US-China Tensions and Trade Relocation: The Role of Financial Frictions

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Abstract

This paper investigates the impact of the US-China trade tension on trade relocation and explores the role of country-sector characteristics in facilitating the relocation of US imports. Specifically, we examine the interaction between a country's financial development and the financial dependence of an sector. Our findings indicate that countries with stronger financial development tend to gain a larger market share when China exits sectors characterized by high financial dependence for investment and working capitals. Moreover, we observe that the effect of this interaction is more pronounced when the country already possesses a significant initial market share in the sector, reflecting comparative advantages. As a result, financial frictions play a crucial role in shaping the relocation of US imports and can lead to reduced gains from trade for countries with less developed financial systems.

JEL codes: F1, F2, F5, F6

Key words: US-China trade tension, financial friction

1   Introduction

The ongoing US-China trade tension has had far-reaching consequences on global trade patterns, prompting a shift in trade dynamics as industries and countries seek alternatives to mitigate risks. Understanding the factors influencing the relocation of US imports is essential for policymakers and businesses alike. This study aims to shed light on the role of financial development and financial dependence in this process.

The US-China trade tension has resulted in significant trade relocation. In 2018 and 2019, the US had imposed tariffs on more than 60 percent of its imports from China, with many tariffs set at the 25 percent level. According to Freund, Mattoo, Mulabdic and Ruta, 2023, US imports from China in tariffed goods declined by 12.5 percent compared to 2017, while imports from other parts of the world saw a surge in the same product categories. Consequently, China's share in US imports decreased from 21.6 percent in 2017 to 16.3 percent in 2022, effectively returning to the level it held back in 2007 before the global financial crisis. The sizable reduction in China's share and increase in overall in US imports implies that importers are turning to new sources of supply. This paper examines what country-sector characteristics facilitate the relocation of US imports. Especially, we are interested in the interaction of a country's financial development, and the financial dependence of a sector.

Why is it important to think about the interaction of a country's financial development, and the financial dependence of a sector? In order to pick up market share in a sector where China exits, a country needs to increase its production scale, which is associated with substantial up-front costs, especially in those sectors with high financial dependence. A country with inefficient financial system may fail to allocate the resources and as a result, the country cannot seize the market, even with comparative advantage in production. Hence financial frictions can be a key factor determining the relocation of trade.

Using import data from US Customs, we study what country-sector characteristics, especially financial characteristics, facilitate the relocation of trade. We define a sector as a US SIC 4-digit sector. The analysis relies on a simple identification strategy. First, we study how a country-sector's market share in the US is influenced by the country's financial development interacted with the sector's financial dependence, controlling for other country-sector characteristics including the initial market share in 2017. The results from this analysis suggest that countries with high financial development gain more market share

in sectors with high financial dependence.

Second we examines the effect of the three-way interaction of the initial market share, financial development and financial dependence. The initial market share reflects a country's comparative advantage in a sector. Upon China's exit, the US importers will turn to other sources of supply with comparative advantages. Indeed we find the effect of the interaction of a country's financial development and a sector's financial dependency will be stronger if the country has a larger initial share.

These results suggests that a country's financial development matters in the relocation of trade, especially in sectors with high financial dependence. We also check the robustness by considering (1) FDI inflow, (2) countries increase their exports to the US by reallocating from other destinations, and (3) China exports to the US via a third country to circumvent the tariff. The results are robust to different assumptions.

Literature Review

This paper contributes to two strands of literature in international trade and macroeconomics. First, this paper relates to the recent literature on the economic effects of the US-China trade war. Several studies (Amiti, Redding, and Weinstein, 2019; Fajgelbaum, Goldberg, Kennedy, and Khandelwal, 2020; Cavallo, Gopinath, Neiman, and Tang, 2021; Flaaen, Hortaçsu, and Tintelnot, 2020) analyze the impact of the tariffs on US import prices, finding that US consumers and importers have borne the brunt of the tariffs through higher prices. This literature also finds that the tariffs reduced US export growth (Handley, Kamal, and Monarch, 2020), lowered employment (Flaaen and Pierce 2019) and had a negative effect on aggregate real income in both the US and in China (Amiti et al. 2019; Fajgelbaum et al. 2020). Closer to our work is the paper by Fajgelbaum, Goldberg, Kennedy, Khandelwal, and Freund, Mattoo, Mulabdic and Ruta (2023) that studies the impact of the US-China trade war on exports by third countries, finding that they largely increased exports to the US and to the rest of the world in response to the tariffs. Different from these studies, this paper contributes to this literature by focusing on the impact of financial frictions on the export growth of third countries.

Second, this paper is closely related to previous studies which investigate the relation between financial

development and the level of international trade flows across industries (Chor and Manova, 2012; Manova, 2013; Caggese and Cunat, 2013; Chaney, 2016; Kohn et al., 2020; Brooks and Dovis, 2020; Leibovici, 2021). This paper treats the US-China trade tension as a natural experiment and provides new evidence on the impact of financial frictions on trade flows.

The remainder of the paper is organized as follows. The next section introduces the data. Section 3 outlines a conceptual framework that guides our empirical analysis. We present the empirical results in Section 4 and check the robustness in section 5. The last section concludes.

2 Data

2.1 Import of the US

We collect HS 10-digit import data at the country level from US Customs for 2017 and 2022. Then we aggregate varieties from HS 10-digit to SIC 4-digit according to the concordance by Pierce and Schott (2012). This is because the measures of financial dependence of sectors we will exploit, the Rajan Zingales Index and working capital requirement, are both at SIC 3-digit level. Focusing on import at SIC 4-digit level will thus be less noisy. In 2017, US imports around 20,000 HS 10-digit varieties or 441 SIC 4-digit sectors from 224 countries.

2.2 Tariff

The tariff data are from Bown (2023) and USITC's website. We observe tariff punishment at HS 10-digit level. In 2017, the US imports 14,330 HS 10-digit varieties from China, among which 12,690 are on the list of tariff punishment during the trade tension. Among these 12,690 targeted HS 10-digit varieties, 8,622 of them are punished by 25% tariff, and the remaining 4,068 varieties are punished by 7.5%, by the end of 2022. Tariff punishments at SIC 4-digit level can be calculated as the weighted average of HS 10-digit level.

2.3 Financial Development

Country level financial development data is collected from Global Financial Development Database of the World Bank. Following the literature, we proxy financial development with the sum of (i)private credit by deposit money banks to GDP, indexed by GFDD.DI.01, (ii) stock market capitalization to GDP, indexed by GFDD.DM.01 and (iii) outstanding domestic private debt securities to GDP, indexed by GFDD.DM.03:

$$\text{FinDev} = \frac{\text{private credit by bank}}{\text{GDP}} + \frac{\text{stock market capitalization}}{\text{GDP}} + \frac{\text{private debt securities}}{\text{GDP}}$$

Indeed, bank loans, stock market and bond market are major sources for firms to raise liquidities. The median of financial development is 0.389, mean is 0.722, and standard deviation is 1.26

2.4 Financial Dependence

We measure the sector level financial dependence by a sector's intrinsic liquidity need for working capital, and its intrinsic dependence on external finance for capital expenditure.

Working Capital. Working capital plays a vital role in facilitating a firm's day-to-day operations and meeting its obligations for both short-term debt payments and ongoing operational expenses. To fulfill their working capital requirements, firms often utilize various financial instruments such as lines of credit, term loans, or commercial papers.

We utilize a sector-level measure of intrinsic liquidity need for working capital, which is based on the concept of a "cash conversion cycle". This metric has been previously adopted by Raddatz (2006) and Kroszner, Laeven, and Klingebiel (2007). The cycle measures the time elapsed from the moment a firm pays for its inputs to the moment it receives payment for the goods it sells. We assume that this intrinsic liquidity need is due to pure technological reasons, such as the length of the production process and the mode of operation. For firms operating in the United States during periods without significant crises, when the availability of finance is ample compared to other countries, the relative values of the cash conversion cycle across sectors can be seen as a reflection of their relative true need for working capital. More specifically,

$$\text{Cash Conversion Cycle} = 365 * \left(\frac{\text{inventories - accounts payable}}{\text{cost of goods sold}} + \frac{\text{accounts receivable}}{\text{total sales}} \right)$$

Following Tong and Wei (2011), the sector-level proxy is constructed as follows: First, for each U.S. firm from 1990 to 2006, we calculate the cash conversion cycle based on annual data from Compustat USA Industrial Annual. Then we calculate the median within each U.S. SIC 3-digit sector, and apply it as the sector's intrinsic liquidity need for working capital. The index for the U.S. firms is then extrapolated to other countries. We take the log of the index to alleviate influence of potential outliers. The median and mean values of this log index are 4.46 and 4.48 respectively, and the standard deviation is 3.35. This indicator is specifically designed to assess the essential requirement for working capital to meet a firm's short-term debt payments and ongoing operational expenses. Additionally, we will utilize a separate indicator to gauge a firm's intrinsic financing needs for long-term investments.

Dependence on External Finance for Capital Expenditure. To measure an industry's intrinsic dependence on external finance for capital expenditure, we use the financial dependence measure proposed by Rajan and Zingales (1998). They compute an industry's dependence on external finance as:

$$\text{Financial dependence} = \frac{\text{Capital expenditures - Cash flow}}{\text{Capital expenditures}}$$

where cash flow = cash flow from operations + decreases in inventories + decreases in receivables + increases in payables. The index is computed using data on listed U.S. firms, which are judged to be least likely to suffer from financing constraints relative to firms in other countries. Conceptually, the Rajan and Zingales index aims to identify sectors that are naturally more dependent on external financing for their capital expenditure. To calculate the Rajan and Zingales index, we take the following steps as in Tong and Wei (2020). We first sort every firm in the Compustat USA files based on their 3-digit SIC sectoral classification and then calculate the ratio of dependence on external finance for each firm over the period 1990-2006. We then calculate the financial dependence index as the sector-level median value of these firm ratios for each SIC 3-digit sector that contains at least 5 firm observations. The median and mean values of this index are 0.2 and 0.2 respectively, and the standard deviation is 0.3.

2.5 Other Country Characteristics

Following Freund, Mattoo, Mulabdic and Ruta, 2023, we also consider information regarding country and country-pair characteristics. The Centre d'Etudes Prospectives et d'Informations Internationales (CEPII) GeoDist database (Mayer and Zignago 2011) provides information on bilateral distance in kilometers and an indicator variable that captures if two countries share a border. Data on population and GDP per capita are from the World Bank's World Development Indicators (WDI). Diplomatic disagreement score with the US are also from CEPII. Data on Free Trade Agreements (FTAs) are from Mario Larch's Regional Trade Agreements Database based on Egger and Larch (2008).

3 Conceptual Framework

If China's market share of a sector declines due to the tariff punishment, other countries will absorb it. What characteristics would facilitate a country to increase its export to the US and absorb the market share? Does the characteristics of a sector, especially the financial dependence, matter? This section provides intuitions and develops empirically testable hypotheses.

First, the interaction of a country's financial development and a sector's financial dependency matters. For sectors with high financial dependence, countries with better financial development will absorb more market share. In order to increase export to the US and absorb the market share in a sector that China exits, a country must expand its production scale in this sector, including purchasing new machines, building new factories, hiring and training new employees. Therefore those firms will incur substantial up-front costs, which may require external finance. A good financial system is required to allocate resources to those firms, especially for sectors with high financial dependence. Hence, we can expect that for sectors with high financial dependence, countries with more developed financial systems will absorb more market share.

Second, a country's initial market share in a sector matters. Trade theories suggest a variety be imported from countries with comparative advantage. What's a measure for countries' comparative advantage in a sector? The initial market share, i.e. market in 2017 before the trade tension, provides the information–

countries with comparative advantage would take larger market share. Therefore after the trade tension, if China is no longer the optimal choice as a supplier of the sector, the US firms would turn to their previous second best supplier. The second best supplier must have some comparative advantages over other countries, and hence a relatively large initial market share. Thus, we can expect that the effect of the interaction of a country's financial development and a sector's financial dependency will be stronger if the country has a larger initial share, i.e. a financial developed country with large initial share in high financial dependence sectors would absorb even more market share upon China's exit.

Note that the two predictions are true only when China exits due to the tariff punishment. In other words, the decline of China's market share in a sector must be exogenous for other countries. If not, the two hypotheses will no longer stand. For example, country i develops a new technology in sector j, and we observe that country i seize the market from China. But country i may neither have a large initial share nor a high financial development. Hence when we test these two predictions, we need to guarantee that China's exit in a sector is a result of tariff punishment.

To summarize:

Prediction 1. The interaction of a country's financial development and a sector's financial dependency matters. For sectors with high financial dependence, countries with better financial development will absorb more market share.

Prediction 2. A country's initial market share in a sector matters. The effect of the interaction of a country's financial development and a sector's financial dependency will be stronger if the country has a larger initial share.

4   Results

In this section we examine the predictions from the conceptual framework. We start by studying the effect of the interaction of a country's financial development and a sector's financial dependency. Then we will consider the effect of a country's initial market share.

4.1 Baseline Results

We study the effect of the interaction of a country's financial development and a sector's financial dependency with the following regression specification:

$$\Delta Share_j^i = \alpha_i + \sigma_j + \beta * [\Delta Share_j^{\text{CHN}} * \text{characteristic}^i] + \gamma_1 * Share_{j,2017}^i$$
$$+ \gamma_2 * FinDev^i * FinDepen_j + \epsilon_j^i$$

The dependent variable is the market share change between 2017 and 2022 of country i (do not include China) in SIC 4-digit sector j (we focus on manufactured goods, and hence $2000 \leq sic4 \leq 3999$). On the right hand side, we control for country fixed effect and sector fixed effect. Following Freund, Mattoo, Mulabdic and Ruta, 2023, characteristic is an exporter country characteristic, including population, income, or distance from the US/China, diplomatic disagreement with the US/China and free trade agreement with the US/China. The purpose is to control for characteristics other than financial development that may contribute to the market share change. The change in market share will also depend on how much China exits in sector j. The characteristics and China's market share change in sector j are absorbed by the fixed effects. We include their interactions in the specification. We control for country i's market share of sector j in 2017, since countries with larger initial share may absorb more. The coefficient on the cross term of country i's financial development and sector j's financial dependency, shows whether countries with better financial development will absorb more market share in sectors with high financial dependence. The financial dependence is measured by Rajan Zingales Index. We expect γ_3 to be positive.

Remember that we need to focus on sectors that China exits due to the tariff punish. USTIC provides tariff punishments on imports from China at HS 10-digit level. By 2022, most of the targeted HS 10-digit varieties have a 25% tariff, the rest have a 7.5% tariff. We calculate weighted average tariff punishments for each SIC 4-digit sector. We restrict our sample to the SIC 4-digit sectors whose weighted average tariff punishment equals 25% and China's market share in which declines between 2017 and 2022. About 350 SIC 4-digit sectors are imported in both 2017 and 2022 in our sample, among which 103 are punished with 25% tariff. On the other hand, China's market share decreases in 270 sectors. Conditional on decreasing, the median value of the change in China's maket share is -5.3%.

Table 1 reports the results. In column (1) we restrict our sample to sectors whose tariff equals to 25% and China's market shares in which decrease at least by 2%. The coefficient of the cross term of country i's financial development and sector j's financial dependency, γ_3, is positive, suggesting that countries with better financial development will absorb more market share in sectors with high financial dependence. Also, we find that countries with larger initial share tend to absorb more market share.

In column (2), we restrict our sample to sectors whose tariff equals to 25% and China's market shares in which decrease at least by 5.3%. γ_3 is still positive, and with higher value and stronger statistical significance. While in column (3), with same tariff, we look at sectors in which China's market shares in which decrease at least by 9%. γ_3 is positive and with even higher value than column (2). This suggests that the reshuffle of market share will be more significant if China exits more.

What would happen if we loosen the restriction on tariff? In column (4), we restrict our sample to sectors whose tariff is greater or equal to 10% and China's market shares in which decrease at least by 5.3%. γ_3 is still positive, but no longer statistical significant. We need to restrict the sample to sectors with high tariff to guarantee that China's exit is exogenous.

We can gauge the economic magnitudes of the interaction of a country's financial development and a sector's financial dependence. The country at the ninetieth percentile of financial development is South Korea (with a financial development value of 3.22), while the country at the tenth percentile is Nigeria (with a financial development value of 0.24). The ninetieth percentile of financial dependence is electronic components and accessories (with a Rajan Zingales Index of 0.29), while the tenth percentile is cutlery, handtools, and hardware (with a Rajan Zingales Index of -0.62). Based on column (2) of Table 1, (with a coefficient of 0.24 for the interaction of financial development and financial dependence), the market share increase in electronic components and accessories should be higher than that of cutlery, handtools, and hardware by 0.65 percentage points in South Korea as compared to in Nigeria. The difference is not trivial compared to the median market share change (0.00027 percentage points), or the mean (0.2 percentage points).

4.2 Effect of Initial Market Share

As discussed in the conceptual framework, the initial market share of country i in sector j reflects the comparative advantage and hence countries with larger initial share should absorb more market share upon China's exit. And the effect of interaction of financial development and financial dependence should be strong when a country has a larger initial share. We test this prediction with the following regression specification:

$$
\begin{aligned}
\Delta Share_j^i =&\alpha_i + \sigma_j + \beta * [\Delta Share_j^{\text{CHN}} * \text{characteristic}^i] + \gamma_1 * Share_{j,2017}^i \\
&+ \gamma_2 * FinDev^i * FinDepen_j + \gamma_3 * Share_{j,2017}^i * FinDev^i + \gamma_4 * Share_{j,2017}^i * FinDepen_j \\
&+ \gamma_5 * Share_{j,2017}^i * FinDev^i * FinDepen_j + \epsilon_j^i
\end{aligned}
$$

The specification is very similar to that of the baseline case, except that here we include the three-way interaction of initial share, financial development, and financial dependence. The coefficient the of three-way interaction term, γ_5 is of our interests. We expect γ_5 to be positive.

Table 2 reports the results. In this table we measure the financial dependence by Rajan Zingales index. In column (1) we restrict our sample to sectors whose tariff equals to 25% and China's market shares in which decrease at least by 2%. The coefficient of the three-way interaction term of financial development, financial dependence and initial share, γ_5, is positive, suggesting that a financial developed country with larger initial share in high financial dependence sectors would absorb even more market share upon China's exit.

In column (2), we restrict our sample to sectors whose tariff equals to 25% and China's market shares in which decrease at least by 5.3%. γ_5 is still positive and statistically significant, and with higher value. While in column (3), with same tariff, we look at sectors in which China's market shares decrease at least by 9%. γ_5 is positive and statistically significant, and with even higher value than column (2). This suggests that the reshuffle of market share will be more significant if China exits more.

In column (4), we restrict our sample to sectors whose tariff is greater or equal to 10% and China's market shares in which decrease at least by 5.3%. γ_5 is still positive and statistical significant. This is different from the baseline case, suggesting the effect of the interaction of financial development and

financial dependence varies with initial share. Also we notice that the value of γ_5 is lower than that of column (2), suggesting that the reshuffle of market share is stronger under higher tariff punishment.

As a robustness check, we re-do the regression specification with an alternative measure of financial dependence of a sector, working capital requirement (and henceforce WCR). Table 3 reports the results. We find a consistent result: a financial developed country with larger initial share in high financial dependence sectors would absorb even more market share upon China's exit.

5   Robustness Check

In this section we check the robustness under alternative assumptions which may also shake our results.

5.1   Inflow of FDI

We argue the financial development of a country matters because firms in the country need external finance to expand their production scale so as to pick up the market share. The underlying assumption is that those firms only raise liquidity from domestic market. What if we consider FDI? If the increase in export of a country is due to foreign investment, then our hypothesis will no longer stand.

One may argue that with FDI, the expansion of production does not fully depend on domestic financial market, and hence we would observe weaker effect of the interaction of financial development and financial dependence. The significant results shown in 4 rule out this concern. However this is true only if the inflow of FDI is not correlated with financial development. Desbordes and Wei (2017) documents that local financial development has a large positive influence on FDI. We find countries with high financial development absorb more market share in high financial dependence sector, the reason might be that those countries attract FDI, and it is the FDI that drives the increase in export. Hence to consolidate our results, we need to control for inflow of FDI, to separate FDI from financial development. We study the following regression specification:

$$\Delta Share_j^i = \alpha_i + \sigma_j + \beta * [\Delta Share_j^{\text{CHN}} * \text{characteristic}^i] + \gamma_1 * Share_{j,2017}^i$$

$$+ \gamma_2 * FinDev^i * FinDepen_j + \gamma_3 * Share_{j,2017}^i * FinDev^i + \gamma_4 * Share_{j,2017}^i * FinDepen_j$$

$$+ \gamma_5 * FDI^i * FinDepen_j + \gamma_6 * Share_{j,2017}^i * FinDev^i * FinDepen_j + \epsilon_j^i$$

where FDI is defined as the net inflow of FDI between 2017 and 2021 normalized by GDP in 2017 of country i. Data is from the External Wealth of Nations Database. Ideally we need country-sector level. But due to data limitation, we use country level FDI inflow. We re-do the regression analysis in 4.2 and control for interaction of FDI inflow with financial dependence, i.e. we consider FDI inflow as a parallel to financial development to separate its effect.

Table 4 and 5 report the results. In Table 4 we measure the financial dependence with RZ index. In Table 5 we measure the financial dependence with working capital requirement. The results are robust.

5.2   Reallocation of Export

After China exits in a sector due to the tariff, it is very likely that the price level of the sector in the US would rise. With higher prices, countries may reallocate their export of the sector from other destinations to the US. How will this affect our results?

If countries reallocates their export, then they do not need to increase their production scale in the sector in order to take the market share in the US. If this is true, the interaction of financial development and financial dependence should not matter–financially constrained countries can also pick up the market shares in the US by reducing their exports to other destination. Our result, where the interaction matters, suggests that the reallocation of export may not play a key role.

We can also check this by controlling for a country's export growth in a sector to the world except for the US. We re-do the regression specifications in section 4.1 and section 4.2 . Table 6 and 7 report the results. The results are robust if we control for a country's export growth in a sector to the world except for the US.

5.3 Export to a Third Country to Circumvent Tariff

The US add tariff on imports from China. Can China exports via a third country to circumvent the tariff? How will this affect our results?

Similar to section 5.2, this process means the financial development matters less, since the country does not expand its production scale, even if we observe increase in its export. What's more, China's choice of the third country should not be correlated to the interaction of the country's financial development and the variety's financial dependence in general. Hence the re-export may not play a key role either.

We can also check this by controlling for China's export growth in a sector to a country between 2017 and 2022. Large growth are suspicious. We re-do the regression specifications in section 4.1 and section 4.2 . Table 6 and 7 report the results. The results are robust if we control for China's export growth in a variety to a country between 2017 and 2022.

6 Conclusion

This paper investigates the relocation of US imports following the US-China trade tensions, utilizing comprehensive trade data spanning from 2017 to 2022. The study focuses on identifying country-sector characteristics that facilitate this relocation process, with particular emphasis on the interplay between a country's financial development and the financial dependence of specific sectors.

Our primary objective is to analyze how a country's financial development, in conjunction with the financial dependence of various sectors, influences the acquisition of market share after China's exit from the US import market. Notably, we observe that a country's level of financial development plays a significant role in sectors characterized by high financial dependence for capital investment and working capitals. In these particular sectors, the ability to secure market share following China's departure hinges on the country's financial development.

Moreover, our findings reveal that the impact of the interaction between financial development and financial dependence is particularly pronounced when a country possesses a larger initial share in a specific

sector. In such cases, the combined effect of financial development and financial dependence strongly influences a country's ability to capture the market share left behind by China's absence.

Overall, our study sheds light on the intricate dynamics of the US import market and highlights the crucial role that financial development, financial dependence of industries, and initial market share play in facilitating the relocation of US imports post the US-China trade tension.

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Table 1

	(1) ΔShare_CHN<-2% Tariff = 25%	(2) ΔShare_CHN<-5.3% Tariff = 25%	(3) ΔShare_CHN<-9% Tariff = 25%	(4) ΔShare_CHN<-5.3% Tariff >= 10%
FD*RZ	0.0978*	0.240***	0.366***	0.0385
	(0.0516)	(0.0827)	(0.128)	(0.0377)
Share_2017	0.0217***	0.0315***	0.0422***	0.0514***
	(0.00769)	(0.0106)	(0.0146)	(0.00738)
ΔShare_CHN*				
Log(pop)	-0.466***	-0.485***	-0.405**	-0.211*
	(0.131)	(0.147)	(0.173)	(0.112)
Log(gdp_pc)	-0.0622	-0.0886	-0.0907	0.0117
	(0.205)	(0.230)	(0.268)	(0.186)
Log(dist_USA)	-1.767***	-1.596**	-1.768**	-0.672
	(0.603)	(0.666)	(0.792)	(0.547)
Log(dist_CHN)	-0.942**	-0.927*	-0.880	-0.337
	(0.465)	(0.510)	(0.607)	(0.441)
Contig_USA	-12.90***	-13.72***	-14.98***	-13.66***
	(1.490)	(1.635)	(1.936)	(1.415)
Contig_CHN	-1.441*	-1.502*	-0.927	-2.938***
	(0.788)	(0.859)	(1.001)	(0.756)
Diplo_USA	-1.987***	-2.230***	-2.434***	-1.781***
	(0.477)	(0.524)	(0.626)	(0.433)
Diplo_CHN	-2.439***	-2.772***	-2.932***	-2.200***
	(0.635)	(0.699)	(0.841)	(0.577)
FTA_USA	1.616***	1.556**	1.494**	1.778***
	(0.552)	(0.604)	(0.714)	(0.529)
FTA_CHN	-3.001***	-3.326***	-3.583***	-3.156***
	(0.603)	(0.657)	(0.776)	(0.575)
Observations	4,717	3,141	2,082	8,390
R-squared	0.134	0.188	0.244	0.118
Country FE	Y	Y	Y	Y
SIC4 FE	Y	Y	Y	Y

Note the dependent variable is the market share change between 2017 and 2022 of country i (do not include China) in SIC 4-digit sector j multiplied by 100. FD stands for financial development. Financial dependence is measured by Rajan Zingales Index. Share_2017 refers to the market of country i sector j in 2017, multiplied by 100. The top and bottom 1% of financial dependence are dropped. Robust standard errors are in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

Table 2

	(1) ΔShare_CHN<-2% Tariff = 25%	(2) ΔShare_CHN<-5.3% Tariff = 25%	(3) ΔShare_CHN<-9% Tariff = 25%	(4) ΔShare_CHN<-5.3% Tariff >= 10%
FD*RZ*Share_2017	0.179***	0.418***	0.755***	0.194***
	(0.0218)	(0.0361)	(0.0555)	(0.0171)
RZ* Share_2017	-0.315***	-0.780***	-1.370***	-0.341***
	(0.0465)	(0.0834)	(0.123)	(0.0367)
FD* Share_2017	-0.0297***	-0.0278**	-0.0109	-0.101***
	(0.00954)	(0.0137)	(0.0206)	(0.00880)
FD*RZ	-0.0587	-0.0396	-0.0154	-0.0575
	(0.0543)	(0.0836)	(0.123)	(0.0382)
Share_2017	0.0845***	0.139***	0.150***	0.263***
	(0.0193)	(0.0283)	(0.0372)	(0.0188)
ΔShare_CHN*				
Log(pop)	-0.445***	-0.471***	-0.403**	-0.194*
	(0.129)	(0.143)	(0.163)	(0.110)
Log(gdp_pc)	-0.00268	0.00608	0.0504	0.0293
	(0.203)	(0.223)	(0.252)	(0.183)
Log(dist_USA)	-1.953***	-1.423**	-1.784**	-0.996*
	(0.598)	(0.649)	(0.747)	(0.539)
Log(dist_CHN)	-1.090**	-0.871*	-1.061*	-0.722*
	(0.461)	(0.497)	(0.573)	(0.435)
Contig_USA	-13.52***	-12.71***	-13.26***	-14.26***
	(1.476)	(1.598)	(1.833)	(1.393)
Contig_CHN	-1.479*	-1.501*	-1.098	-3.184***
	(0.778)	(0.835)	(0.942)	(0.744)
Diplo_USA	-1.976***	-2.221***	-2.413***	-1.791***
	(0.471)	(0.509)	(0.589)	(0.425)
Diplo_CHN	-2.427***	-2.744***	-2.953***	-2.219***
	(0.628)	(0.679)	(0.791)	(0.568)
FTA_USA	1.602***	1.583***	1.603**	1.744***
	(0.546)	(0.587)	(0.672)	(0.520)
FTA_CHN	-2.899***	-3.226***	-3.486***	-3.065***
	(0.596)	(0.639)	(0.730)	(0.566)
Observations	4,717	3,141	2,082	8,390
R-squared	0.155	0.235	0.332	0.148
Country FE	Y	Y	Y	Y
SIC4 FE	Y	Y	Y	Y

Note the dependent variable is the market share change between 2017 and 2022 of country i (do not include China) in SIC 4-digit sector j multiplied by 100. FD stands for financial development. Financial dependence is measured by Rajan Zingales Index. Share_2017 refers to the market of country i sector j in 2017, multiplied by 100. The top and bottom 1% of financial dependence are dropped. Robust standard errors are in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

Table 3

	(1) ΔShare_CHN<-2% Tariff = 25%	(2) ΔShare_CHN<-5.3% Tariff = 25%	(3) ΔShare_CHN<-9% Tariff = 25%	(4) ΔShare_CHN<-5.3% Tariff >= 10%
FD*WCR*Share_2017	0.0959***	0.195***	0.207**	0.255***
	(0.0270)	(0.0420)	(0.0900)	(0.0258)
WCR* Share_2017	-0.267***	-0.400***	-0.429***	-0.526***
	(0.0549)	(0.0826)	(0.148)	(0.0544)
FD* Share_2017	-0.621***	-1.056***	-1.054***	-1.269***
	(0.119)	(0.181)	(0.400)	(0.115)
FD*WCR	-0.0963	-0.124	-0.0405	-0.0492
	(0.110)	(0.152)	(0.237)	(0.0791)
Share_2017	1.503***	2.080***	2.115***	2.584***
	(0.248)	(0.371)	(0.663)	(0.249)
ΔShare_CHN*				
Log(pop)	-0.390**	-0.354	-0.371	-0.175
	(0.182)	(0.231)	(0.286)	(0.140)
Log(gdp_pc)	0.0567	0.0589	0.0968	0.0116
	(0.289)	(0.362)	(0.436)	(0.233)
Log(dist_USA)	-2.301***	-2.882***	-1.077	-1.506**
	(0.840)	(1.060)	(1.312)	(0.686)
Log(dist_CHN)	-1.100*	-1.594*	-0.856	-0.660
	(0.650)	(0.817)	(0.995)	(0.551)
Contig_USA	-11.72***	-13.93***	-11.99***	-13.52***
	(2.072)	(2.614)	(3.173)	(1.765)
Contig_CHN	-1.117	-1.667	-2.170	-2.640***
	(1.106)	(1.380)	(1.645)	(0.946)
Diplo_USA	-1.982***	-1.944**	-2.257**	-1.646***
	(0.676)	(0.840)	(1.015)	(0.542)
Diplo_CHN	-2.263**	-2.238**	-2.915**	-1.856**
	(0.898)	(1.123)	(1.363)	(0.723)
FTA_USA	1.384*	1.405	1.592	1.526**
	(0.774)	(0.971)	(1.180)	(0.662)
FTA_CHN	-2.710***	-2.690**	-3.469***	-2.751***
	(0.839)	(1.051)	(1.277)	(0.717)
Observations	5,101	3,506	2,057	8,632
R-squared	0.133	0.138	0.143	0.100
Country FE	Y	Y	Y	Y
SIC4 FE	Y	Y	Y	Y

Note the dependent variable is the market share change between 2017 and 2022 of country i (do not include China) in SIC 4-digit variety j multiplied by 100. FD stands for financial development. Financial dependence is measured by logarithm of working capital requirement. Share_2017 refers to the market of country i sector j in 2017, multiplied by 100. The top and bottom 1% of financial dependence are dropped. Robust standard errors are in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

Table 4

	(1) ΔShare_CHN<-2% Tariff = 25%	(2) ΔShare_CHN<-5.3% Tariff = 25%	(3) ΔShare_CHN<-9% Tariff = 25%	(4) ΔShare_CHN<-5.3% Tariff >= 10%
FD*RZ*Share_2017	0.179***	0.417***	0.754***	0.195***
	(0.0220)	(0.0364)	(0.0557)	(0.0172)
RZ* Share_2017	-0.315***	-0.779***	-1.370***	-0.343***
	(0.0468)	(0.0838)	(0.124)	(0.0369)
FD* Share_2017	-0.0297***	-0.0280**	-0.0111	-0.101***
	(0.00958)	(0.0138)	(0.0207)	(0.00884)
FD*RZ	-0.0590	-0.0347	-0.00941	-0.0689*
	(0.0576)	(0.0900)	(0.130)	(0.0415)
Share_2017	0.0845***	0.140***	0.151***	0.263***
	(0.0194)	(0.0284)	(0.0373)	(0.0189)
RZ*FDI	0.00168	0.00915	0.0123	-0.0175
	(0.0388)	(0.0522)	(0.0892)	(0.0233)
ΔShare_CHN*				
Log(pop)	-0.452***	-0.477***	-0.409**	-0.210*
	(0.130)	(0.144)	(0.164)	(0.113)
Log(gdp_pc)	0.00137	0.00746	0.0530	0.0364
	(0.204)	(0.224)	(0.253)	(0.185)
Log(dist_USA)	-1.950***	-1.424**	-1.787**	-0.969*
	(0.600)	(0.651)	(0.749)	(0.543)
Log(dist_CHN)	-1.113**	-0.891*	-1.089*	-0.739*
	(0.463)	(0.499)	(0.575)	(0.437)
Contig_USA	-13.50***	-12.69***	-13.25***	-14.20***
	(1.482)	(1.603)	(1.838)	(1.403)
Contig_CHN	-1.466*	-1.489*	-1.086	-3.159***
	(0.781)	(0.837)	(0.945)	(0.748)
Diplo_USA	-2.088***	-2.313***	-2.541***	-1.885***
	(0.483)	(0.519)	(0.602)	(0.436)
Diplo_CHN	-2.581***	-2.872***	-3.130***	-2.351***
	(0.644)	(0.692)	(0.809)	(0.582)
FTA_USA	1.596***	1.575***	1.594**	1.744***
	(0.548)	(0.589)	(0.673)	(0.522)
FTA_CHN	-2.881***	-3.214***	-3.466***	-3.055***
	(0.598)	(0.641)	(0.732)	(0.569)
Observations	4,680	3,120	2,068	8,315
R-squared	0.155	0.235	0.332	0.148
Country FE	Y	Y	Y	Y
SIC4 FE	Y	Y	Y	Y

Note the dependent variable is the market share change between 2017 and 2022 of country i (do not include China) in SIC 4-digit sector j multiplied by 100. FD stands for financial development. Financial dependence is measured by Rajan Zingales Index. Share_2017 refers to the market of country i sector j in 2017, multiplied by 100. FDI is the net inflow of fdi between 2017 and 2021 normalized by 2017 GDP. The top and bottom 1% of financial dependence are dropped. Robust standard errors are in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

Table 5

	(1) ΔShare_CHN<-2% Tariff = 25%	(2) ΔShare_CHN<-5.3% Tariff = 25%	(3) ΔShare_CHN<-9% Tariff = 25%	(4) ΔShare_CHN<-5.3% Tariff >= 10%
FD*WCR*Share_2017	0.0966***	0.196***	0.207**	0.256***
	(0.0272)	(0.0422)	(0.0903)	(0.0260)
WCR* Share_2017	-0.268***	-0.400***	-0.428***	-0.526***
	(0.0552)	(0.0829)	(0.148)	(0.0547)
FD* Share_2017	-0.624***	-1.060***	-1.054***	-1.271***
	(0.119)	(0.182)	(0.401)	(0.115)
FD*WCR	-0.113	-0.141	-0.0406	-0.0592
	(0.116)	(0.160)	(0.249)	(0.0839)
Share_2017	1.507***	2.083***	2.114***	2.586***
	(0.249)	(0.372)	(0.665)	(0.250)
WCR*FDI	-0.0400	-0.0458	-0.0107	-0.0206
	(0.0788)	(0.108)	(0.161)	(0.0536)
ΔShare_CHN*				
Log(pop)	-0.395**	-0.357	-0.376	-0.188
	(0.184)	(0.232)	(0.287)	(0.144)
Log(gdp_pc)	0.0608	0.0614	0.101	0.0177
	(0.290)	(0.363)	(0.437)	(0.235)
Log(dist_USA)	-2.297***	-2.880***	-1.078	-1.487**
	(0.843)	(1.063)	(1.314)	(0.691)
Log(dist_CHN)	-1.115*	-1.610**	-0.881	-0.677
	(0.653)	(0.820)	(0.998)	(0.554)
Contig_USA	-11.70***	-13.92***	-11.98***	-13.47***
	(2.080)	(2.623)	(3.178)	(1.777)
Contig_CHN	-1.111	-1.661	-2.158	-2.619***
	(1.110)	(1.385)	(1.647)	(0.951)
Diplo_USA	-2.049***	-2.021**	-2.373**	-1.735***
	(0.687)	(0.855)	(1.036)	(0.556)
Diplo_CHN	-2.357***	-2.345**	-3.075**	-1.980***
	(0.913)	(1.144)	(1.393)	(0.741)
FTA_USA	1.382*	1.404	1.585	1.525**
	(0.777)	(0.974)	(1.182)	(0.665)
FTA_CHN	-2.697***	-2.675**	-3.449***	-2.739***
	(0.843)	(1.054)	(1.279)	(0.721)
Observations	5,062	3,482	2,047	8,557
R-squared	0.133	0.138	0.143	0.100
Country FE	Y	Y	Y	Y
SIC4 FE	Y	Y	Y	Y

Note the dependent variable is the market share change between 2017 and 2022 of country i (do not include China) in SIC 4-digit sector j multiplied by 100. FD stands for financial development. Financial dependence is measured by working capital requirement. Share_2017 refers to the market of country i sector j in 2017, multiplied by 100. FDI is the net inflow of fdi between 2017 and 2021 normalized by 2017 GDP. The top and bottom 1% of financial dependence are dropped. Robust standard errors are in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Table 6

	(1) ΔShare_CHN<-2% Tariff = 25%	(2) ΔShare_CHN<-5.3% Tariff = 25%	(3) ΔShare_CHN<-9% Tariff = 25%	(4) ΔShare_CHN<-5.3% Tariff >= 10%
FD*RZ*Share_2017	0.186***	0.463***	0.833***	0.202***
	(0.0225)	(0.0376)	(0.0578)	(0.0177)
RZ* Share_2017	-0.333***	-0.897***	-1.600***	-0.360***
	(0.0479)	(0.0871)	(0.130)	(0.0381)
FD* Share_2017	-0.0221**	-0.0409***	-0.0515**	-0.0984***
	(0.0100)	(0.0145)	(0.0216)	(0.00977)
FD*RZ	-0.0596	-0.0423	-0.00937	-0.0585
	(0.0583)	(0.0880)	(0.130)	(0.0410)
Share_2017	0.0632***	0.177***	0.239***	0.257***
	(0.0206)	(0.0304)	(0.0397)	(0.0217)
Import_growth_CHN	-0.00589	0.0337	0.0561*	-0.00480
	(0.0177)	(0.0227)	(0.0337)	(0.0159)
Export_growth_N_US	0.00687	-0.0141	-0.0213	-0.00294
	(0.0144)	(0.0172)	(0.0225)	(0.0109)
ΔShare_CHN*				
Log(pop)	-0.488***	-0.519***	-0.492***	-0.233*
	(0.149)	(0.160)	(0.181)	(0.133)
Log(gdp_pc)	0.151	0.142	0.169	0.134
	(0.228)	(0.246)	(0.278)	(0.210)
Log(dist_USA)	-2.228***	-1.628**	-1.760**	-1.127*
	(0.637)	(0.686)	(0.781)	(0.585)
Log(dist_CHN)	-1.229**	-1.067**	-1.165*	-0.873*
	(0.486)	(0.522)	(0.595)	(0.463)
Contig_USA	-14.63***	-13.45***	-12.91***	-14.87***
	(1.547)	(1.668)	(1.893)	(1.484)
Contig_CHN	-1.382	-1.504*	-1.136	-3.383***
	(0.842)	(0.896)	(1.005)	(0.811)
Diplo_USA	-2.292***	-2.600***	-2.885***	-2.119***
	(0.513)	(0.549)	(0.632)	(0.469)
Diplo_CHN	-2.836***	-3.194***	-3.518***	-2.669***
	(0.683)	(0.731)	(0.845)	(0.623)
FTA_USA	1.569***	1.515**	1.579**	1.717***
	(0.568)	(0.608)	(0.688)	(0.546)
FTA_CHN	-2.773***	-3.073***	-3.251***	-2.945***
	(0.623)	(0.665)	(0.753)	(0.599)
Observations	4,276	2,812	1,895	7,619
R-squared	0.159	0.251	0.354	0.145
Country FE	Y	Y	Y	Y
SIC4 FE	Y	Y	Y	Y

Note the dependent variable is the market share change between 2017 and 2022 of country i (do not include China) in SIC 4-digit sector j multiplied by 100. FD stands for financial development. Financial dependence is measured by Rajan Zingales Index. Share_2017 refers to the market of country i sector j in 2017, multiplied by 100. The top and bottom 1% of financial dependence are dropped. Robust standard errors are in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

Table 7

	(1) ΔShare_CHN<-2% Tariff = 25%	(2) ΔShare_CHN<-5.3% Tariff = 25%	(3) ΔShare_CHN<-9% Tariff = 25%	(4) ΔShare_CHN<-5.3% Tariff >= 10%
FD*WCR*Share_2017	0.131***	0.202***	0.254***	0.270***
	(0.0293)	(0.0428)	(0.0980)	(0.0272)
WCR* Share_2017	-0.398***	-0.530***	-0.794***	-0.611***
	(0.0645)	(0.0918)	(0.189)	(0.0606)
FD* Share_2017	-0.804***	-1.173***	-1.435***	-1.376***
	(0.129)	(0.188)	(0.447)	(0.122)
FD*WCR	-0.109	-0.121	-0.0419	-0.0528
	(0.113)	(0.156)	(0.240)	(0.0822)
Share_2017	2.174***	2.895***	4.216***	3.081***
	(0.292)	(0.424)	(0.882)	(0.281)
Import_growth_CHN	-0.00226	0.0135	0.0250	-0.0130
	(0.0211)	(0.0315)	(0.0424)	(0.0187)
Export_growth_N_US	0.0204	0.0210	0.0100	0.0141
	(0.0180)	(0.0244)	(0.0321)	(0.0129)
ΔShare_CHN*				
Log(pop)	-0.454**	-0.397	-0.361	-0.218
	(0.199)	(0.247)	(0.295)	(0.163)
Log(gdp_pc)	0.216	0.219	0.229	0.0951
	(0.306)	(0.378)	(0.443)	(0.256)
Log(dist_USA)	-2.765***	-3.605***	-2.138*	-1.949***
	(0.854)	(1.063)	(1.250)	(0.717)
Log(dist_CHN)	-1.279*	-1.945**	-1.496	-0.877
	(0.655)	(0.813)	(0.944)	(0.565)
Contig_USA	-11.42***	-14.94***	-15.22***	-13.62***
	(2.083)	(2.592)	(2.991)	(1.811)
Contig_CHN	-0.989	-1.540	-2.157	-2.775***
	(1.135)	(1.397)	(1.596)	(0.991)
Diplo_USA	-2.215***	-2.131**	-2.531**	-1.882***
	(0.691)	(0.853)	(0.989)	(0.574)
Diplo_CHN	-2.551***	-2.447**	-3.068**	-2.158***
	(0.918)	(1.138)	(1.315)	(0.762)
FTA_USA	1.406*	1.400	1.538	1.502**
	(0.764)	(0.948)	(1.099)	(0.667)
FTA_CHN	-2.613***	-2.548**	-3.259***	-2.604***
	(0.837)	(1.035)	(1.201)	(0.731)
Observations	4,578	3,105	1,748	7,801
R-squared	0.147	0.161	0.182	0.107
Country FE	Y	Y	Y	Y
SIC4 FE	Y	Y	Y	Y

Note the dependent variable is the market share change between 2017 and 2022 of country i (do not include China) in SIC 4-digit variety j multiplied by 100. FD stands for financial development. Financial dependence is measured by logarithm of working capital requirement. Share_2017 refers to the market of country i sector j in 2017, multiplied by 100. The top and bottom 1% of financial dependence are dropped. Robust standard errors are in parentheses.
*** p<0.01, ** p<0.05, * p<0.1