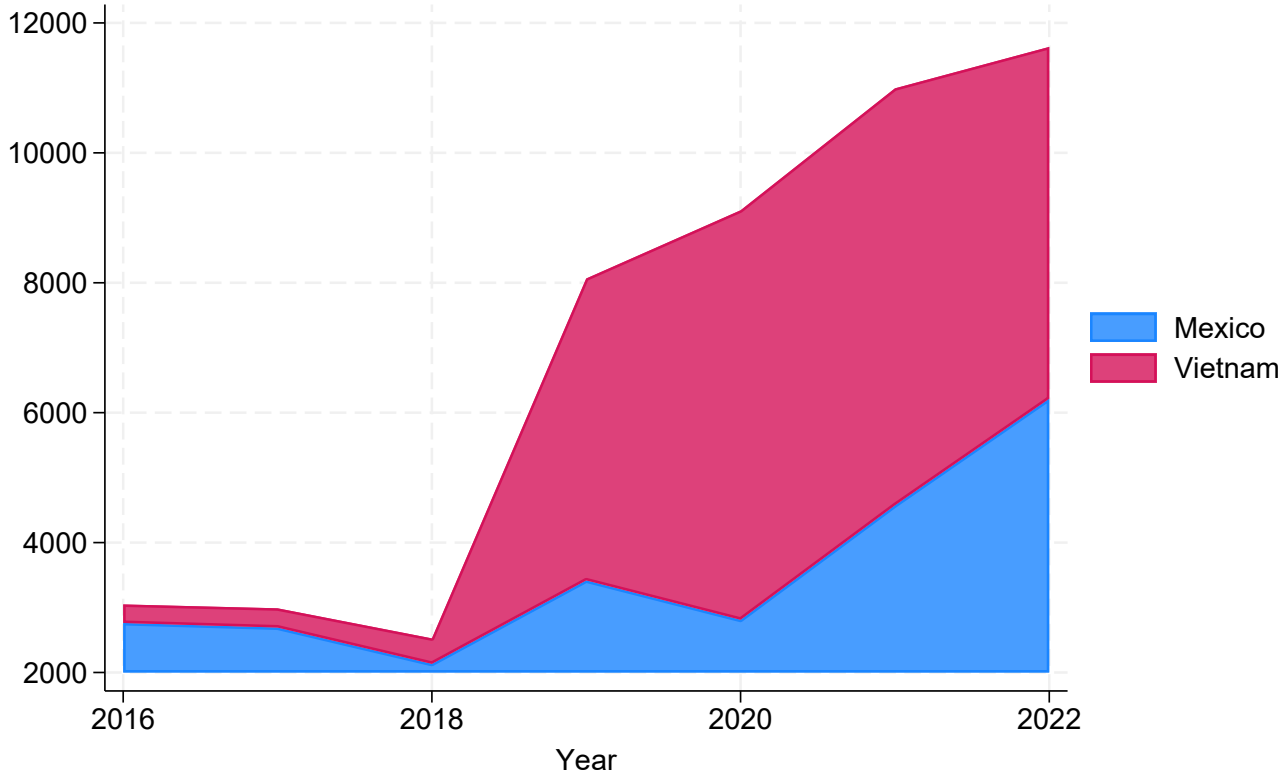
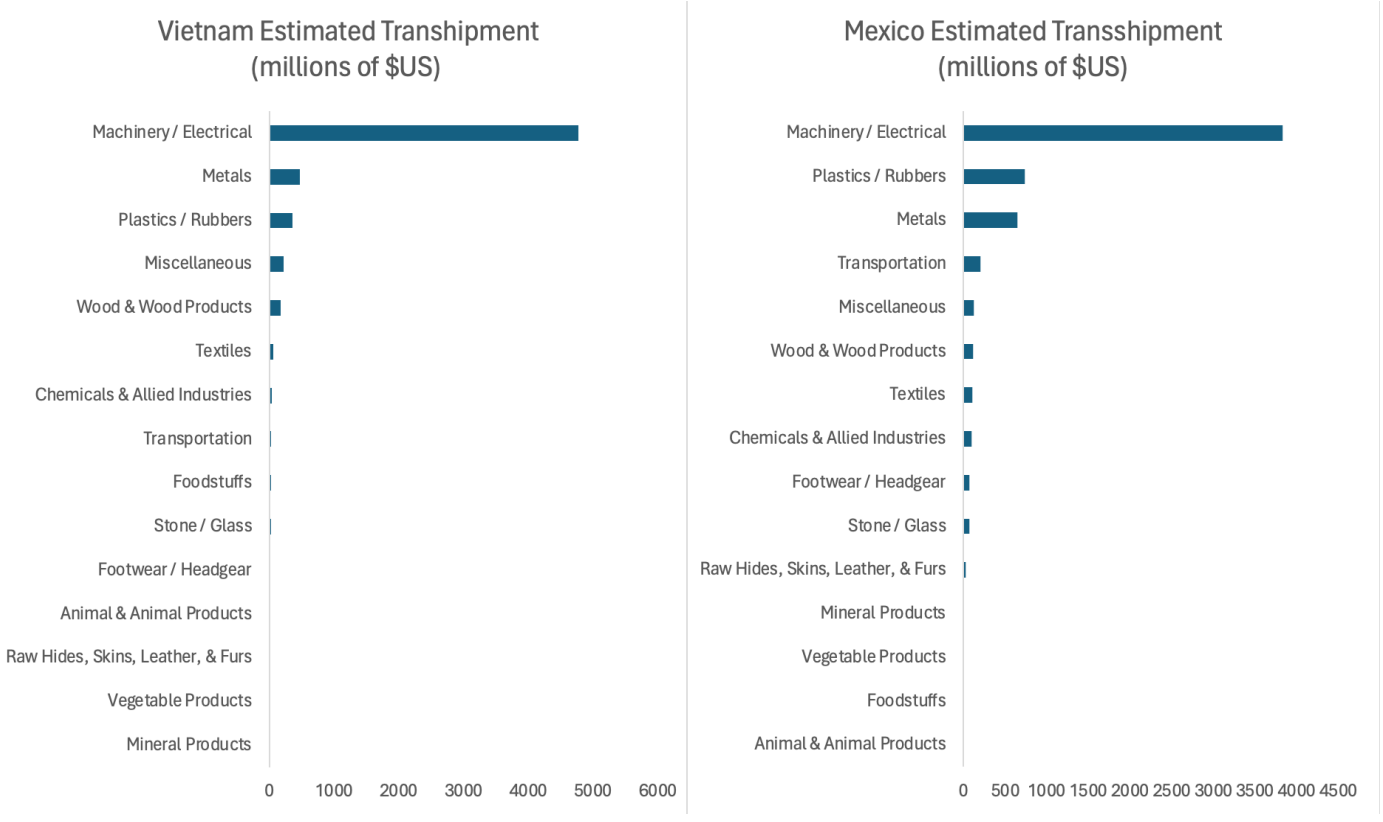


Figure 4: Estimated transshipment by One-digit HS Category (millions of $US)



Note: Calculated in year of max transshipment, 2020 for Vietnam and 2022 for Mexico

Figure 5: Top 10 products likely to be transshipped.

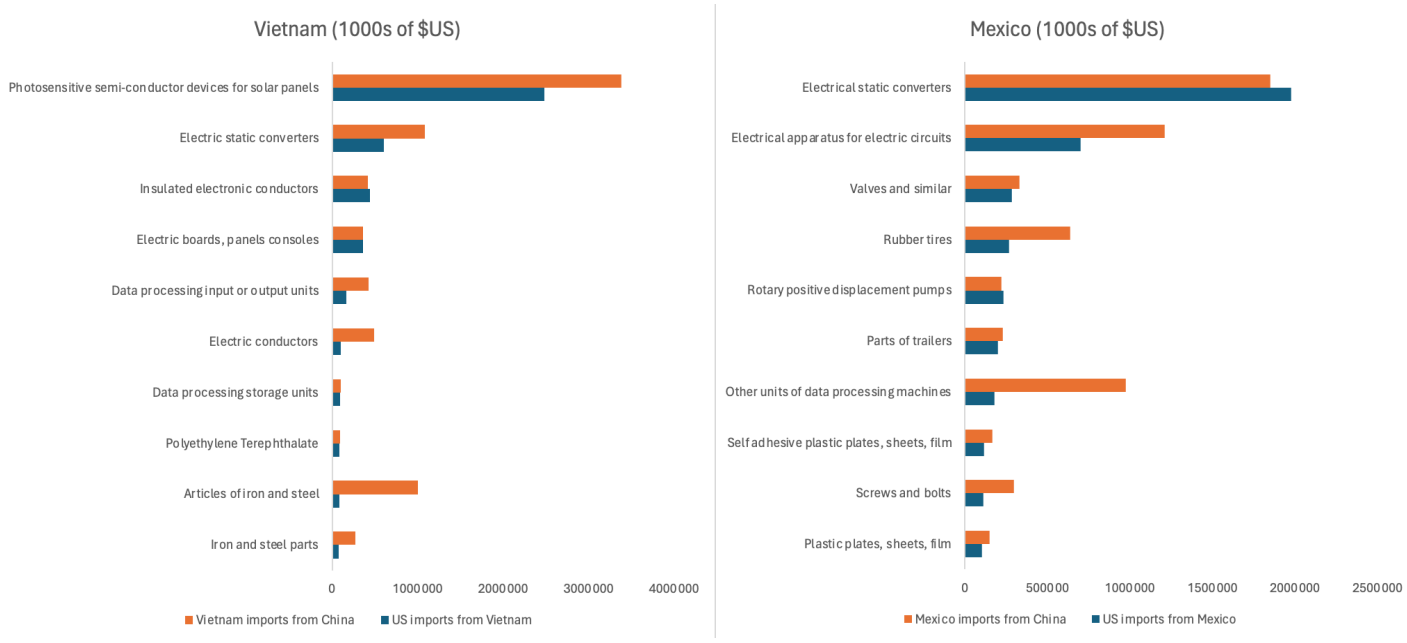
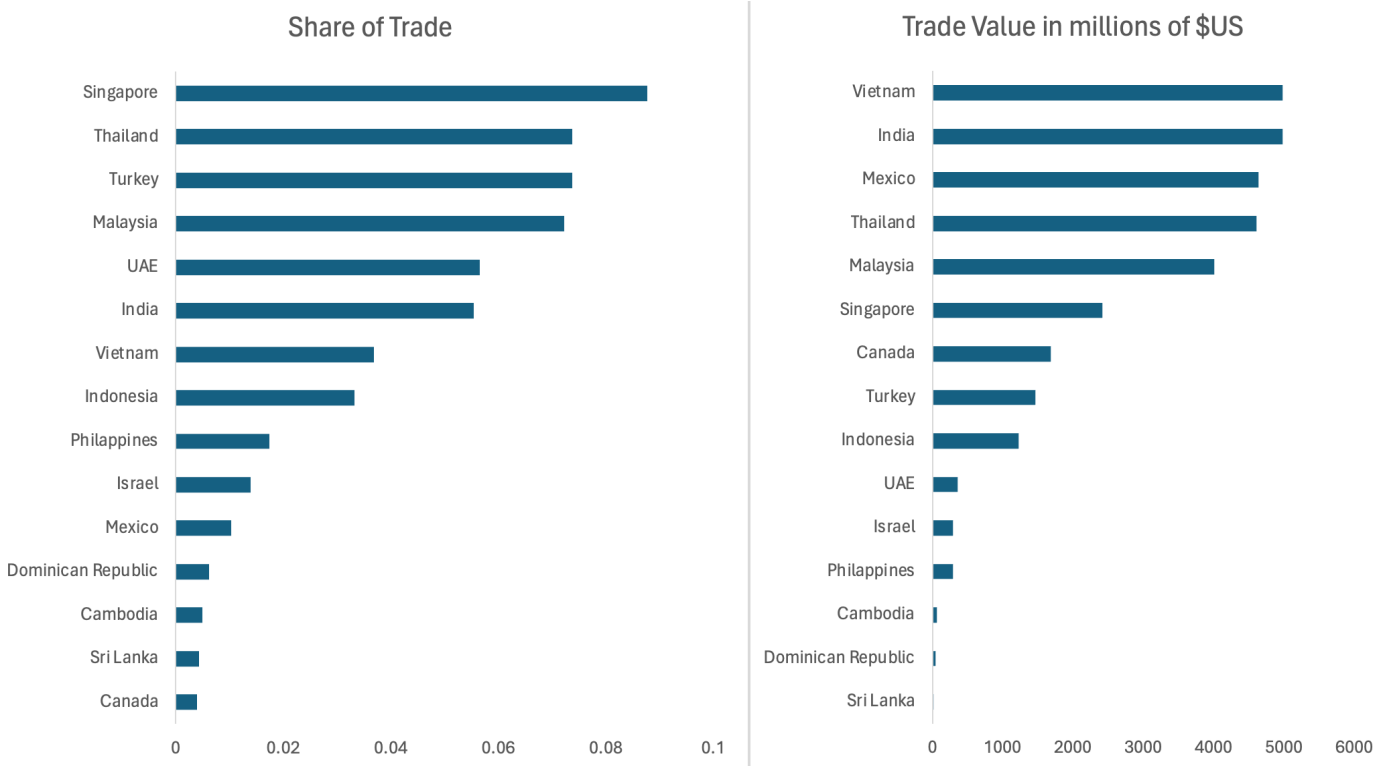


Figure 5 shows the specific products that top the list for estimate of transshipped quantities in each country. Products such as solar panels and static converters are at the top of the list. These are products where, as the criteria require, Vietnam and Mexico are importing more from China and exporting more to the U.S., but China is growing its world share faster than Mexico or Vietnam.

Figure 6: Share and value of estimated transshipment in 2022



Finally, we examine other countries that are potential transshipment hubs as identified from historical data on transshipment. For this exercise, data from 2022 are compared to 2017 to identify products that are likely transshipped using the criteria above. The results are reported in Figure 6. While higher volumes of trade are transshipped through Mexico and Vietnam, countries like Singapore and Thailand experience a greater share of trade that is likely transshipped from China.

4. ROBUSTNESS

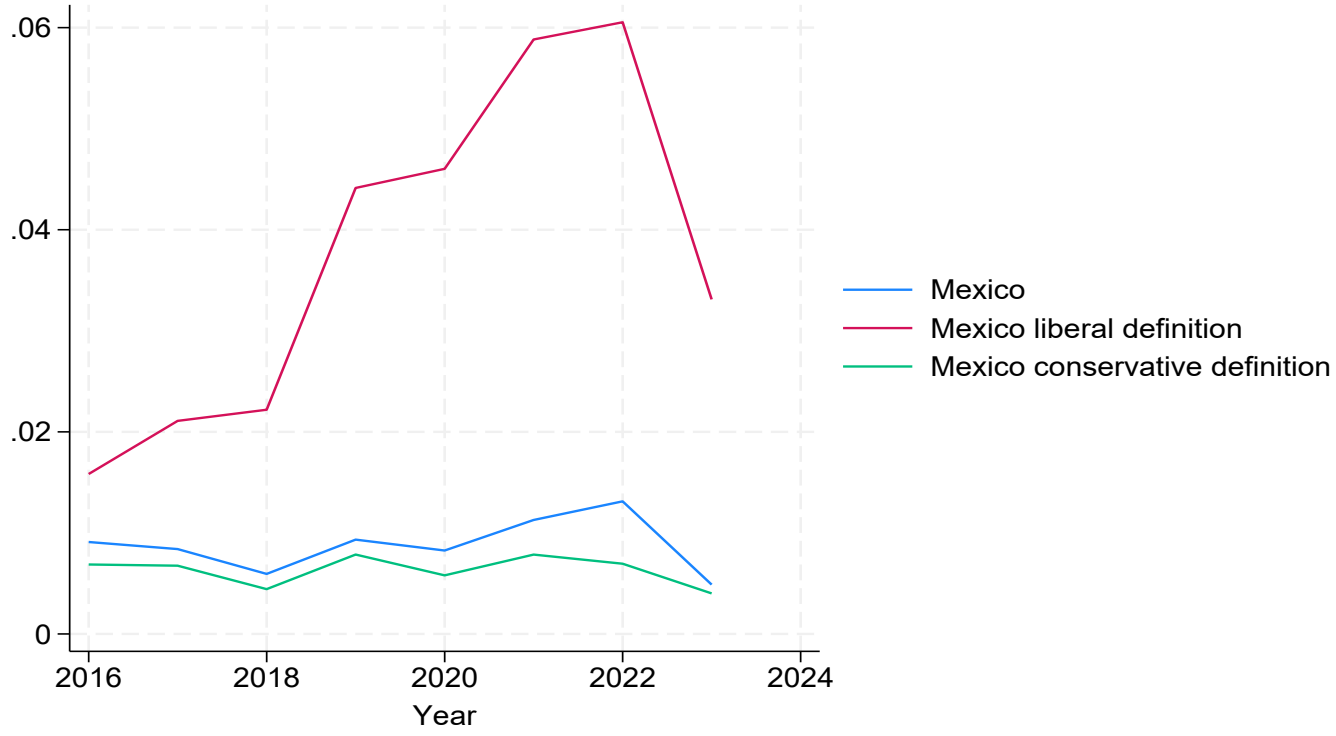
Condition iv — that China's exports to the transit country account for at least 75 percent of US imports from the transit country — could understate transshipment if goods are transshipped even when the country also exports sizable amounts of the product. Alternatively, it could overstate transshipment if only goods where the country imports more from China are transshipped.

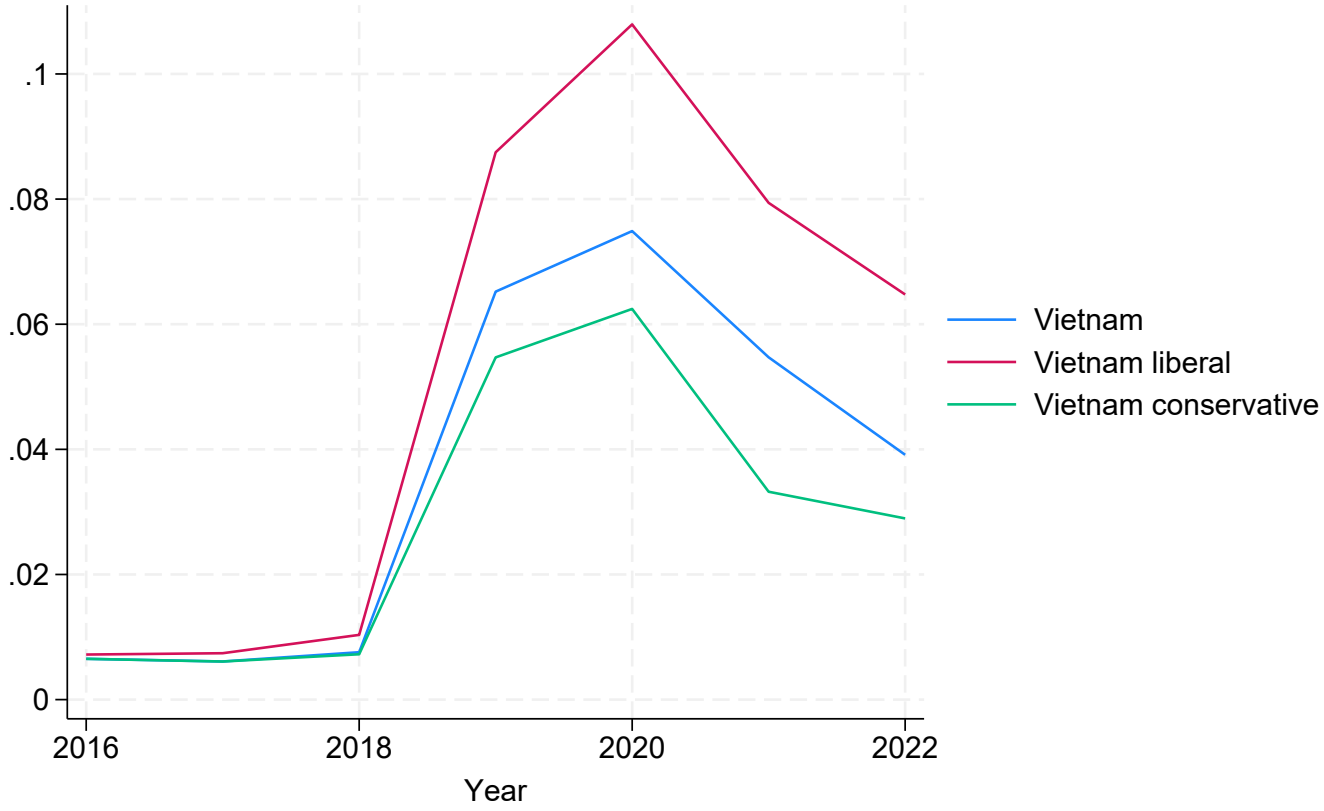
For robustness, the condition is replaced with a more liberal or conservative one. The liberal definition assumes all trade in a product where China's trade to the rest of the world is expanding faster than the trade from the transit country, and where transit-country imports from China and exports to the U.S. are growing, is transshipped. This puts a maximum on transshipment.

A more conservative estimate is also used, where China must export at least as much to the transit country as the country exports to the United States.

The results for Vietnam and Mexico are shown in Figure 7. While the estimated shares expand under the more liberal definition and fall under the more conservative definition, as would be expected, the patterns remain unchanged. Moreover, even under the conservative definition, about 10 percent of Vietnam's exports are transshipped.

Figure 7: Robustness of estimated transshipment, altering condition iv





5. CONCLUSION

This paper presents a simple methodology for identifying products that are likely transshipped from China through third parties. These are defined as products that countries are increasingly importing from China and exporting to the U.S. and where China is losing market share in the US but gaining ground in the rest of the world.

The methodology shows that the share of exports to the U.S. from Mexico and Vietnam that are consistent with transshipment is less than 10 percent of their imports and has declined in recent years in both Mexico and Vietnam. While illegal transshipment through Vietnam may have been an initial response to tariffs, over time at least part of the production process appears to be shifting to Vietnam. The decline in transshipment could also reflect that it may be rotated across countries, given that other countries, such as Singapore and Thailand, have a higher share of trade consistent with transshipment.

The methodology can be used to choose products to monitor for transshipment and to track patterns in transshipment.

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