Research Institute of Economy, Trade and Industry (RIETI)

RIETI
Research Institute of Economy, Trade & Industry, IAA

RIETI BBL Seminar
Handout

Build Back Better?
The Future of the US-China Economic Relationship

December 7, 2020

Speaker: Prof. WEI Shang-Jin

https://www.rieti.go.jp/jp/index.html

Build Back Better?
The Future of the US-China Economic Relations

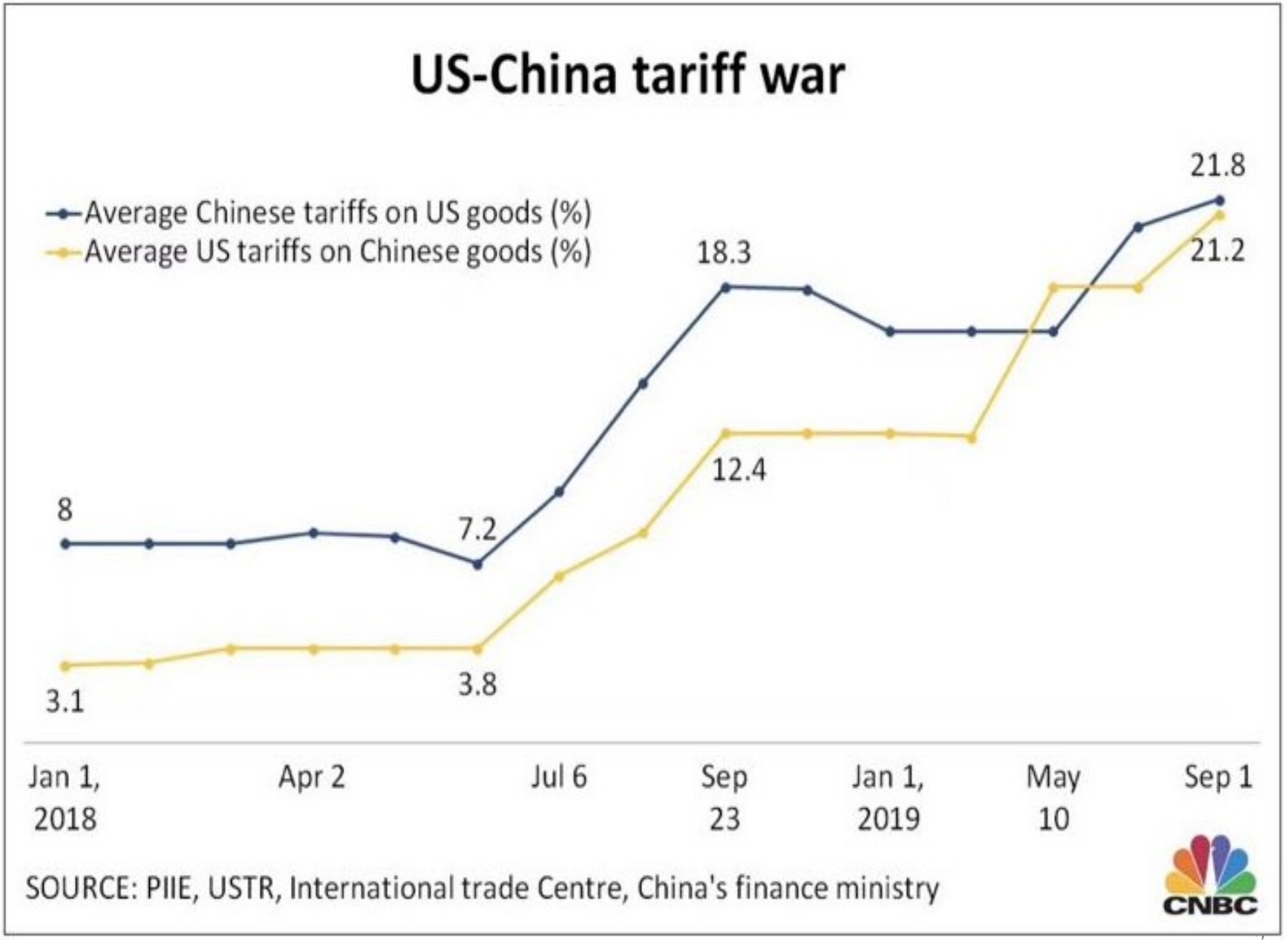
Shang-Jin Wei

Columbia Business School & NBER

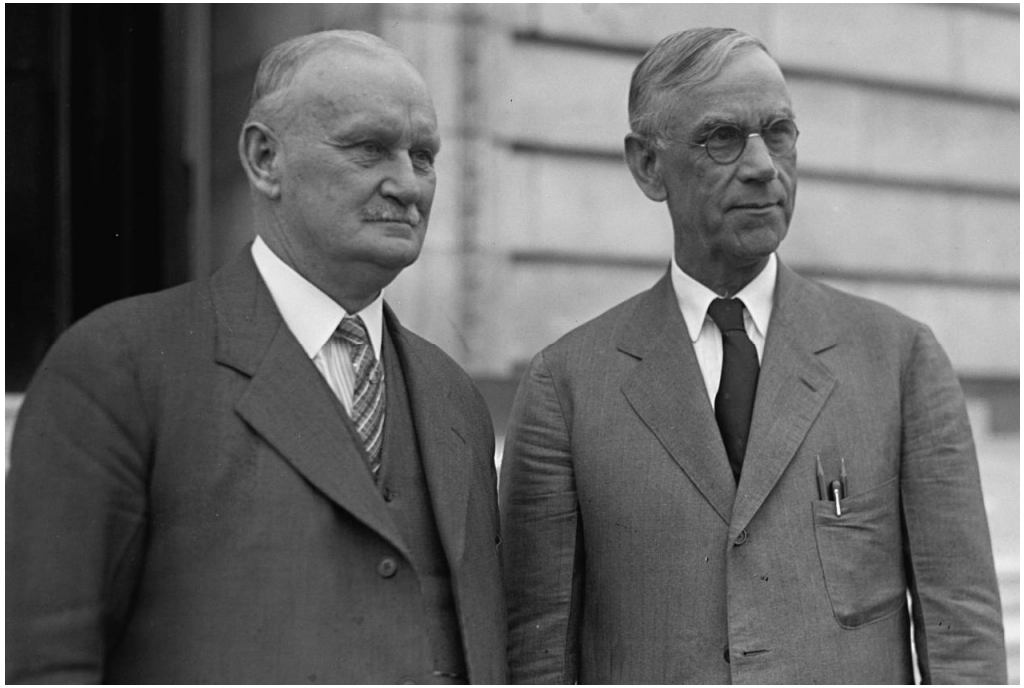
Assessing the Trade War

Assessing China's Post-WTO Trade Conduct

Speculating on the Future


US-China tariff war
Average Chinese tariffs on US goods (%)
Average US tariffs on Chinese goods (%)
21.8
21.2
18.3
12.4
8
7.2
3.8
3.1
Jan 1, 2018
Apr 2
Jul 6
Sep 23
Jan 1, 2019
May 10
Sep 1
SOURCE: PIIE, USTR, International trade Centre, China's finance ministry
CNBC

Smooth and Hawley's Ghosts



Sen. Reed Owen Smoot (R-Utah) and
Rep. Willis Chatman Hawley (R-Ore.)
Source: historycentral.com

- The Smoot-Hawley Tariff Act of 1930, raised the US tariffs substantially (+20%).
- Pres. Hoover signed into law
- Goal: to protect American workers and farmers
- Response: 25 countries imitated
- Verdict: A contributor to Great Depression
- President FDR reversed it.
- Both Smoot & Hawley lost election
- "Reciprocal Trade Agreements Act of 1934"

- In May 2019, China bought a case to the WTO against the US on these tariffs
- In September 2020, the WTO dispute panel ruled against the US.
  - The US tariff measures are inconsistent with its GATT/WTO obligations under Articles I and II
- Would the WTO ruling bring any change?
- Are these a gift to the Biden administration?

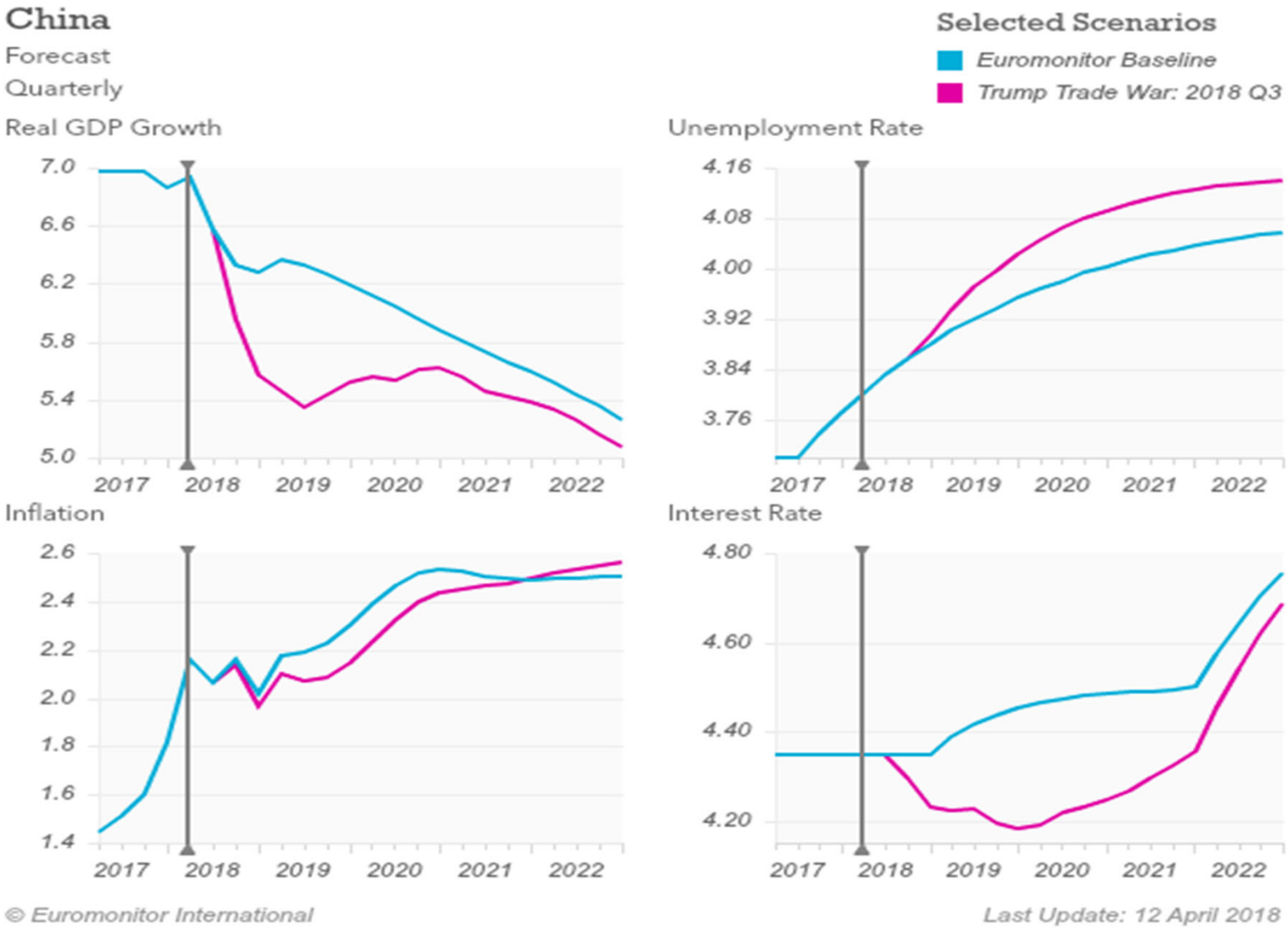
Assessing the Impact of the Trade War

- On China
- On the United States
- On the rest of the world

Effect of the Trade War on China

- Conversation with a businessman in Guangdong
- Uncertainty and business confidence
- Offsetting policies from the government
  - Dual Circulation Strategy

Projected impact of the trade war on China in March 2018 by Daniel Solomon, Euromonitor



Effects on the US Economy?

- Who pays for the tariff?
- Effects on prices
- Effects on jobs
- Effects on firms
- Political Economy

- Let us review some recent research papers on the subject by credible economists

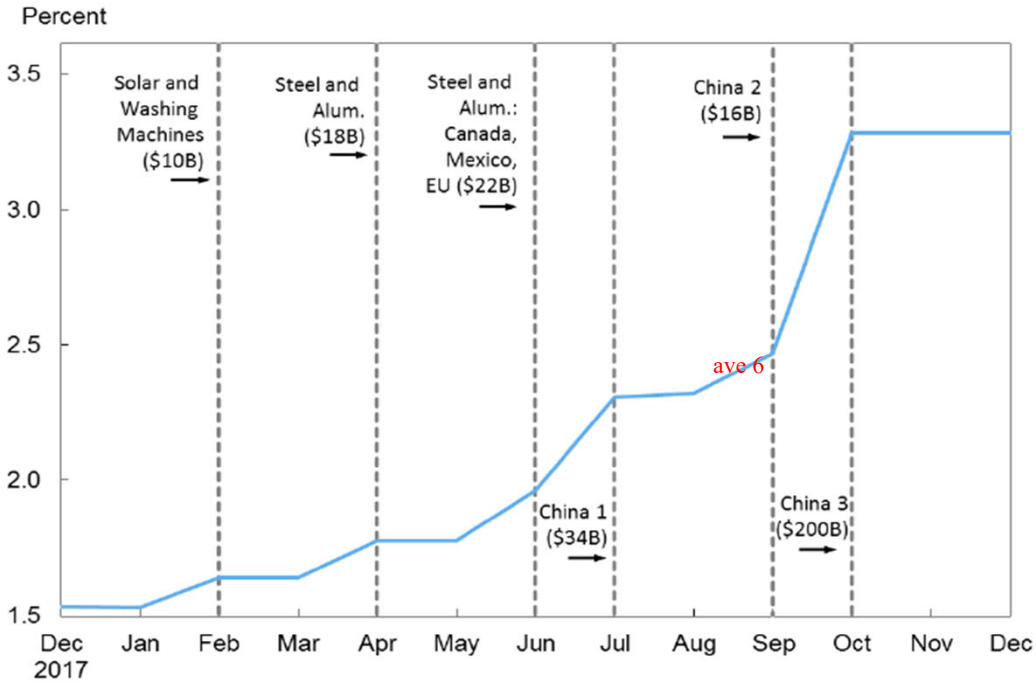
THE IMPACT OF THE 2018 TRADE WAR ON U.S. PRICES AND WELFARE

Mary Amiti, Stephen J. Redding, and David Weinstein
NBER Working Paper 25672

Overview of the Trump Trade War

- Six tariff waves through 2018
- Wave 4-6 targeted from China outweighed wave 1-3
- The fraction of U.S. imports facing duties of over 10 percent rose from 3.5 percent in December of 2017 to 10.6 percent by October of 2018

Figure 1: Average Tariff Rates



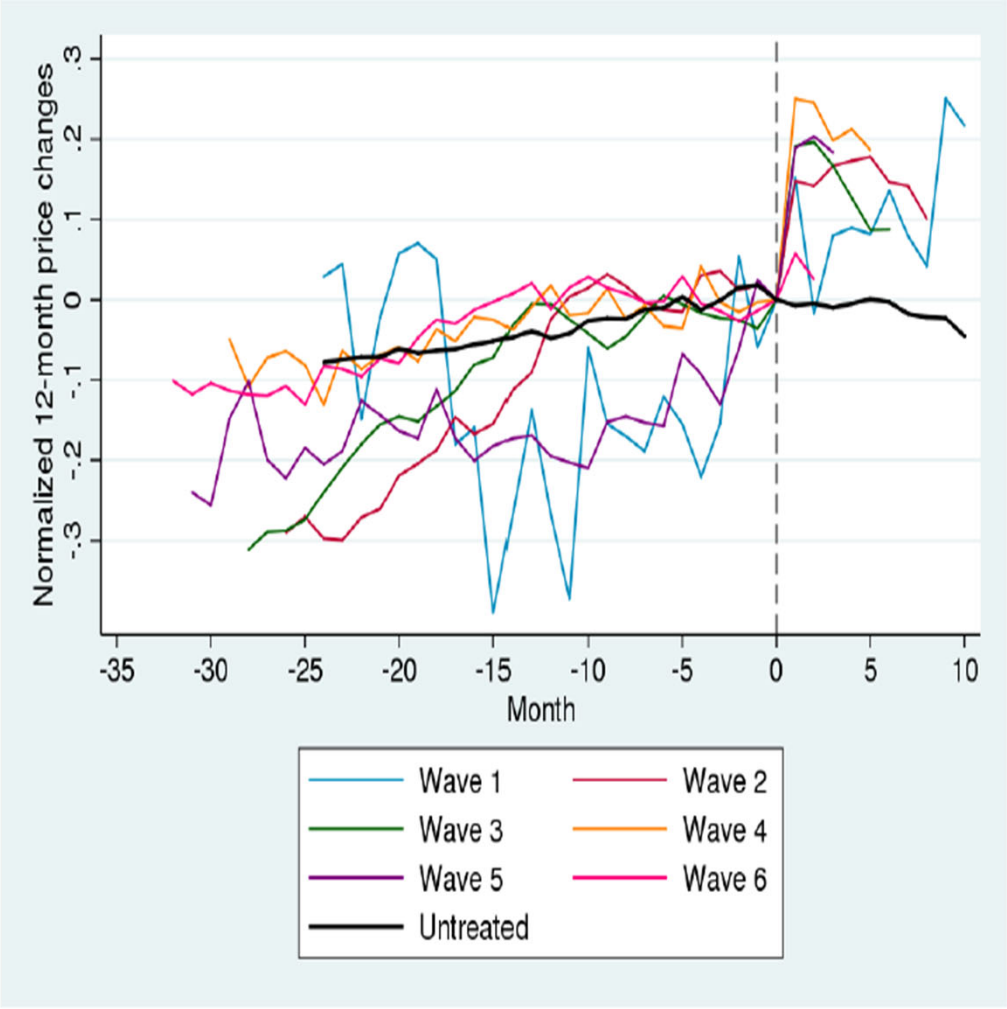
Source: US Census Bureau; USTR; USITC; authors' calculations.

Notes: Tariffs on the 10-digit Harmonized Tariff Schedule (HTS) product code by country, weighted by 2017 annual import value. Dashed vertical lines indicate the implementation of major new tariffs; tariffs implemented after the 15th of the month counted for the subsequent month. Three tranches of tariffs were imposed on China, designated by 1, 2, and 3.

Price Impacts

- US customers data (HTS 10data)
- Prices for sectors not subject to tariffs are fairly flat.
- Larger increases in prices of goods that were subject to tariffs, with unit values typically rising from 10 to 30 percent in the wake of the tariffs. Much of the tariffs were passed on to U.S. importers and consumers.
- The full price impact of the tariffs could be even larger than suggested by these figures since competitors raised their prices in response

Figure 3: 12-month Proportional Change in Import Prices by Tariff Wave



Notes: Proportional change in an import-share-weighted average of 12-month relative changes in U.S. import unit values inclusive of tariffs (import values divided by input quantities) for each tariff wave and for unaffected countries and products; proportional changes for each wave are normalized to equal zero in the month prior to the introduction of the tariff; tariff waves are defined in Section 2 of the paper.

Import values

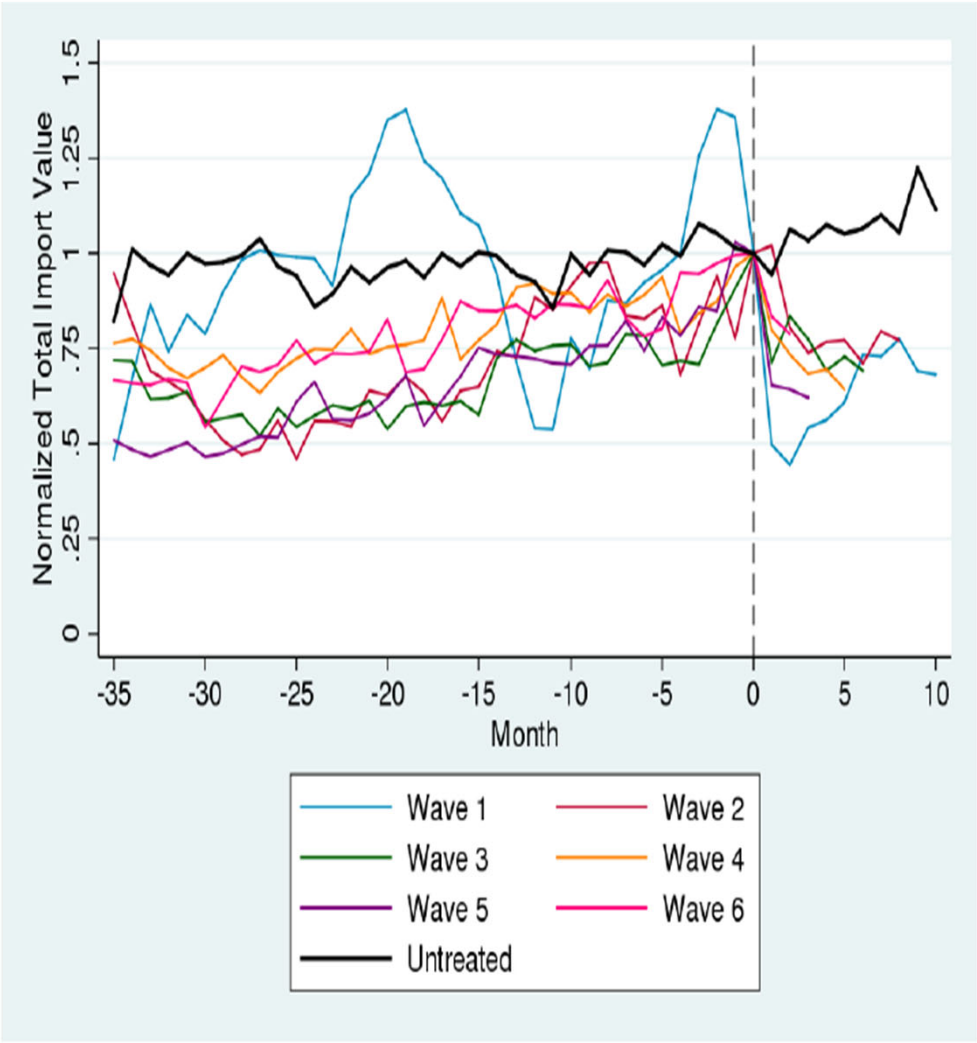
- A big surge in imports just before wave 1
- Bring forward the imports

- steep decline in import values after the imposition of the tariffs, falling 25 to 30 on average

- The imports of unaffected sectors and countries rose by about 10 percent over the same period

- The imposition of the tariffs had very large relative impacts on the amount of imports for affected countries and sectors.

Figure 4: Total Import Values by Tariff Wave



Notes: 12-month proportional changes in the value of U.S. imports by tariff wave and for unaffected products; each series is normalized to the value one in the month prior to the introduction of the tariff; tariff waves are defined in Section 2 of the paper.

Estimating Price and Welfare Losses

Regressing the change in the log import unit value (bbefore tariff) over a 12-month period on the change in one plus the applied tariff on imports over the same period. Treating the tariffs as exogenous, and assuming that they are uncorrelated with unobserved shocks to unit values, the estimated coefficient in this regression captures the impact of the tariffs on the prices received by foreign exporters.

Col (1):The tariff increases have been almost entirely passed through into domestic prices, leaving exporter prices unchanged

Column (2): one percent increase in tariffs is associated with a 1.3 percent decrease in imports

Column (3): one percentage point increase in tariffs is associated with a six percentage point fall in import quantities

Col (5): the relative decline in imports from affected sectors is $136 billion dollars in imports (on an annual basis).

Col (6): The estimated elasticity of tariffs on sectoral imports is smaller in magnitude (-3.8 vs. -6.5), suggesting that some of the decline in imports from targeted countries is offset by more imports from unaffected countries.

Table 1: Impact of U.S. Tariffs on Importing

	(1)	(2)	(3)	(4)	(5)	(6)
	$\Delta\ln(p_{ijt})$	$\Delta\ln(m_{ijt})$	$\Delta\ln(m_{ijt})$	$\Delta\ln(p_{ijt}\times m_{ijt})$	$\Delta\ln(p_{ijt}\times m_{ijt})$	$\Delta\ln(p_{it}\times m_{it})$
$\Delta\ln(1+\text{Tariff}_{ijt})$	-0.003	-1.299***	-6.026***	-1.380***	-6.466***	-3.757***
	(0.024)	(0.094)	(0.597)	(0.090)	(0.791)	(0.760)
N	1,576,955	1,576,955	3,178,368	2,379,947	4,271,990	373,422
R^2	0.021	0.025	0.108	0.02	0.111	0.43

Notes: Observations are at the HTS10-country-month level for the period January 2017 to December 2018. Variables are in 12 month log change. Standard errors are clustered at the HTS 8-digit level. All columns include HTS10 product fixed effects and country x year fixed effects. The dependent variable in column (1) is the log change of prices (before U.S. duties are applied) charged by foreign exporters. The dependent variables in column (2) and (3) are the log change and the change in the inverse hyperbolic sine of U.S. import quantities. The dependent variables in column (5) and (6) are the log change and the change in the inverse hyperbolic sine of U.S. import values. We use the inverse of the hyperbolic sine transformation $[\log(x+(x^2+1)^{0.5})]$ to be able to estimate changes when import quantities or values are zero in t or t–12. Columns 1-3 drop any observations with a ratio of unit values in t relative to t–12 greater than 3 and less than 1/3. Column 6 collapses the country dimension, so an observation is an HTS10-month. Standard errors are reported in parentheses. * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$.

Estimating Price and Welfare Losses

In Table 2, it compute the value of these deadweight losses for each month of 2018 and compare them to the value of the tariff revenue raised.

Since no effect of the tariffs on the prices received by foreign exporters, this tariff revenue is a pure transfer from domestic consumers to the government.

Table 2: Deadweight Welfare Loss and Tariff Revenue

Month	Deadweight Loss	Tariff Revenue	Total Cost to Importers
Jan	0	0	0
Feb	0.1	0.1	0.2
Mar	0.1	0.1	0.2
Apr	0.3	0.4	0.7
May	0.2	0.4	0.6
Jun	0.4	0.7	1.2
Jul	0.9	1.4	2.4
Aug	0.9	1.4	2.3
Sep	1.0	1.6	2.6
Oct	1.5	3.1	4.6
Nov	1.4	3.0	4.4
Total	6.9	12.3	19.2

Note: Deadweight welfare loss and tariff revenue measured in current prices in billions of dollars; see the text for the discussion of these calculations.

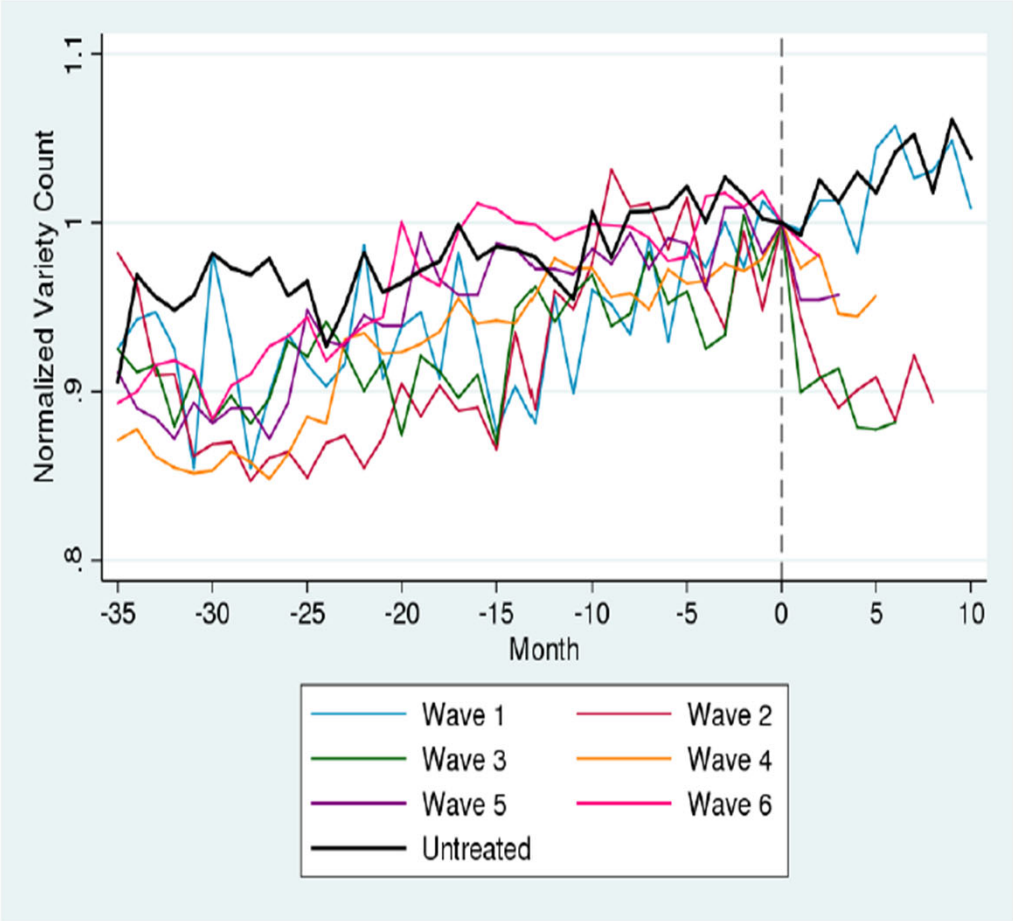
Assessing the impact of tariffs on imported varieties

How the trade war has influenced imported varieties?
A variety as a country-HTS10-digit code (e.g. French red wine).

Some of the tariffs were prohibitive, reducing imports to zero.

This can create a measurement problem that can arise if we try to assess the price impacts of tariffs on goods that are no longer imported

Figure 7: Number of Varieties by Tariff Wave



Notes: 12-month proportional changes in the number of import varieties, defined as an HTS10-country code, by tariff wave and for unaffected products; each series is normalized to the value one in the month prior to the introduction of the tariff; tariff waves are defined in Section 2 of the paper.

Assessing the impact of tariffs on imported varieties

Table 4: regressing the percent change in these indexes on a weighted average of the changes in tariffs in the sector where the weights reflect the import shares from each country at the HTS10 level in the previous year. When the average tariff in an HS6 sector goes up by ten percent, the average domestic price for common goods goes up by 9.95 percent.

Column (2), taking into account that the tariffs may cause the entry and exit of varieties. This report obtain a coefficient on the variety adjustment term of 0.049, which implies that a ten-percent tariff not only raises the tariff-inclusive price of goods that continue to be imported, but also raises import price indexes by an additional 0.5 percent because some goods became prohibitively expensive as a result of the tariffs

Column (3), this report sum these two terms together to form the overall price, we find that a ten percent increase in tariffs causes domestic prices to rise by 10.4 percent through both effects, tariffs is actually somewhat larger than the simple pass-through regressions suggest.

Table 4: Import Price Indexes and Tariffs

	(1) $\Delta\ln$(Common Goods Price Index$_{jt}$)	(2) $\ln$(Variety Adjustment$_{jt}$)	(3) $\Delta\ln$(Price Index$_{jt}$)
$\Delta\ln(1+\text{Tariff}_{j,t})$	0.995***	0.049***	1.044***
	(0.040)	(0.009)	(0.041)
N	87321	87321	87321
R^2	0.183	0.096	0.183

Notes: A variety is defined at the HTS10-country, aggregated up to the HS6-month level for January 2017 to December 2018 in 12 month changes. All regressions include HS6 and time fixed effects Standard errors are clustered at the HS6 level. The elasticity of substitution in column 1 and 3 is set equal to 6, consistent with the results above. Price ratios are cleaned on top and bottom 1/3 and 3, and lambda ratios are cleaned on top and bottom 5 percentiles. Standard errors are reported in parentheses. * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$.

The Impact of Tariffs on U.S. Domestic Producer Prices

- the 12-month change in the PPI in each NAICS6 on these adjusted output and input tariffs
- 2018 U.S. tariffs increased the prices charged by U.S. producers through both of these channels.
- Clear markup or competition effect of tariffs in the coefficient on output tariffs, domestic producers raise their prices when their foreign competitors are forced to raise prices due to higher tariffs.
- Domestic prices were 1.1 percent higher in manufacturing industries in 2018 due to the new tariffs, which compares with an average annual rate of producer price inflation from 1990-2018 of just over two percentage points

Table 5: Regressions of Non-Petroleum Merchandise Producer Price Index (PPI) onto Import Tariffs

Dependent Variable: $\Delta\log(PPI_{it})$	12-Month Change
Panel A: Regression Coefficients:	
Import Share$_i$ x $\Delta\ln(1+\text{Output Tariff}_{it})$	0.487**
	(0.210)
Input Import Intensity$_i$ x $\Delta\ln(1+\text{Input Tariff}_{it})$	1.798***
	(0.646)
Fixed Effects: Industry and Time	Yes
Panel B: Implied Aggregate Effects:	
Input Tariff Effect:	0.857
Output Tariff Effect:	0.230
Total Effect:	1.087
N	8350
#Industries	334
R^2	0.453

Notes: The dependent variable is the 12-month change in log PPI, while the tariffs are entered as the 12-month changes in log(1+Tariff$_{it}$). The sample period is monthly data from January 2017 to December 2018. Standard errors in parentheses, clustered on BEA IO code. Input import intensities constructed using only tradable non-service inputs. Standard errors are reported in parentheses. * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$.

Overview: Over the course of 2018, the Trump administration imposed import tariffs on approximately $283 billion of U.S. imports, with rates ranging between 10% and 50%. In response, U.S. trading partners, esp. China, have retaliated with tariffs averaging 16% on approximately $121 billion of U.S. exports.

Import Protection causes real income loses

- Deadweight welfare cost
- Domestic consumer and importers (tariff revenue transferred to the government)
- Dramatic adjustments in international supply chains- lost or redirected in order to avoid tariffs
- Tariffs passed through into U.S. domestic prices
- U.S. producers raising prices to reduced import competition
- Policy uncertainty- considerable- equity market (most important trade policy announcement)

TARIFF PASSTHROUGH AT THE BORDER AND AT THE STORE: EVIDENCE FROM US TRADE POLICY

Alberto Cavallo, Gita Gopinath
Brent Neiman, Jenny Tang

NBER Working Paper 26396

Higher US tariffs raised US import prices

Figure 1 plots log price indices - inclusive of tariffs - for six mutually exclusive and collectively exhaustive groups of US imports.

All six categories exhibit similar and mildly deflationary trends for the four years prior to the tariffs.

Each affected good category from China saw an immediate jump in its price, inclusive of tariffs, during the month that the policy was implemented.
The scale of the jumps are only slightly below the scale of the tariff rates, consistent with the fact that the ex-tariff prices did not exhibit meaningful breaks from their trends.

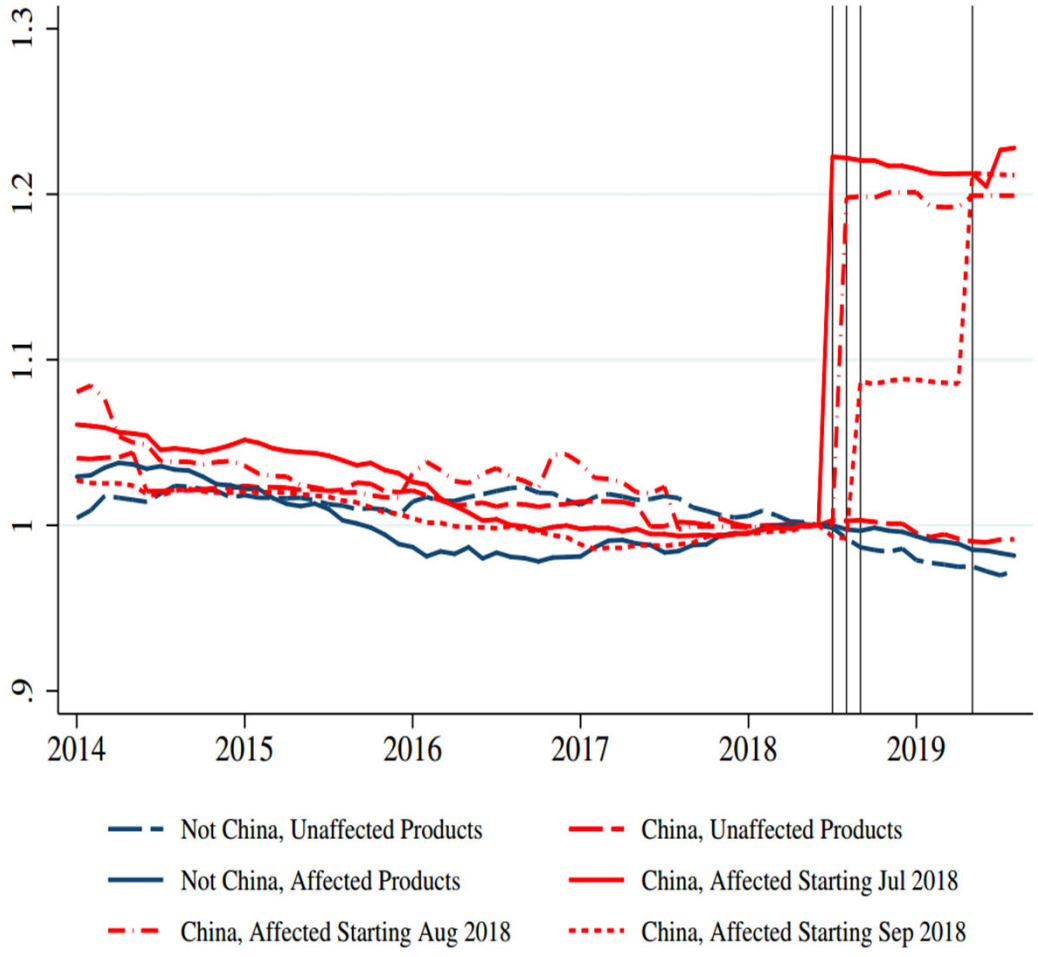


Figure 1: Import Price Indices, by China Tariff Wave

Tariffs on Steel Import (inputs)

Figure 3 shows the evolution of steel prices, which had been quite volatile during the preceding four years.

The vertical lines indicate the initiation of steel tariffs for two groups of countries in March and June 2018.

Steel prices from all three groups tracked each other relatively closely until the steel tariffs were introduced. After that point, prices on imports from all countries rose, but imports from the affected countries (shown in red) jumped to roughly 20 percent above those from unaffected countries.

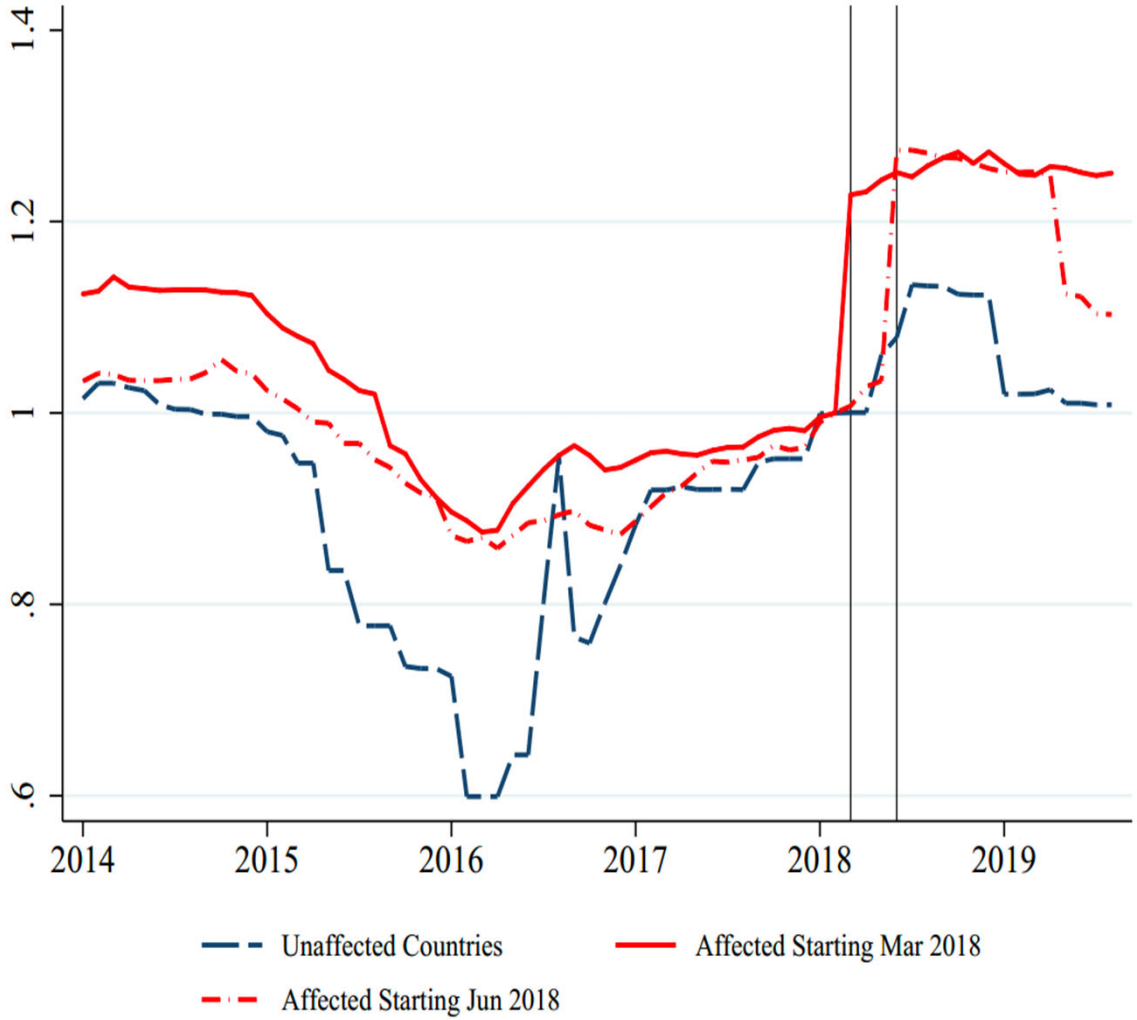
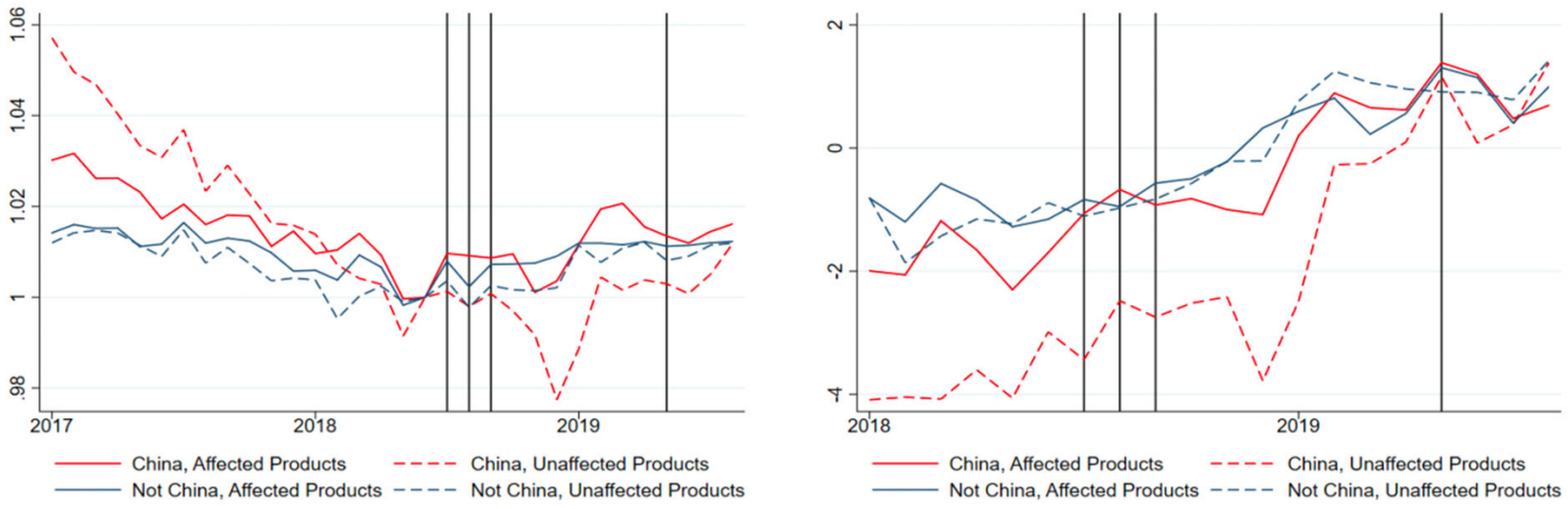


Figure 3: Steel Import Price Indices, by Tariff Wave

Retailers seem to absorb the tariff effects initially
Two Retailers with Country of Origin Information



(a) Price Indices

(b) Inflation Rates

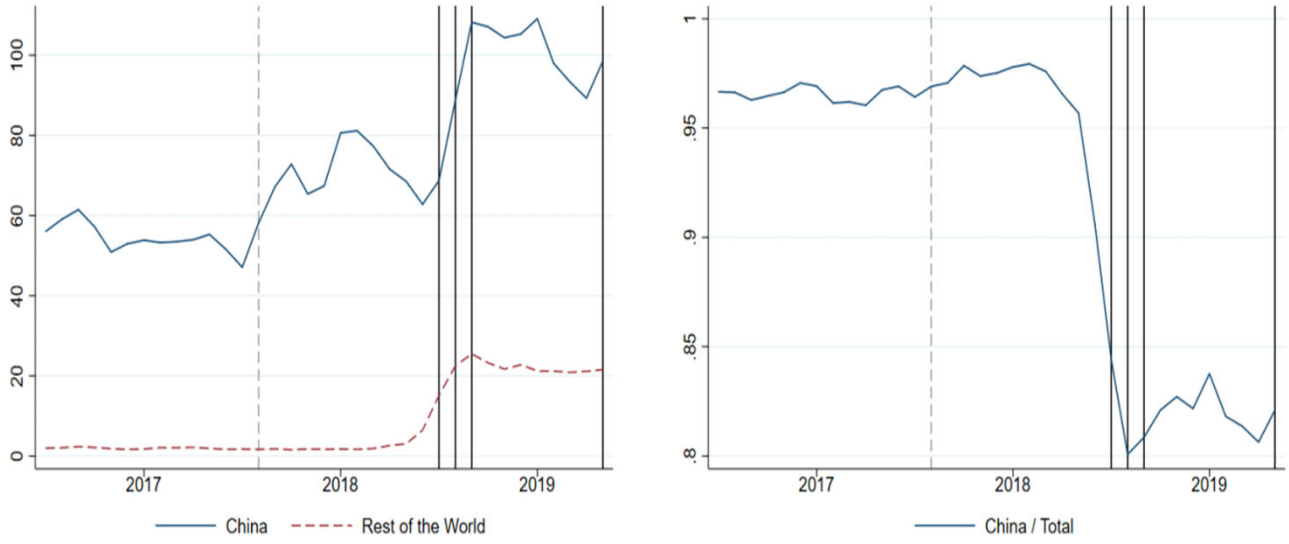
Figure 7: Retail Price Response to Chinese Import Tariffs by Two US Retailers

We start by using these data to plot daily retail price indices and corresponding annual retail inflation rates separately for those products imported from China that were affected by the tariffs, products imported from China that were unaffected, products not imported from China but in categories that were affected, and products not imported from China and in categories that were not affected, equivalent to the import data shown in Figure 1. Looking at the price indices in Figure 7(a), or the inflation rates in Figure 7(b), it is difficult to discern any quantitatively important price differences brought about by the tariffs. The inflation rates in all groups behave similarly, though the exception may be unaffected products sold by China, as this goods sector exhibited the largest increase in inflation rates over the sample period.

Other Adjustment Margins : Front-Running and Trade Diversion

The solid blue line, showing tonnage (in thousands) imported from China, is around 55,000 tons and remains flat from 2016Q3 through 2017Q2, but appears to jump in August 2017, the date indicated with the dashed vertical line.

The vertical line is dashed rather than solid to indicate that the US Trade Representative was directed at that date to determine whether to initiate a Section 301 investigation against China (and shortly thereafter did initiate the investigation).



(a) Tons Imported, Thousands

(b) Share of Tons Imported from China

Figure 11: Front-Running and Trade Diversion by Two Major US Retailers

Imports appear to have increased roughly 20 percent at that point, presumably as firms wished to import supplies prior to the actual imposition of any tariffs. When tariffs were in fact announced, imports jumped further, before declining a bit thereafter (though by early 2019, still at elevated levels). Many of these goods were likely affected by the 10 percent tariff rate, and the importers may have wanted to stockpile them before the announced 25 percent tariffs

US Export Prices fell significantly after the start of the trade war

Figure 12 plots the ex-tariff prices of US exports affected and unaffected by recently imposed foreign tariffs. The vertical lines in this figure correspond to the dates on which different countries either initiated or increased their retaliatory tariffs on US exports.

The post-tariff period represents the first time when the price indices for the two types of goods move so differently, with the prices of unaffected goods highly stable and the prices of affected goods dropping by about 7 percent.

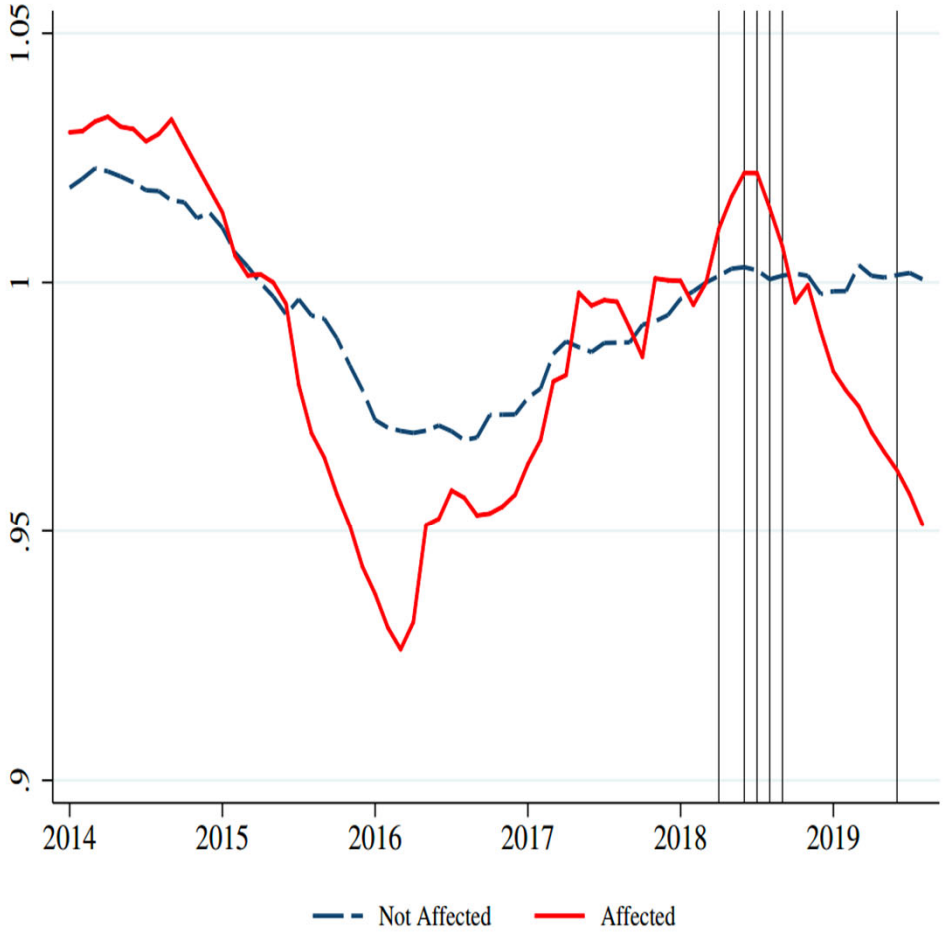


Figure 12: US Export Price Indices for Goods Affected and Not Affected by Foreign Tariffs

Summary of Cavallo, Gopinath, Neiman, and Tang

Tariff passed-through almost fully to US import prices, implying that much of the tariffs' incidence rests with the United States.

Mixed /more subdued evidence on retail price increases, which suggests that many US retailers reduced the profit margin

The response of US exporters to foreign retaliatory tariffs was not symmetric to the response of foreign exporters to US import taris. Foreign tariffs targeted undifferentiated goods exported by the United States, and US exporters significantly reduced their ex-tariff export prices on these goods, particularly on shipments to China.

The Consumption Response to Trade Shocks: Evidence from the US-China Trade War

Key Focus: Effects of China's Retaliatory Tariffs

Michael E. Waugh
New York University and NBER

Computed regional exposure to China's retaliatory tariffs (more in rural, republican locations)

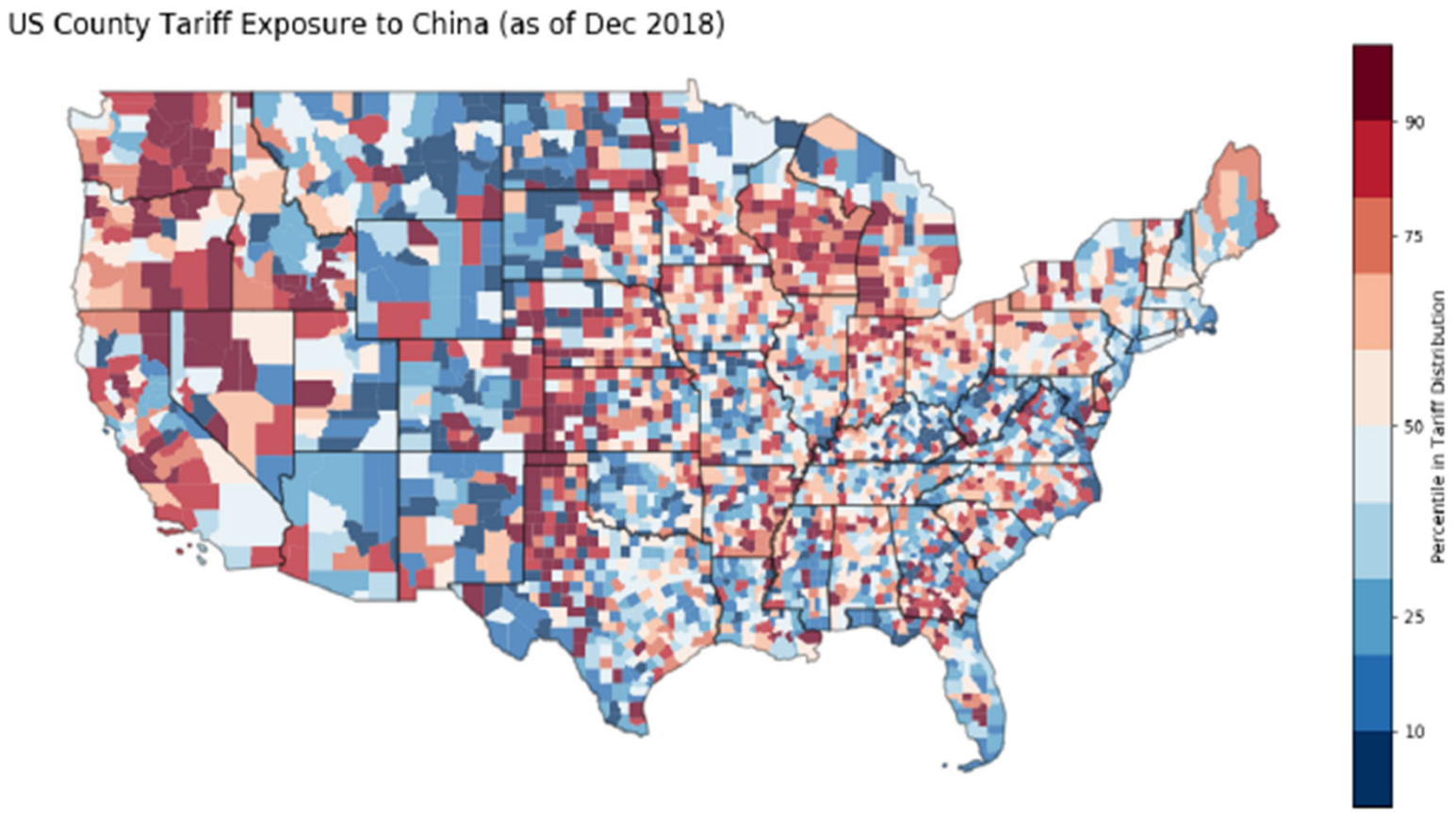


Figure 1: Tariff Exposure by County, Continental US ("lower 48")

First column: reports summary statistics for the change in this tariff measure between December 2017 and December 2018.with 1.5 percent average across all countries

The second column reports annual auto sales for 2017. The third column of Table 1 reports summary statistics for exports to China for the year 2017.

Table 1: Summary Statistics: Tariffs, Autos, Trade, Employment

Δ Tariff Quartile	Δ Tariff	Autos	Exports to China	Total Emp.	Goods Emp.	Retail Emp.	Population
Upper quartile	3.79	1,446	4,034	11,548	4,175	1,492	37,309
25th-75th quartiles	1.05	8,262	1,289	55,455	9,562	7,262	144,399
Bottom quartile	0.15	3,979	347	29,855	3,168	3,557	76,587
Average	1.51	5,525	1,879	38,144	6,624	4,896	101,000
Number of Counties	3,122						

Note: All values are for the year 2017; Δ Tariff is the change in the tariff between December 2017 and December 2018. Exports to China are on a per worker basis. Population is from the American Community Survey.

Prior to the new tariffs in July 2018, Figure 2 shows that there is no difference in auto sales growth between high- and low-tariff counties.

A difference emerges right after the implementation of the first round of tariffs in July 2018

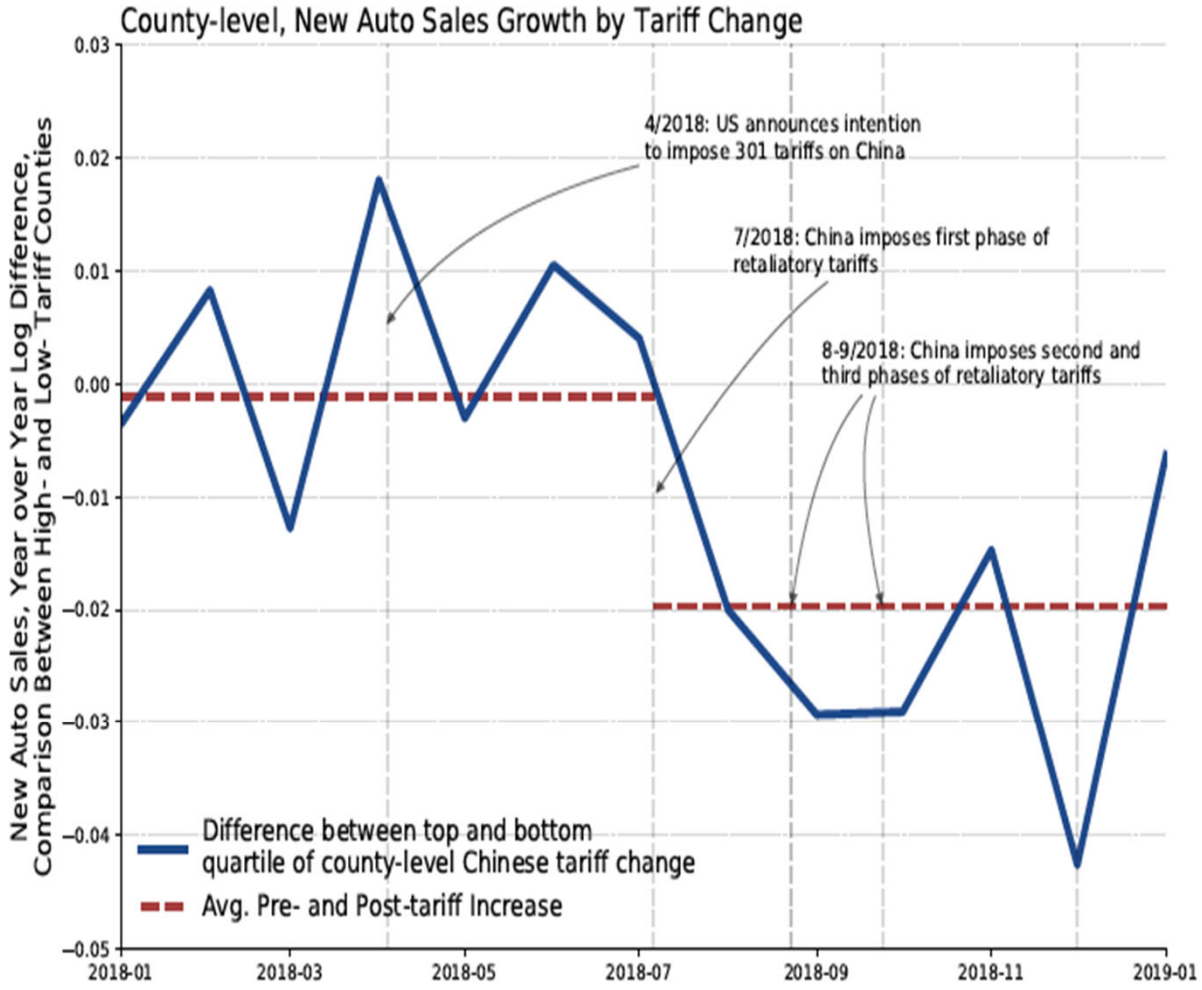


Figure 2: US County-level Auto Sales and Chinese Retaliatory Tariffs

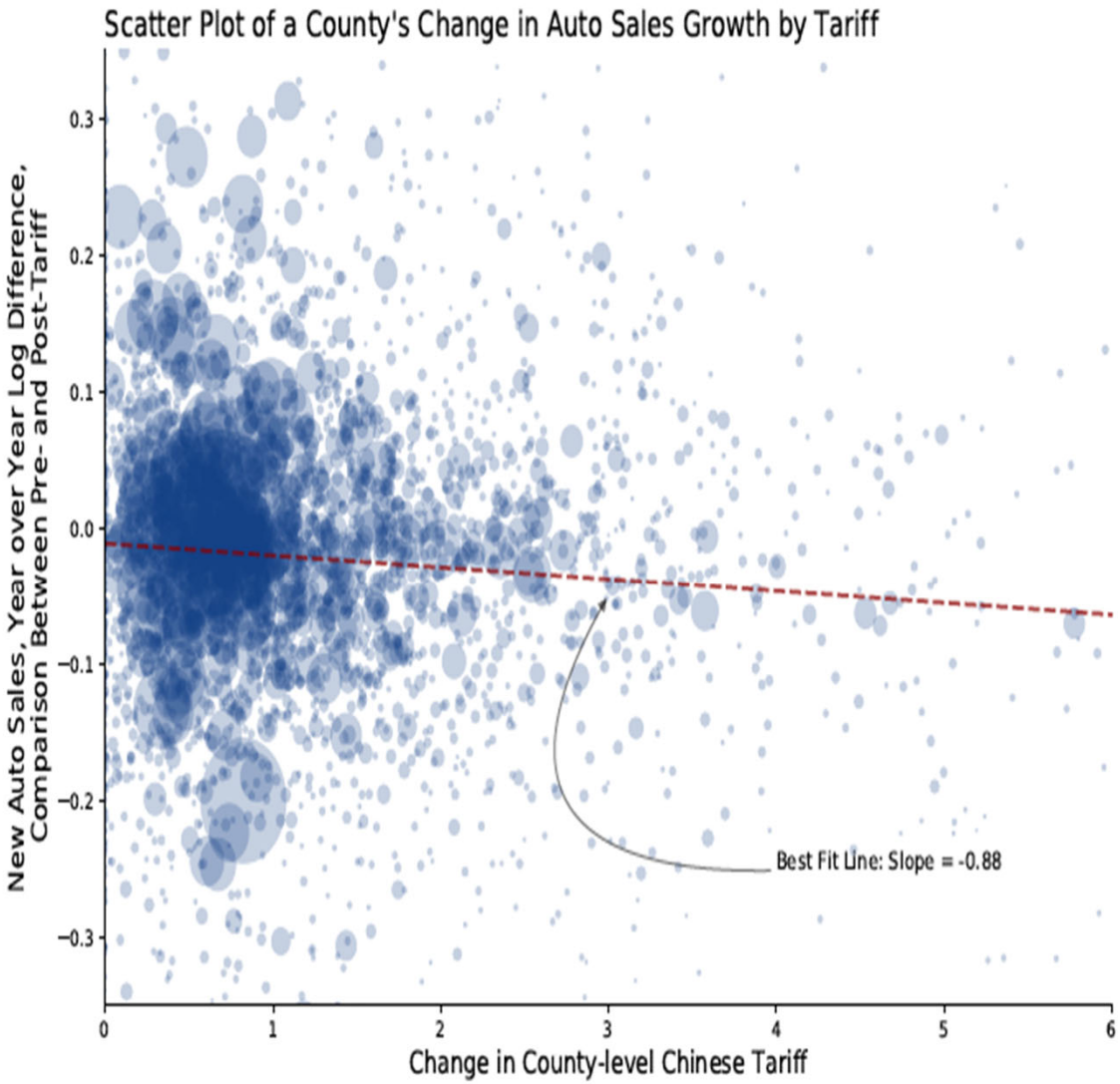


Figure 3: Auto Sales and Chinese Tariffs

There is a lot of variation in auto sales growth across counties. However, there is a systematic, downward-sloping relationship between the change in growth and a county's tariff exposure.

Prior to the trade war, auto sales in both county types were growing at the same rate: about 1 percentage point.

After the trade war, growth in both fell, but 2 ppt more in those counties more exposed to the Chinese tariff.

Table 2: Auto Sales Growth, Pre and Post Trade War

Tariff Quartile	Pre-Trade War	Post-Trade War
Upper quartile	0.013	−0.0269
	[0.005]	[0.005]
Bottom quartile	0.010	−0.0052
	[0.006]	[0.005]

Note: Values are 12-month log differences averaged across counties and time periods. Pre-Trade War is the period from January 2017 to June 2018; Post-Trade War is July 2018-January 2019. Standard errors are reported in brackets.

Chinese retaliatory tariffs had a large impact on consumption.

The first column reports the raw projection of county-level tariffs on consumption. Columns 2&3 report the results for the main specification with and without employment growth as a control.

The 4th and 5th columns include county fixed effects. This specification is the most stringent in that it controls for any time-invariant, county-specific differences in growth rates.

Table 3: Auto Sales Growth and Chinese Tariff Exposure

	(1)	(2)	(3)	(4)	(5)
$\Delta \log(1+\tau_{c,t})$	-0.97*** [0.22]	-1.06*** [0.24]	-1.03*** [0.24]	-1.00*** [0.33]	-1.01*** [0.33]
$\Delta \log L_{c,t}$			0.20*** [0.06]		0.07 [0.11]
Time Effects	N	Y	Y	Y	Y
County Fixed Effects	N	N	N	Y	Y
# Observations	40383				
Time Period	Jan 2017 - Jan 2019				

Note: Dependent variable is 12 month, log differenced auto sales. County-level observations are weighted by a county's 2010 population. Standard errors are clustered at the county level and are reported in brackets. $\Delta \log L_{c,t}$ is employment.

Figure 4 plots the results for auto sales.

The increase in a county's tariff from Chinese retaliation as of 2019 is uncorrelated with auto sales growth for all of 2017 and the first two months of 2018.

This evidence supports the parallel trends assumption and the conclusion that Chinese retaliatory tariffs are causing the decline in auto sales growth.

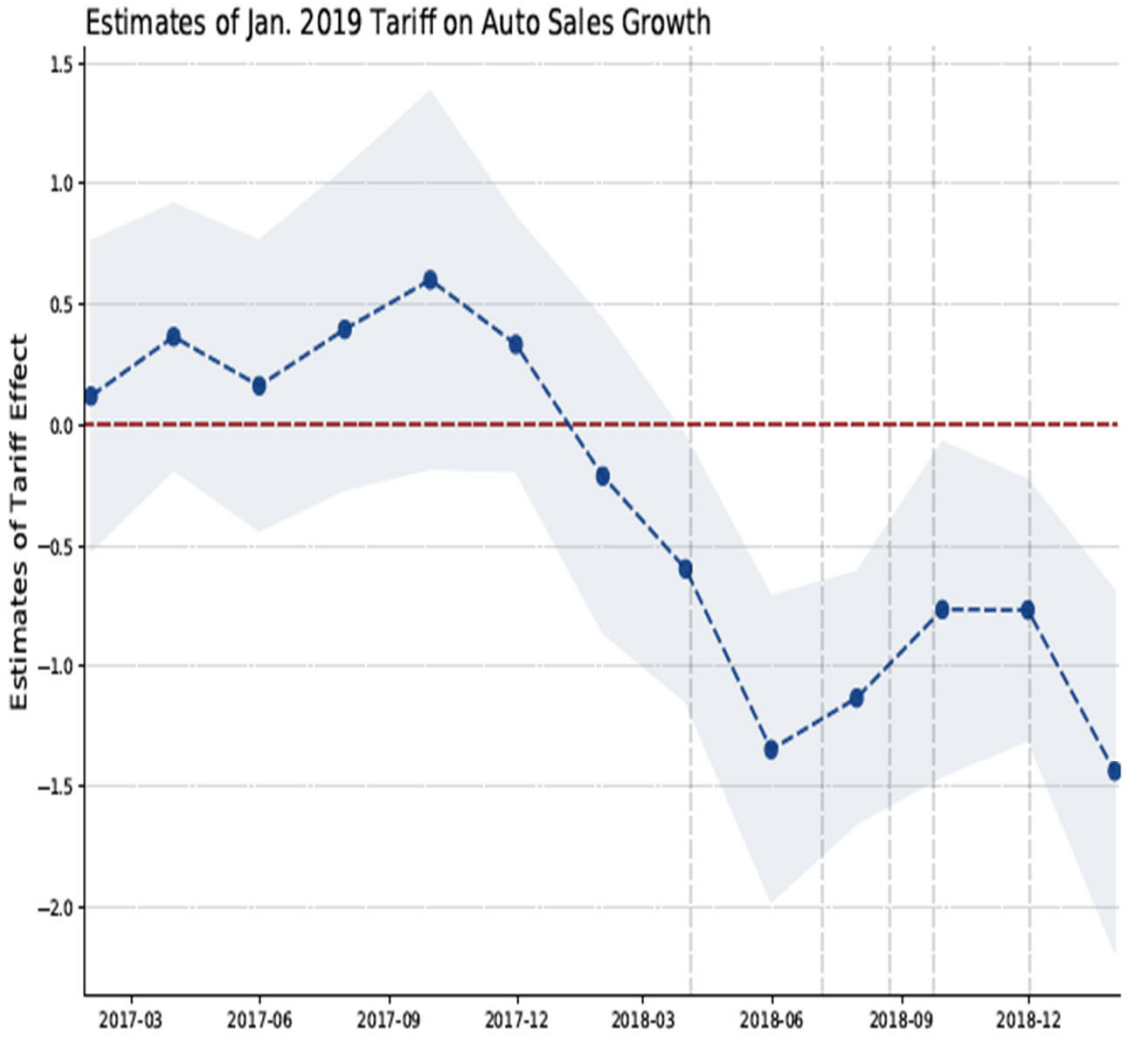


Figure 4: Auto Sales and Chinese Tariffs, Jan 2017 - Jan 2019

Exporters in high-tariff counties did not have the ability to simply redirect exports to other destinations

For counties relatively more exposed to Chinese tariffs, it was hard for them to replace these lost export opportunities.

Table 4: Exports and Chinese Retaliatory Tariffs

	US Exports to China			US Exports		
$\Delta \log(1+\tau_{c,t})$	-21.7***	-13.7***	-9.74***	-4.36***	-1.76***	-1.61***
	[0.80]	[0.82]	[0.89]	[0.20]	[0.15]	[0.13]
Time Effects	N	Y	Y	N	Y	Y
County Fixed Effects	N	N	Y	N	N	Y
# Observations	51,552					
Time Period	Jan 2017 - Jun 2019					

Note: County-level observations are weighted by a county's 2017 population. Standard errors are clustered at the county level and are reported in brackets.

Table 5 reports the results with employment.

For total employment, these point estimates are between -0.21 &- 0.15

For goods-producing employment, the estimates are twice as large with elasticity of -0.47 in the specification with time effects.

Table 5: Employment Growth and Chinese Retaliatory Tariffs

	Total Employment			Goods Employment			Retail Employment		
$\Delta \log(1+\tau_{c,t})$	-0.24***	-0.24***	-0.18**	-0.44***	-0.50***	-0.36***	-0.23**	0.07	0.14*
	[0.04]	[0.06]	[0.06]	[0.08]	[0.10]	[0.13]	[0.06]	[0.07]	[0.08]
Time Effects	N	Y	Y	N	Y	Y	N	Y	Y
County Fixed Effects	N	N	Y	N	N	Y	N	N	Y
# Observations	55,053								
Time Period	Jan 2017 - June 2019								

Note: County-level observations are weighted by a county's 2010 population. Standard errors are clustered at the county level and are reported in brackets.

Summary of Michael Waugh (2020)

The trade war is inducing concentrated losses in consumption and employment for American communities most exposed to Chinese retaliatory tariffs.

The analysis uses a unique data set with the universe of new auto sales at the US county level.
The elasticity of consumption growth to Chinese retaliatory tariffs is estimated to be around minus one.

The fall in consumption corresponds with decline in both tradeable and total employment.

No evidence that US own tariff increases have helped Americans

THE RETURN TO PROTECTIONISM

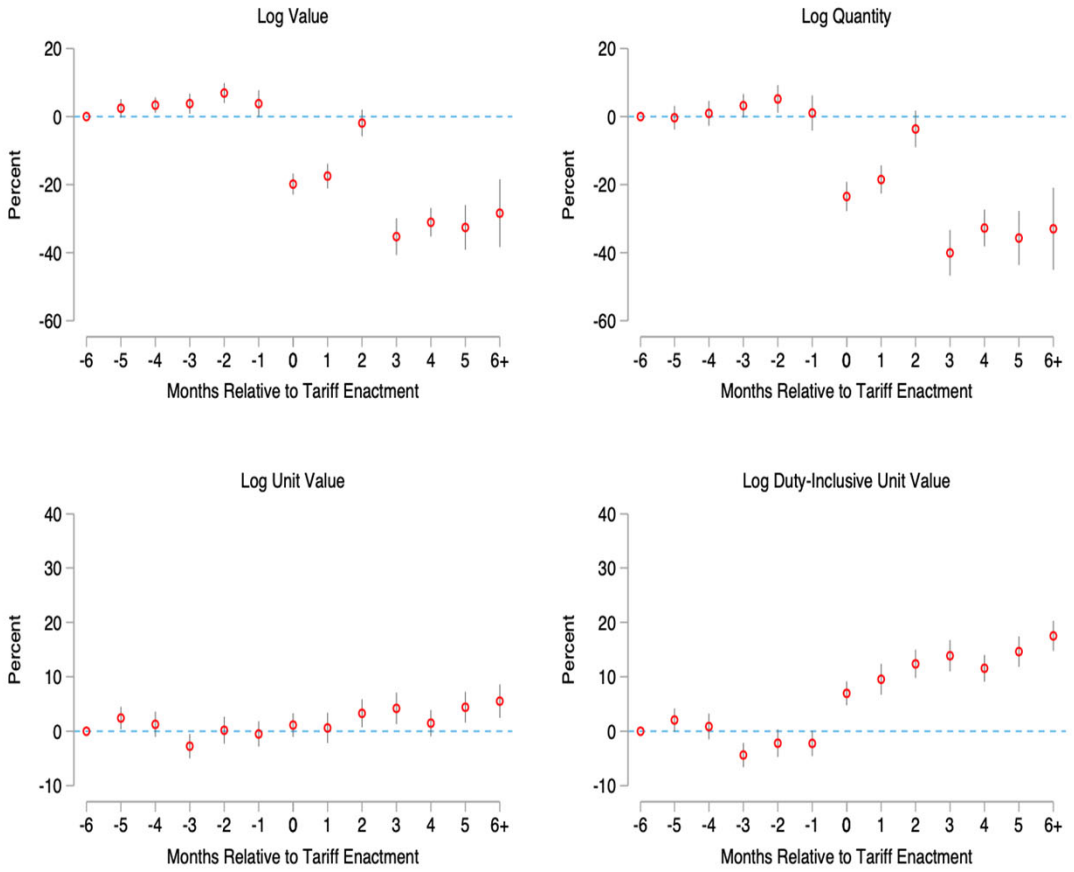
Pablo D. Fajgelbaum, Pinelopi K. Goldberg
Patrick J. Kennedy, Amit K. Khandelwal

NBER Working Paper 25638

Upon impact, large declines in imports. Import values decline on average by 20% and quantities decline by 23%.
In the bottom-left panel, before-duty unit values do not change. However, duty-inclusive unit values increase sharply for targeted varieties. **Complete pass-through of the tariffs to import prices at the variety level.**

The figure reveals anticipatory effects occurring before the tariff changes, but they are quantitatively small. Hence, the concern that importers shifted forward their purchases in order to avoid paying tariffs is mild. Below, we further assess tariff anticipation through dynamic specifications.

Figure II: Variety Event Study: Imports

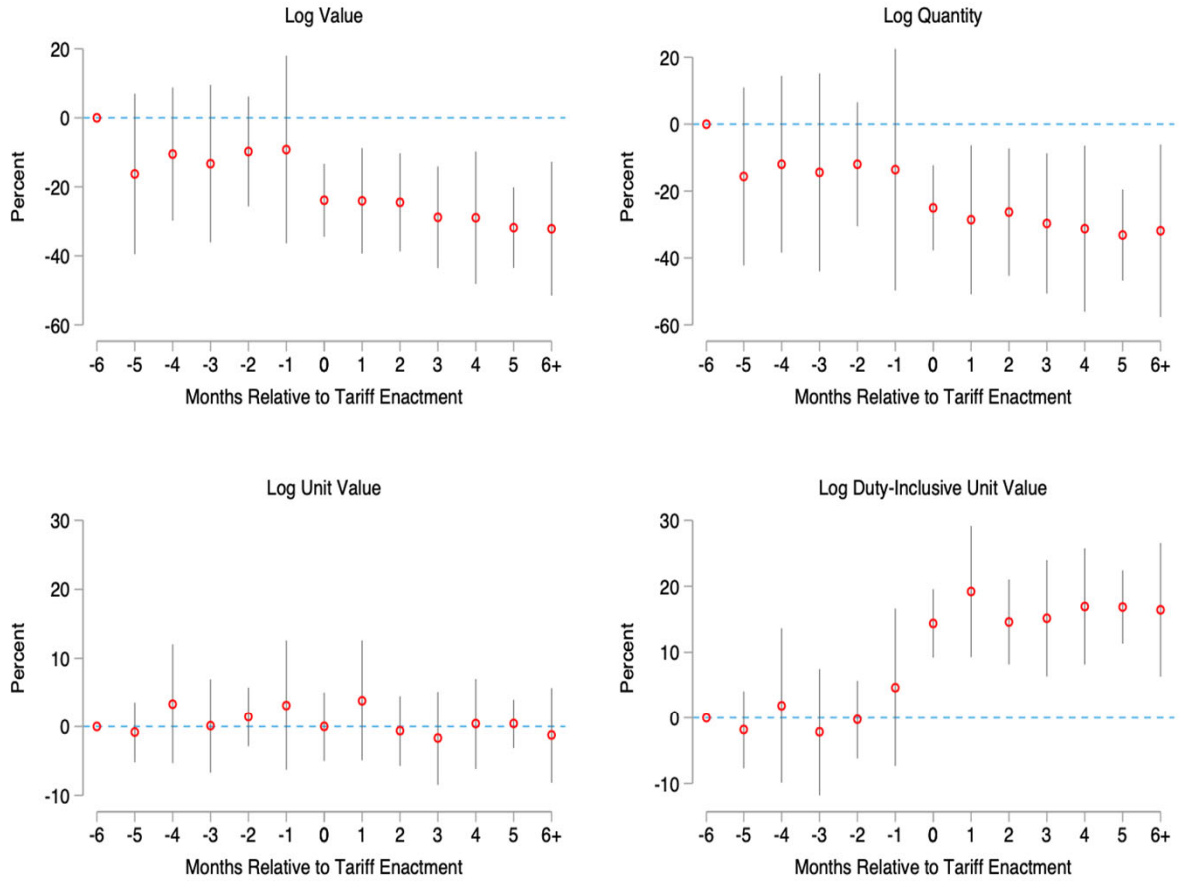


Notes: Figure plots event time dummies for targeted varieties relative to untargeted varieties. Regressions include country-product, product-time, and country-time fixed effects. Standard errors clustered by country and HS-8. Event periods before -6 are dropped, and event periods >=6 are binned. Error bars show 95% confidence intervals. In Appendix B we provide evidence that the temporary surge in imports during event period 2 reflects an anticipation response to additional tariff threats on a subset of Chinese varieties. Sample: Monthly variety-level import data from U.S. Census. Sample period is 2017:1 to 2019:4.

The impacts of the retaliatory tariffs on U.S. exports

The patterns are similar to imports. At the month of implementation, export values decline on average by 24% and quantities fall by 25%. No change in the before-duty unit values, suggesting complete pass-through of the retaliatory tariffs to foreigners' imports of U.S. varieties.

Figure III: Variety Event Study: Exports

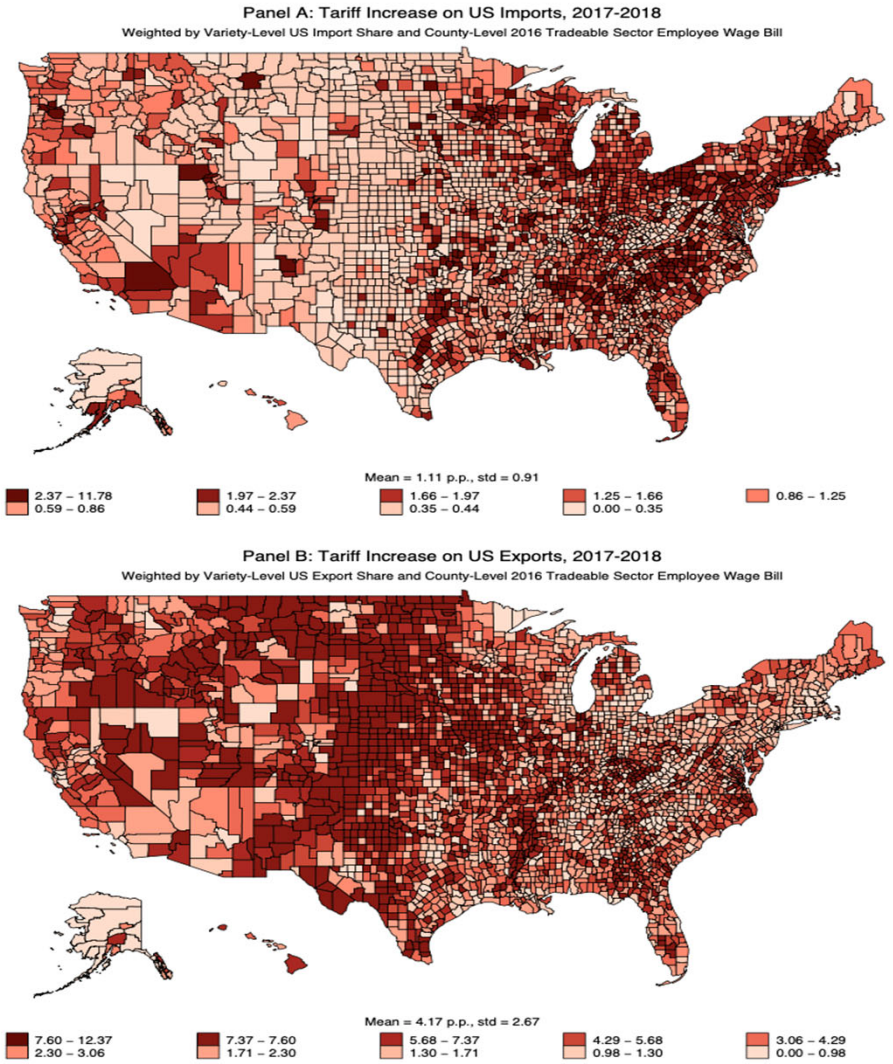


Notes: Figure plots event time dummies for targeted varieties relative to untargeted varieties. Regressions include country-product, product-time, and country-time fixed effects. Standard errors clustered by country and HS-6. Event periods before -6 are dropped, and event periods >=6 are binned. Error bars show 95% confidence intervals. Sample: Monthly variety-level export data from U.S. Census. Sample period is 2017:1 to 2019:4.

Large variation in exposure to the trade war across counties in the U.S.
The top panel shows county-level exposure to U.S. tariffs, and the bottom panel shows county-level exposure to retaliatory tariffs.

The maps show a clear contrast between the regional structure of U.S. protection and retaliation. The Great Lakes region of the Midwest and the industrial areas of the Northeast received higher tariff protection, while rural regions of the Midwestern plains and Mountain West received higher tariff retaliation

Figure V: Regional Variation in U.S. and Retaliatory Tariffs

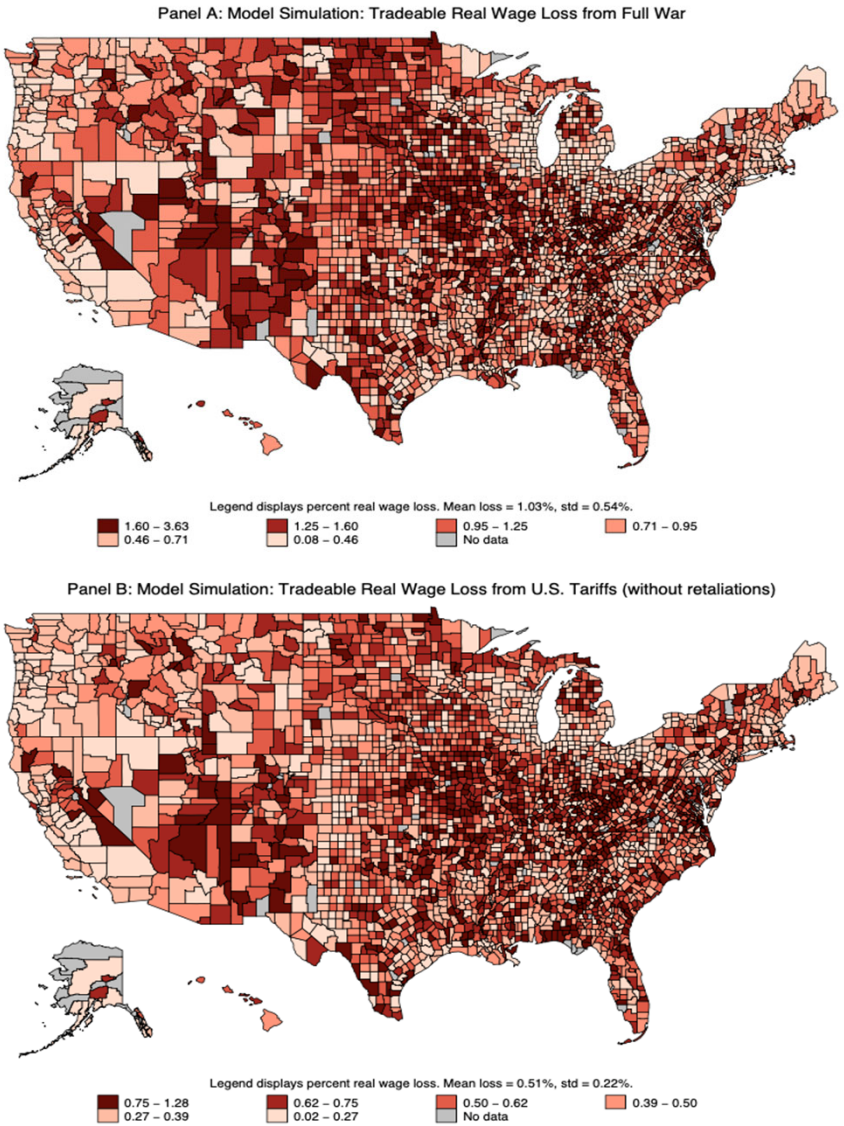


Notes: Figure shows county-level exposure to U.S. import tariff changes (Panel A) and retaliatory tariff changes (Panel B) due to the trade war, weighted by variety-level 2013-2017 U.S. trade shares (constructed from Census data) and by 2016 county-level tradeable sector employee wage bill (constructed from County Business Patterns). Darker shades indicate higher tariff exposure. Values indicate percentage point tariff increases.

Figure VI shows the impacts of the trade war across counties. The first map shows the county-level reduction in real wages in tradeable sectors in a hypothetical scenario where U.S. trade partners did not retaliate, and the second map shows real wage losses from the full war.

Every county experiences a reduction in the tradeable real wage. Counties with smaller relative losses are concentrated in the Rust Belt region as well as the Southeast. These patterns map imperfectly with the direct protection received through import tariffs shown in Figure V because of input-output linkages across sectors. The counties hit hardest by the war are those concentrated in the Midwestern Plains, largely due to the structure of the retaliatory tariffs.

Figure VI: Model Simulation of Real Wage Impacts from U.S. and Retaliatory Tariffs

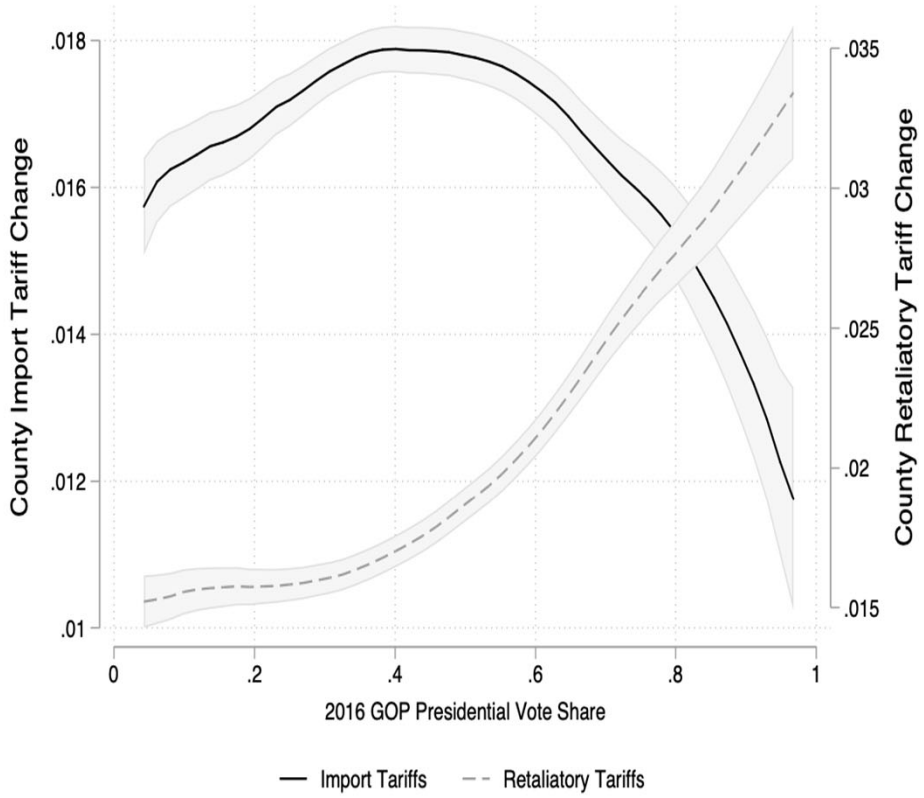


Notes: Figure shows county-level mean tradeable wage losses as simulated from the model. Panel A shows losses accounting for both import and retaliatory tariffs. Panel B shows losses in the counterfactual scenario that U.S. trade partners did not retaliate. Darker shades indicate greater losses. Values indicate percent wage declines.

Figure VII presents a non-parametric plot of county-level import and retaliatory tariff changes against the Republican (GOP) vote share, weighted by county population. The county-level tariffs are constructed within tradeables, and therefore do not reflect differences in shares of tradeable activity across counties. The figure reveals two different patterns of protection for U.S. and retaliatory tariffs. For U.S. tariffs, we observe an inverted-U shape, implying that counties with a 40-60% Republican vote share received more protection than heavily Republican or Democratic counties.

Hence, U.S. tariffs appear targeted toward sectors concentrated in politically competitive counties. By contrast, trading partners retaliated by targeting exports in sectors concentrated in heavily Republican counties.

Figure VII: Tariff Changes vs. 2016 Republican Vote Share



Notes: Figure plots county-level import and retaliatory tariff changes against the 2016 Republican presidential two-party vote share, using a non-parametric fit weighted by county population. County-level tariff changes weighted by variety-level 2013-2017 U.S. trade shares and by 2016 county-level tradeable sector employee wage bill. Vote shares constructed from Federal Election Commission data. Unit of analysis is 3,111 U.S. counties.

Summary:

Large negative impacts of the war on imports and exports.

Complete pass-through of tariffs to duty-inclusive import prices

-> an annual loss of $51 billion due to higher import prices.

[However, a general equilibrium model imposing neoclassical assumptions implies a smaller aggregate loss of $7.2 billion.]

Tradeable sectors in heavily GOP counties experienced the largest losses. Therefore, the negative effects are concentrated.

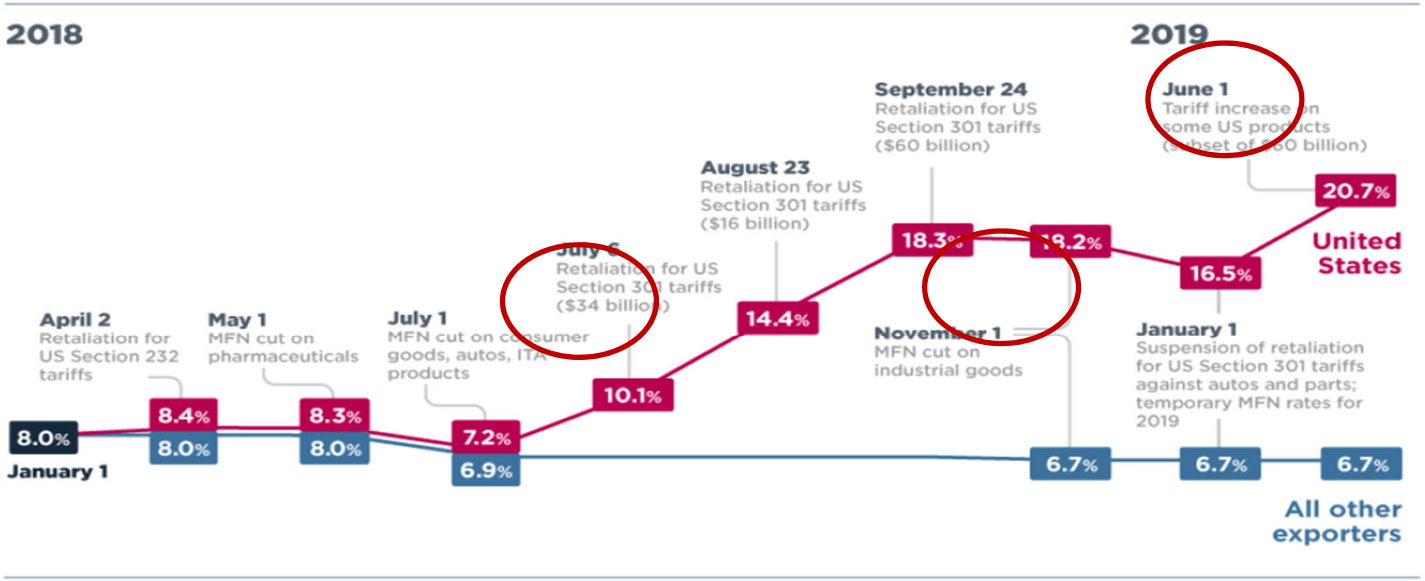
Trump Has Gotten China to Lower Its Tariffs. Just Toward Everyone Else

Chad P. Bown, Euijin Jung and Eva (Yiwen) Zhang (All PIIE)

.

Figure 1

China's average tariff rate is climbing on US goods and falling for the rest of the world



PIIE

ITA = Information Technology Agreement; MFN = most favored nation

Note: Trade-weighted average tariffs computed from product-level tariff and trade data, weighted by US exports to the world in 2017.

Sources: Constructed by the authors with data from Trade Map and Market Access Map (International Trade Centre, marketanalysis.intracen.org) and China's Ministry of Finance's announcements (as linked in appendix table A.1).

Later in 2018, China's retaliation against $110 billion of US exports increased the average Chinese tariff on US products to 18.3 percent. China had lowered its tariffs on imports from the rest of the world from 8.0 to 6.7 percent. Consumers in China now had another reason to switch away from American suppliers.

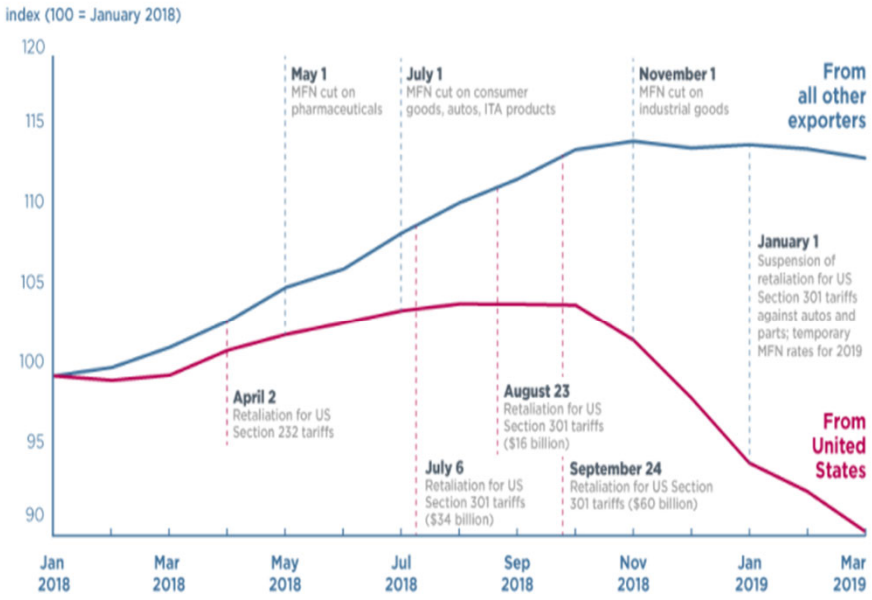
China's tariff reductions toward the rest of the world are likely to have helped stem the decline in imports from those countries.

Nevertheless, the drop in US exports to China—due to slowing domestic demand, the retaliatory tariffs, as well as the incentive to switch to other foreign sources—is much more severe.

China's actions have two parallels of note. The first is the contemporary counterpart of American beef being shut out of Japan—not because of retaliation, but because of President Trump's decision to pull the United States out of the Trans-Pacific Partnership agreement in January 2017 The second and more ominous parallel is the shadow of the 1930s. Like China's response today, there was a two-pronged international reaction to the United States' imposition of its infamous Smoot-Hawley Tariff Act.

Figure 4

China's imports from the United States have declined much more rapidly than imports from elsewhere during the trade war



PIIE

ITA = Information Technology Agreement; MFN = most favored nation

Note: China's monthly import data, not seasonally adjusted, 12-month trailing average.

Source: Constructed by the authors with data from Trade Map, International Trade Centre, marketanalysis.intracen.org.

Effects on other countries

- Favorable trade diversion in the short run
  - E.g., Vietnam, India, Mexico, other high-income countries
- Unfavorable trade diversion via the US-China Phase-1 agreement
  - "The impact of the China-US trade agreement on developing countries" (Caroline Freund, Maryla Maliszewska, Aaditya Mattoo, Michele Ruta, March 2020)
- Desensitizing the weaponization of tariffs
- Undermining the WTO dispute settlement process

Overall effect

- The Trade War
- On China, the United States, and the rest of the world
- Lose, lose, and lose

- The Technology War
- λ (national security) + (1- λ) (govnmt help to dom. technology firms)
- Waiting to be rigorously assessed

Topic 2: Biden's Reset Opportunity

- What does the US want China to reform?
- Is China capable of reforms?
- Scope for collaboration?

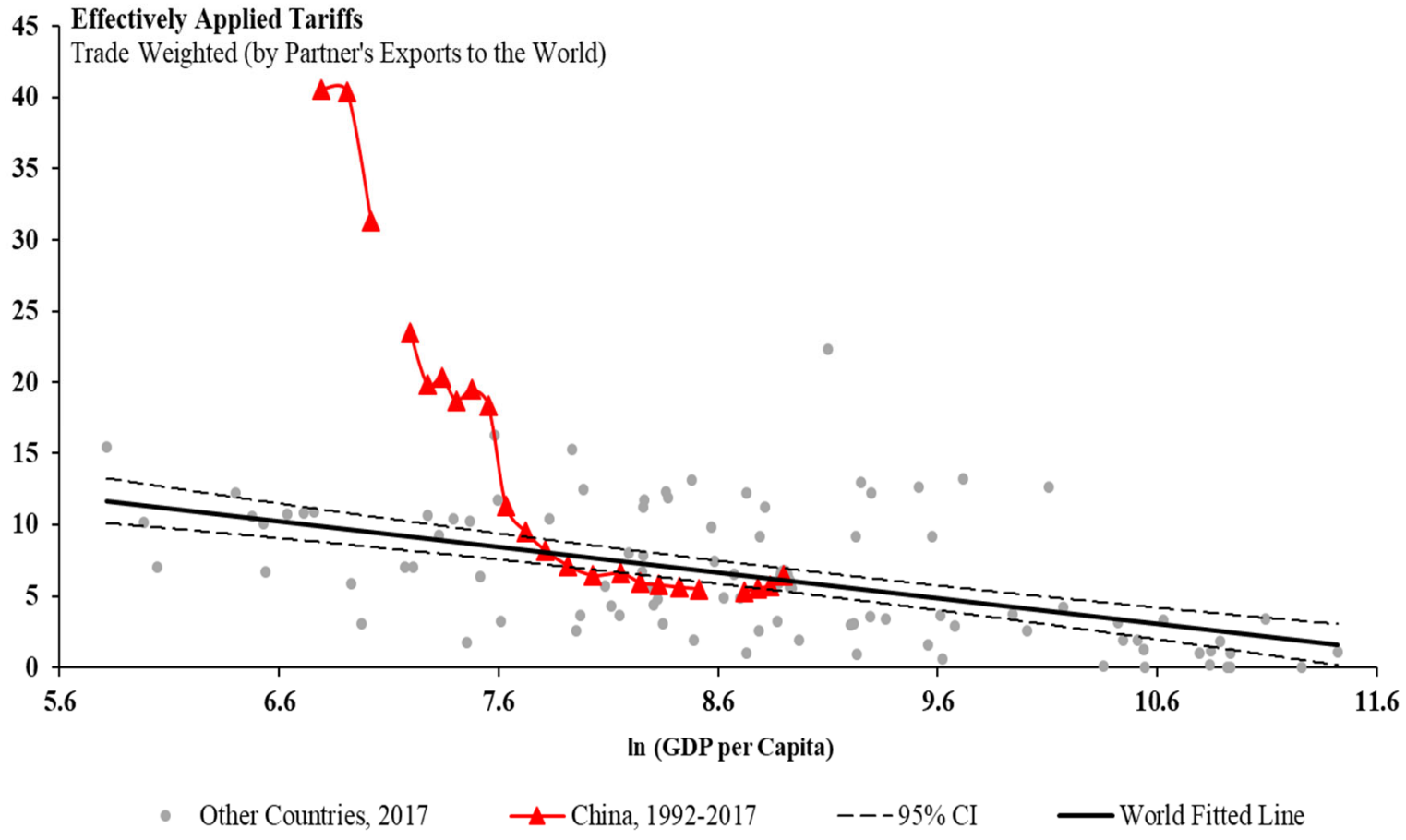
Structural Reforms Needed in China

- Industrial Policy
- Discipline on subsidies
- Discipline on state-owned firms
- Exchange rate and financial sector reforms
- IP Protection
- Trade and investment barriers
- More balanced growth model

- Realistic to see progress?

- On the trade barriers and trade balance

China’s Trade Barriers in International Comparison

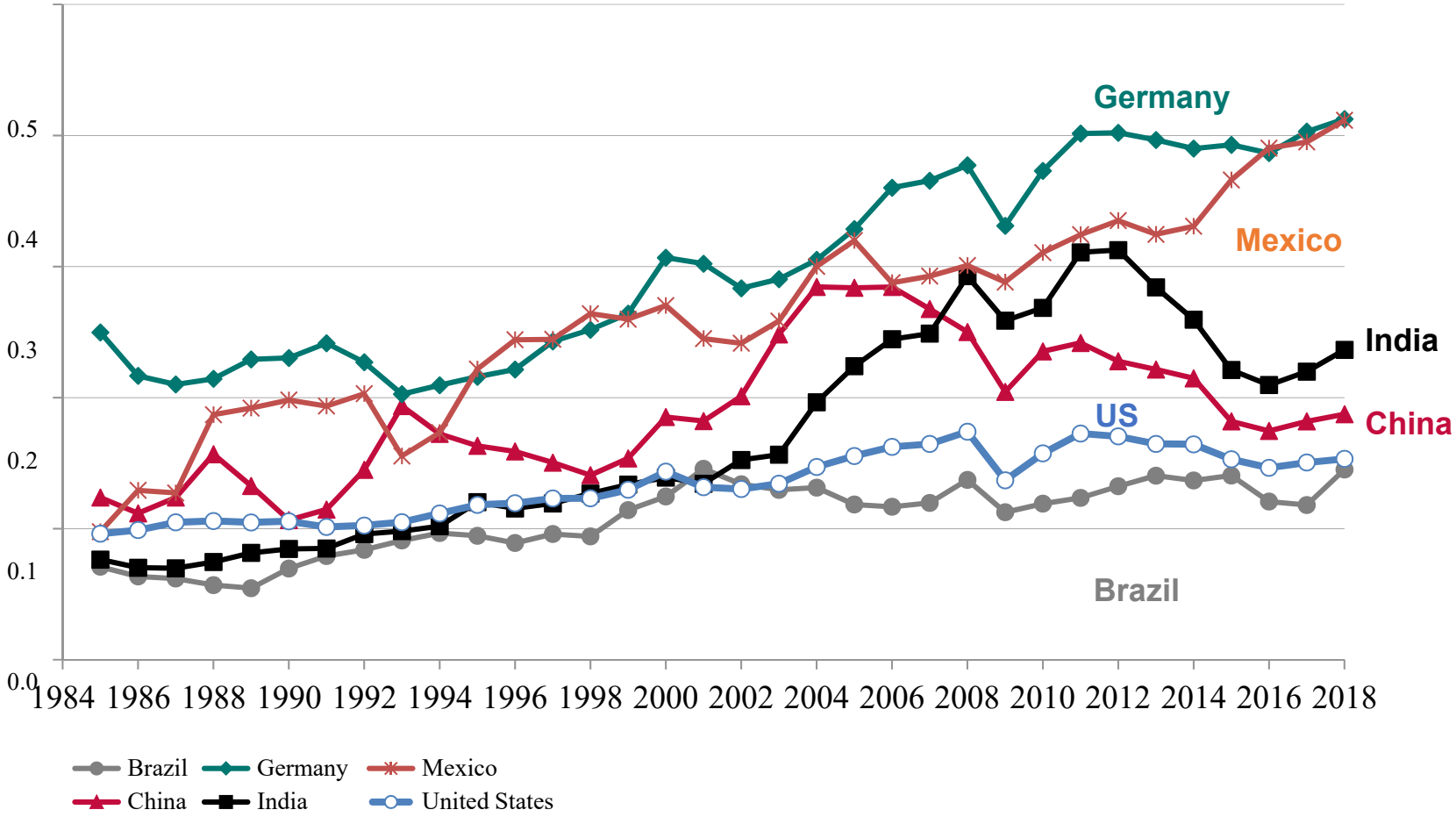


Effectively Applied Tariffs, Weighted by Partner's Exports to the World

- The Chinese tariff rates in the graph are somewhat misleading
  - Imported inputs for “processing trade” are exempted from tariff; they account for close to 40% of China’s total imports

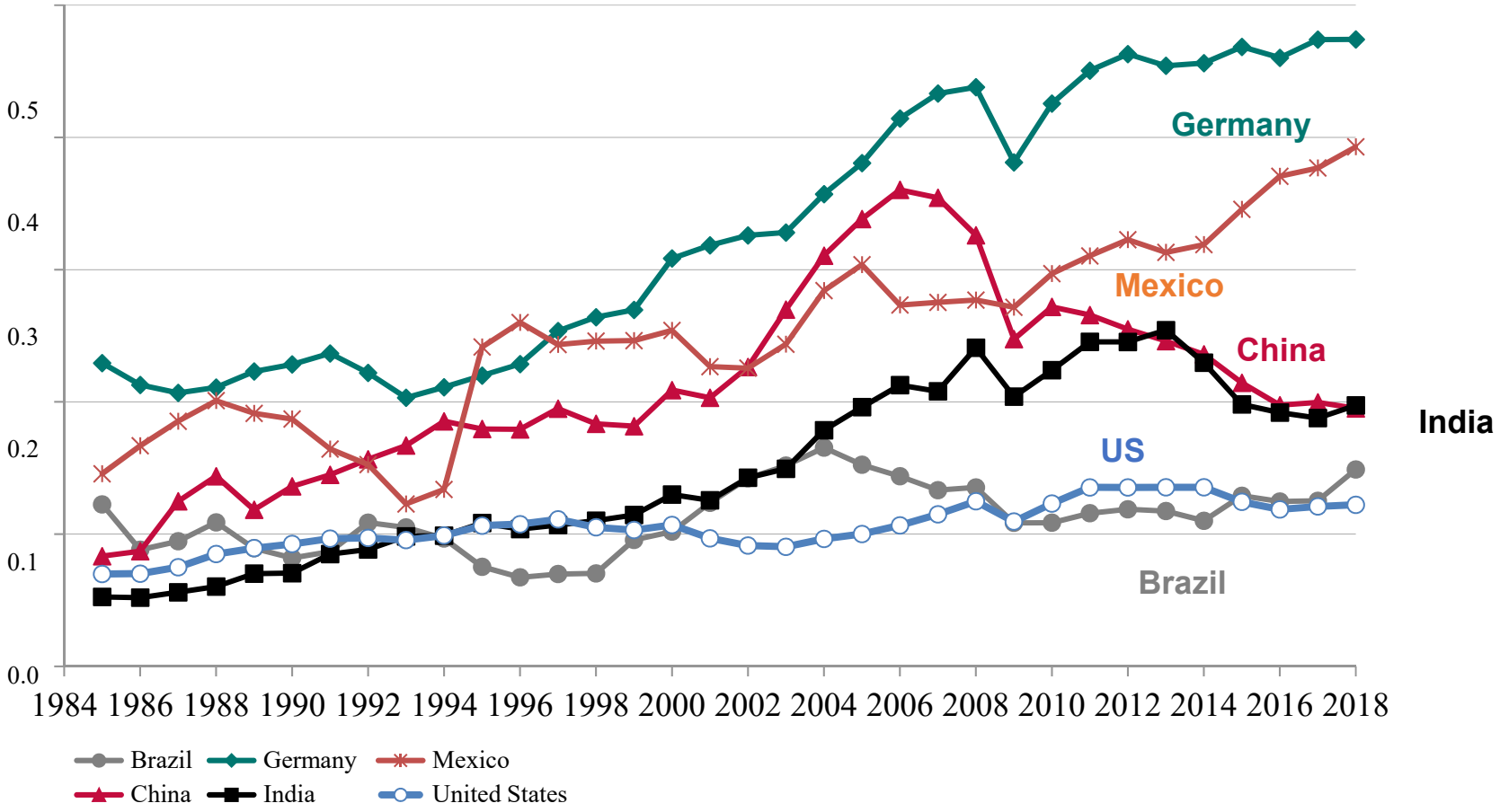
- The US tariff rates are also somewhat misleading
  - They don’t include anti-dumping duties and counter-veiling tariffs.

Imports/GDP



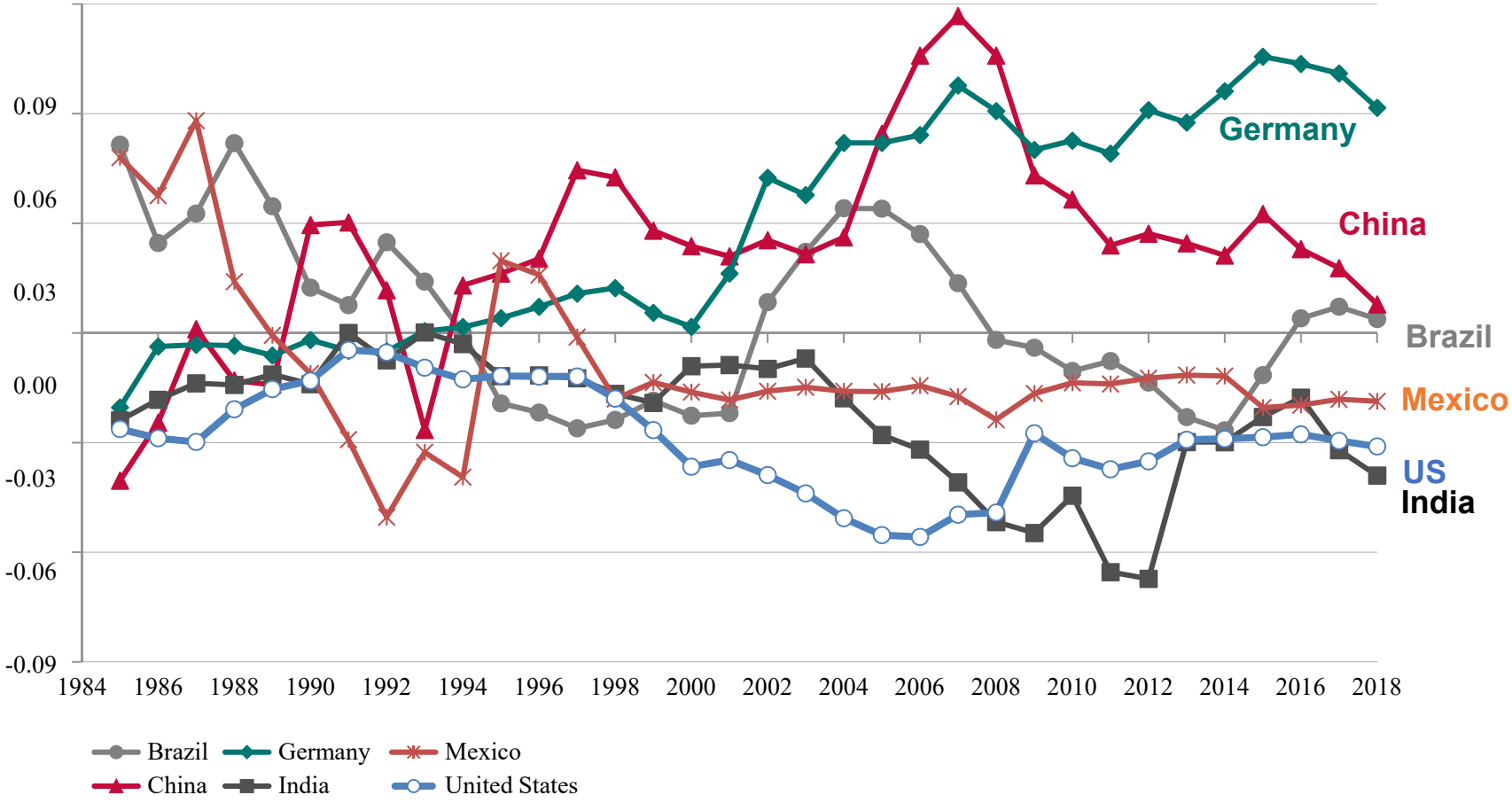
Source: WDI 2019

Exports/GDP



Source: WDI 2019

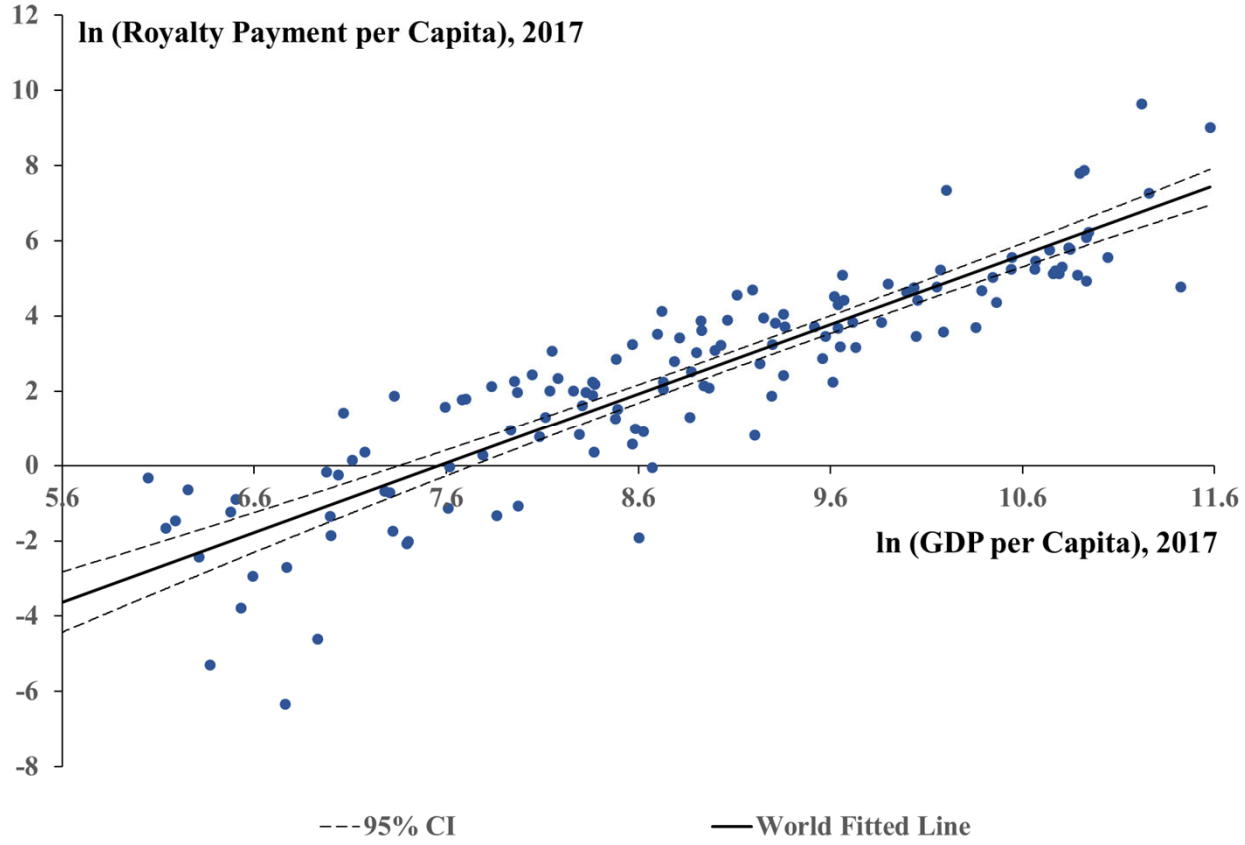
Trade Balance/GDP



Source: WDI 2019

- On the protection of intellectual property

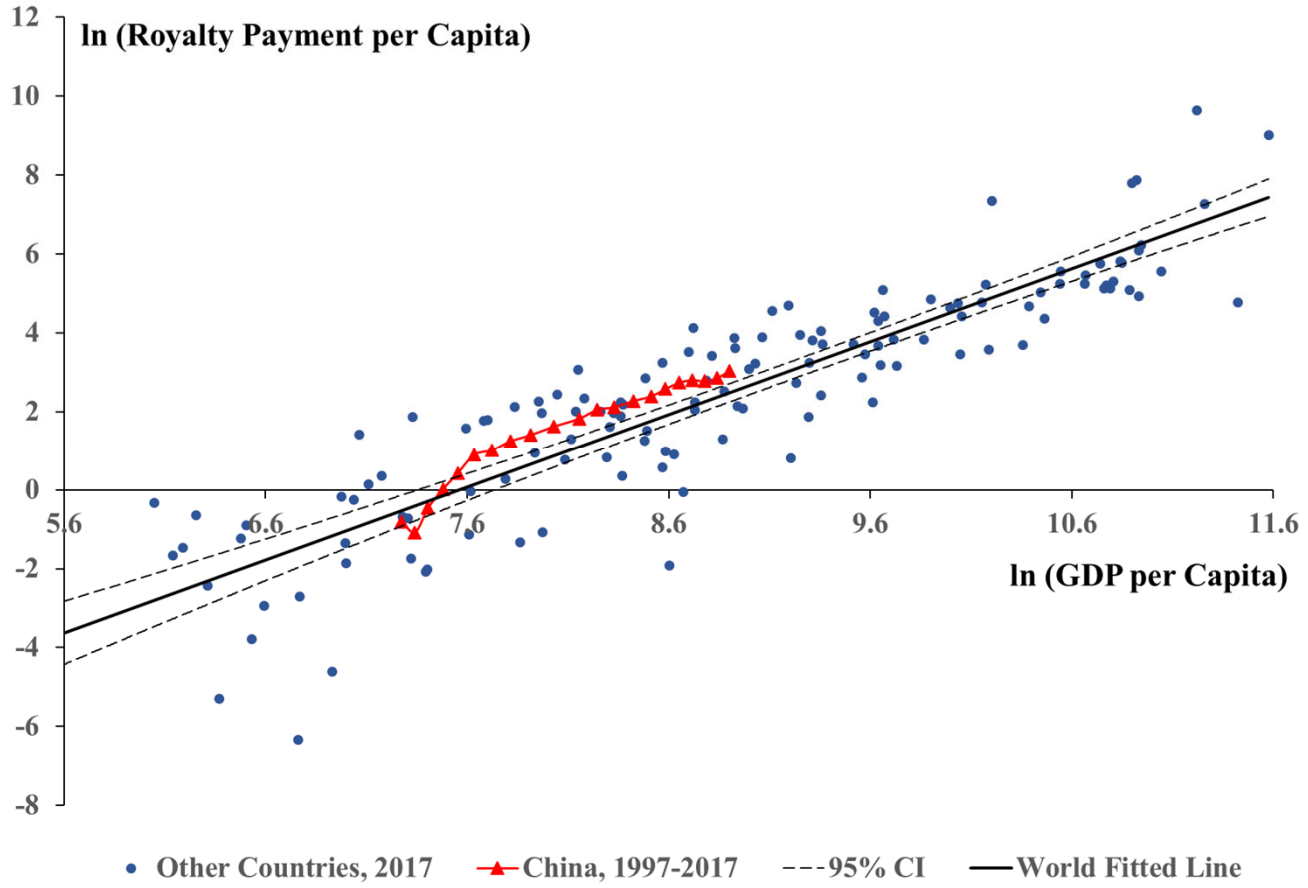
Around the world, royalty payment per capita (to foreign patent holders) tends to rise as a country gets richer



Royalty payment/GDP in 2017

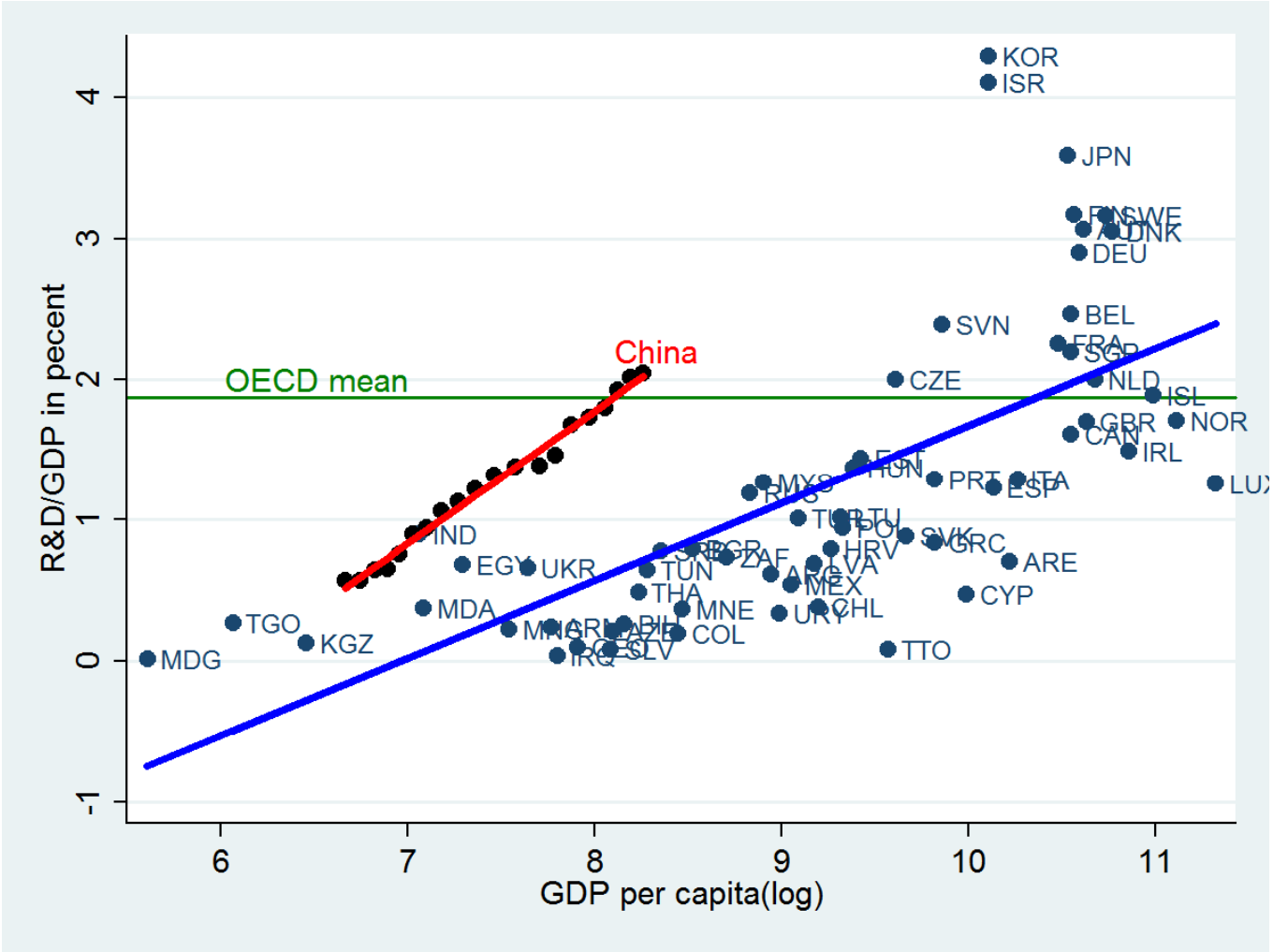
Source: SJ Wei and X. Yu based on IMF's International Financial Statistics database

China's Outbound Royalty Payment for Foreign Patent Holders Rises Very Fast as Its Income Rises, 1997-2017



Source: SJ Wei and X Yu based on IMF's balance of payments data

R&D/GDP vs GDP per capita：
China has more to protect now



Note: data for China are from 1995to 2014, and data for all other countries are for 2014 or the latest year available. Source: OECD database and World Bank.

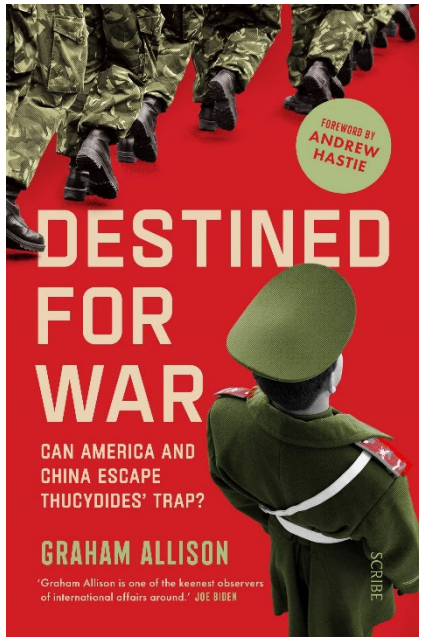
China in the WTO

- As a defendant
  - Of the 348 trade disputes brought to the WTO since the end of 2001, China has been a defendant in 44, or 12.6% of the total – in line with the country's 12.8% share of global exports in 2018. This is fewer than the 99 brought against the US and the 52 brought against the EU during the same period.
- As a complainant
  - Since Dec 2001, China has lodged 21 cases at the WTO, or 6% of the total – lower than its 10.8% share of global imports in 2018. Strikingly, this number also is substantially lower than the 55 cases lodged by the US, and the 46 filed by the EU.
- Record in complying with WTO rulings
  - Large countries tend not to have a perfect record of complying with WTO rulings. But of the 44 cases against China since 2001, only twice when other countries have had to return to the WTO to secure better compliance, compared to 15 times in the 99 cases against the US over the same period.

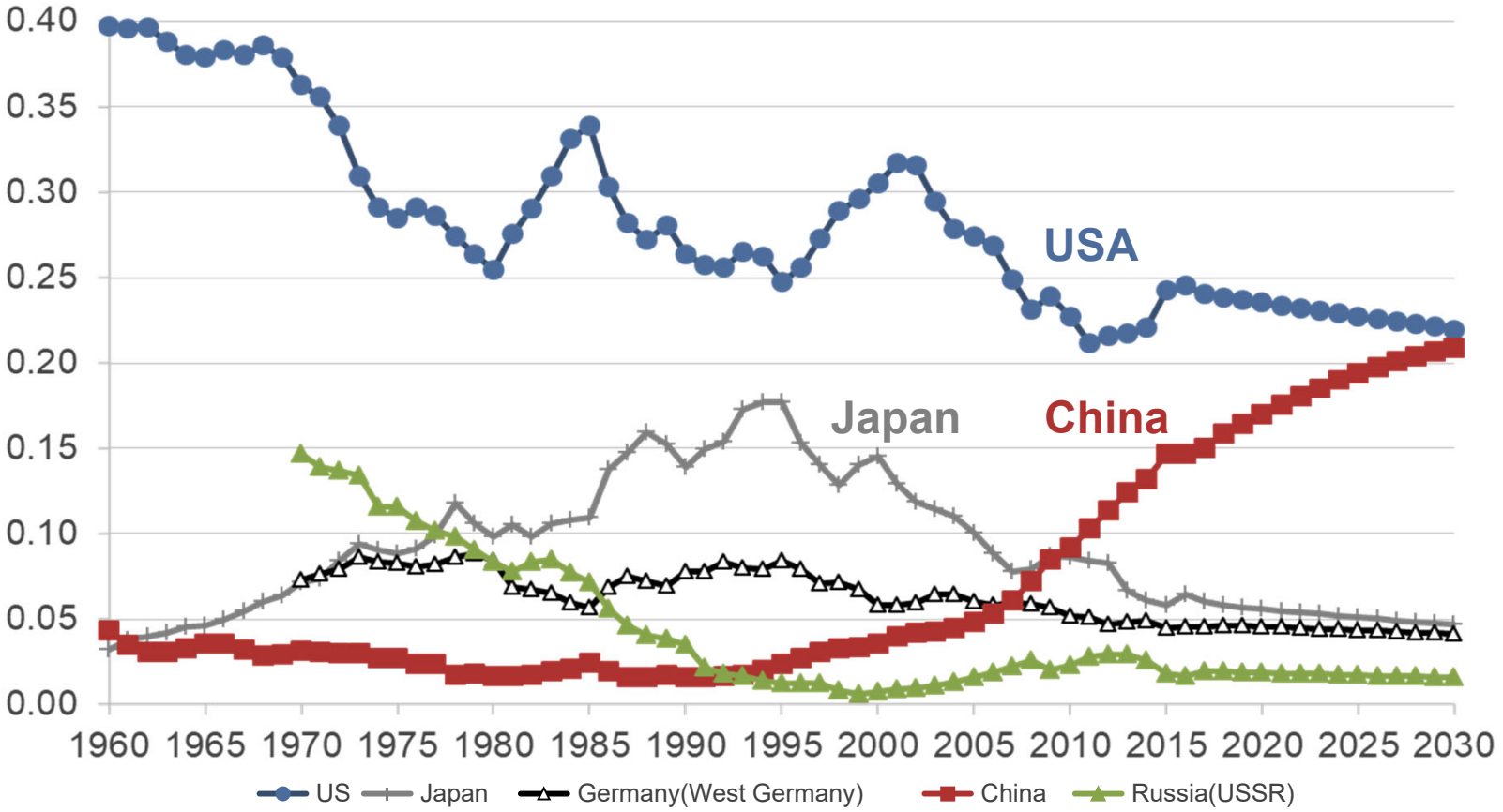
Source: Shang-Jin Wei and xinding Yu, 2019

How would the Biden team view China?

- **China as a new Soviet Union?**
- **China as Athens (and the US as Sparta)?**
  - "Thucydides Trap" (per Graham Allison)
- **China as Japan in the 1990s x 3?**



Share in World GDP (in current US dollars)



Note: For 2019, GDP and GDP growth are based on IMF projections. For 2020 to 2030, all the countries except China are assumed to grow at the average rate of the 2016-2018. Chinese growth is assumed to decline at the rate of 0.25 percentage point a year until it reaches 4% a year and will grow at 4% thereafter. Source: Author's cacluation bbased on data from WDI database

Future Relationship: Build Back Better?

- Trump's legacy policy as a gift to the new administration
- Constraints from the Congress

- China has shown a capability to reforms
- Numerical Targets -> Structural Reforms
- CPTPP vs RCEP vs. WTO
- China Tariffs -> Carbon Tariffs

Structural Reforms vs Numerical Targets

- Norms on industrial policy
- Disciplines on subsidies
- Disciplines on SOEs
- Exchange rate and financial sector reforms
- Trade and investment liberalization

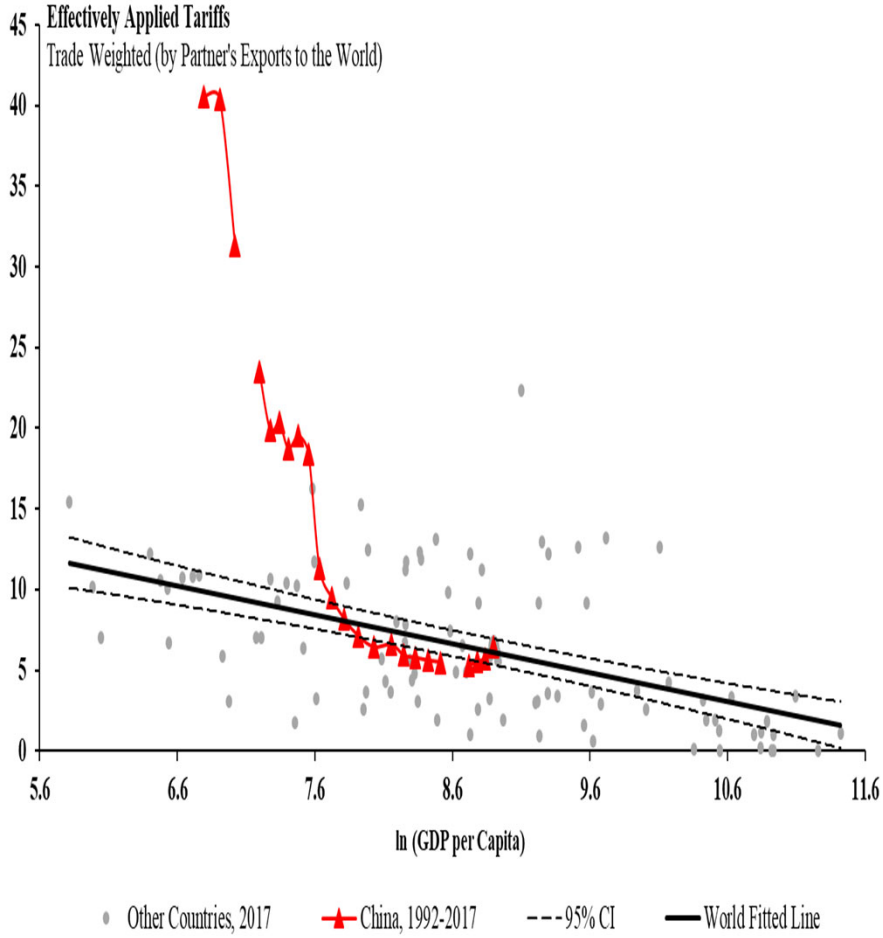
- WTO reforms

CPTPP vs RCEP

- Better than no FTAs
- Need to recognize distortions in both
- Useful tool to secure structural reforms in China
  - "Use of external pressure to secure domestic reforms"
  - The example of China's accession to the WTO
  - The example of the RMB entering the SDR
- Global trading rules

Example: Use of the accession to the WTO to promote domestic reforms

- 15 years of negotiation, 1986-2001
- Acceded on Dec 11, 2001
- Massive trade liberalization on a phase-in basis
- Service sector liberalization in phases as well
- Many reforms ahead of the promised schedule
- Most SOEs pushed to be publicly listed
- "Special safeguards"
- Anti-dumping rules and "non-market status"



Carbon Tariffs vs. China Tariffs

- Climate change: one of the largest existential threat to the human race
- Paris 2015 was significant but insufficient
- Trump's withdraw was a major blow
- New opportunity
  - President-elect Biden: a priority
  - China: the pledge of carbon neutrality by 2060
- How to make any new ambition more enforceable?

Carbon tariff?

- Weakness of the 2015 Paris Accord
  - No enforcement power
  - Ignoring the general equilibrium effect
  - Ignoring “the next China”
- Aim: make it more expensive to emit GHGs by anyone anywhere in the world
- Complemented by
  - Technical support to developing countries
  - Financial support to least developed countries

A Carbon Free World?

- Phased achievement of net zero
- Developed countries: by 2050
- Middle-income countries: by 2060
- All countries: by 2075

Summary

- The Trade War has created a lose-lose-and-lose situation for China, the US, and the rest of the world
- In spite of the US strongly negative rhetoric, China's record has shown that it is capable of genuine pro-market pro-rule reforms
- Future relationships may need to focus more on structural reforms and less on numerical import targets
- Joint work towards a carbon-free world holds promise