Did Trump's Trade War Impact the 2018 Election?

Emily Blanchard (Dartmouth, Tuck)
Chad Bown (PIIE)
Davin Chor (Dartmouth, Tuck)

NBER "Spring" ITI Conference
September 11, 2020

A Trade War Before a Big Election

From January to October 2018:

- Trump imposed new tariffs on roughly 12% of US imports.
- Major trading partners retaliated: 8% of US exports hit.
- Trump announced a $12 billion bailout for US farmers.

Our question: **Did Voters Respond in November 2018?**

Why *might* American voters care?

- Jobs, Wages, Profits:
  - (+) Some industries face less foreign competition
  - (–) Some industries face higher input costs
  - (–) Some industries face lower export demand due to retaliatory tariffs
  - (+) Some farmers benefit directly from the Ag bailout
- Higher average prices for consumers
- Rhetorical or sociotropic influence of "America First"

Our focus: Producer-Side Consequences

- Jobs, Wages, Profits:
  - (+) Some industries face less foreign competition
  - (–) Some industries face higher input costs
  - (–) Some industries face lower export demand due to retaliatory tariffs
  - (+) Some farmers benefit directly from the Ag bailout
- Higher average prices for consumers
- Rhetorical or sociotropic influence of "America First"

Related Work

Price and Welfare Effects of the Trade War

Amiti, Kong, and Weinstein (2020); Amiti, Redding, and Weinstein (2019); Cavallo, Neiman, Gopinath, and Tang (2019); Fajgelbaum, Goldberg, Kennedy, and Khandelwal (2019); Flaan, Hortacsu, Tintelnot (2019); Handley, Kamal, Monarch (2020); Waugh (2019)

Drivers of the 2018 US House Election

Blendon, Benson, and McMurtry (2018); Hollingsworth, Sonil, Carroll, Cawley, and Simon (2019); Shafer and Wagner (2018);

Trade and Trade-War Drivers of Recent US Elections

Autor, Dorn, Hanson, and Majlesi (2017); Che, Lu, Pierce, Schott, Tao (2016); Chyzh and Urbatsch (2019); Fetzer and Schwartz (2019); Kong (2020)

Overview of the Project (and today's talk)

1. Map the geographic distribution of the 2018 trade war to US counties.

2. Estimate the relationship between trade war exposure and voting patterns in the 2018 House elections.

3. Generate counterfactual election outcomes using our estimated 'voting elasticities'.

Three Facets of the 2018 Trade War

We develop separate measures for each US county:

- The US Tariff Shock
- The Retaliatory Tariff Shock
- The 2018 Agricultural Bailout

... all measured in dollars per worker.

† In progress: disentangling own industry effects from cross-industry IO effects using new disaggregated CBP employment data [Eckert, Fort, Schott, and Yang (2020)]

Data Sources for the Trade Shock Measures

- New US and Retaliatory Tariffs: Bown (2019)
- 2017 Trade Volumes: WITS/US Customs
- Concordances: Feenstra, Romalis, Schott (2002); Pierce and Schott (2009)
- County-level employment data: US Census 2016 County Business Patterns
- Agricultural Subsidies (MFP): Congressional Research Service; USDA; EWG

Mapping the 2018 Trade Shock from Products to Places

Step 1:
Define the magnitude of the product-level tariff shock as:

$$TS_p^{o,d} \quad = \quad X_p^{o,d}\Delta(\tau_p^{o,d}) \tag{1}$$

Where,

- $X_p^{o,d}$ is the (2017) value of product-p trade flows from origin country o to destination country d.
- $\Delta(\tau_p^{o,d})$ is the change in the tariff on product-p imposed by country d on products from o.

When $d = US$ captures new US "protection" against o.

When $o = US$ captures tariff retaliation by country d.

Mapping the 2018 Trade Shock from Products to Places

Step 2:
Aggregate product level tariff shocks to 3-digit NAICS** (subscript i) according to:

$$TS_i^{o,d} = \sum_p \omega_{p,i}^{o,d} TS_p^{o,d} \tag{2}$$

Where the $\omega_{p,i}^{o,d}$ terms are concordance weights (the share of trade in product p moving from country o to d that is also classified by US Customs as part of NAICS industry i).

Mapping the 2018 Trade Shock from Products to Places

Step 3:
Map the industry-level tariff shocks to US counties as follows:

$$TS_c^{o,d} = \sum_i \frac{L_{i,c}}{L_i} \frac{TS_i^{o,d}}{L_c} \tag{3}$$

Where,

- $L_{i,c}$ is total employment in industry i and county c;
- L_i denotes total US employment in that industry;
- L_c is total county working-age population.

This tariff shock is measured in dollars per worker, and is additive across products and trading partners.

Mapping the MFP from Products to Places

Map the agricultural subsidy disbursements to US counties as follows:

$$AgSub_c = \sum_p \frac{q_{p,c}}{q_p} \frac{MFP_p}{L_c} \tag{4}$$

Where,

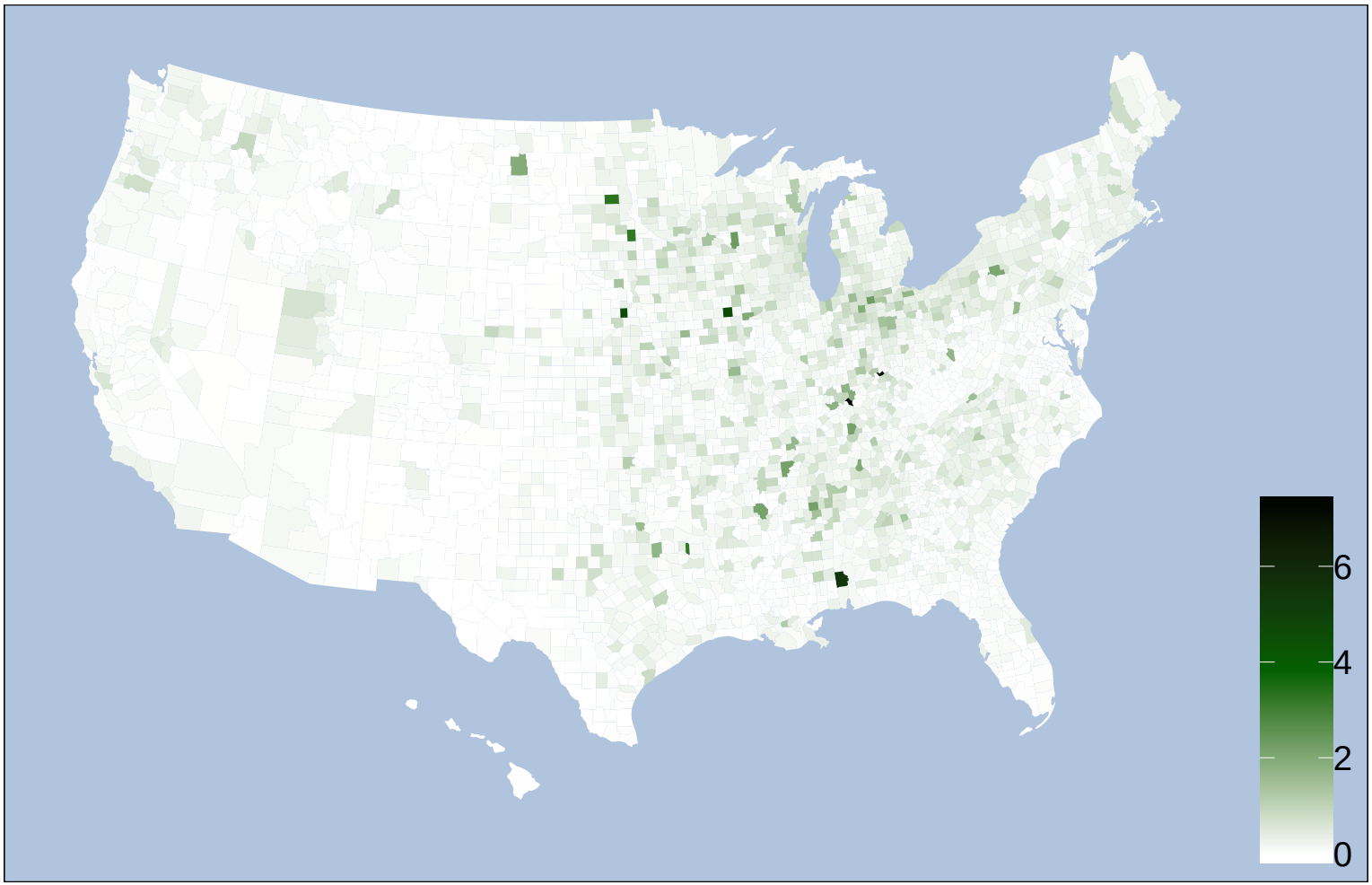
- MFP_p denotes total predicted MFP disbursement for all US producers of product p;
- q_p denotes total US production of product p;
- $q_{p,c}$ denotes production of product p in county c;
- L_c is total county working-age population.

Like the tariff shock, the MFP is measured in dollars per worker.

Geographic Distribution of the 2018 Trade Shock:

New US Tariffs

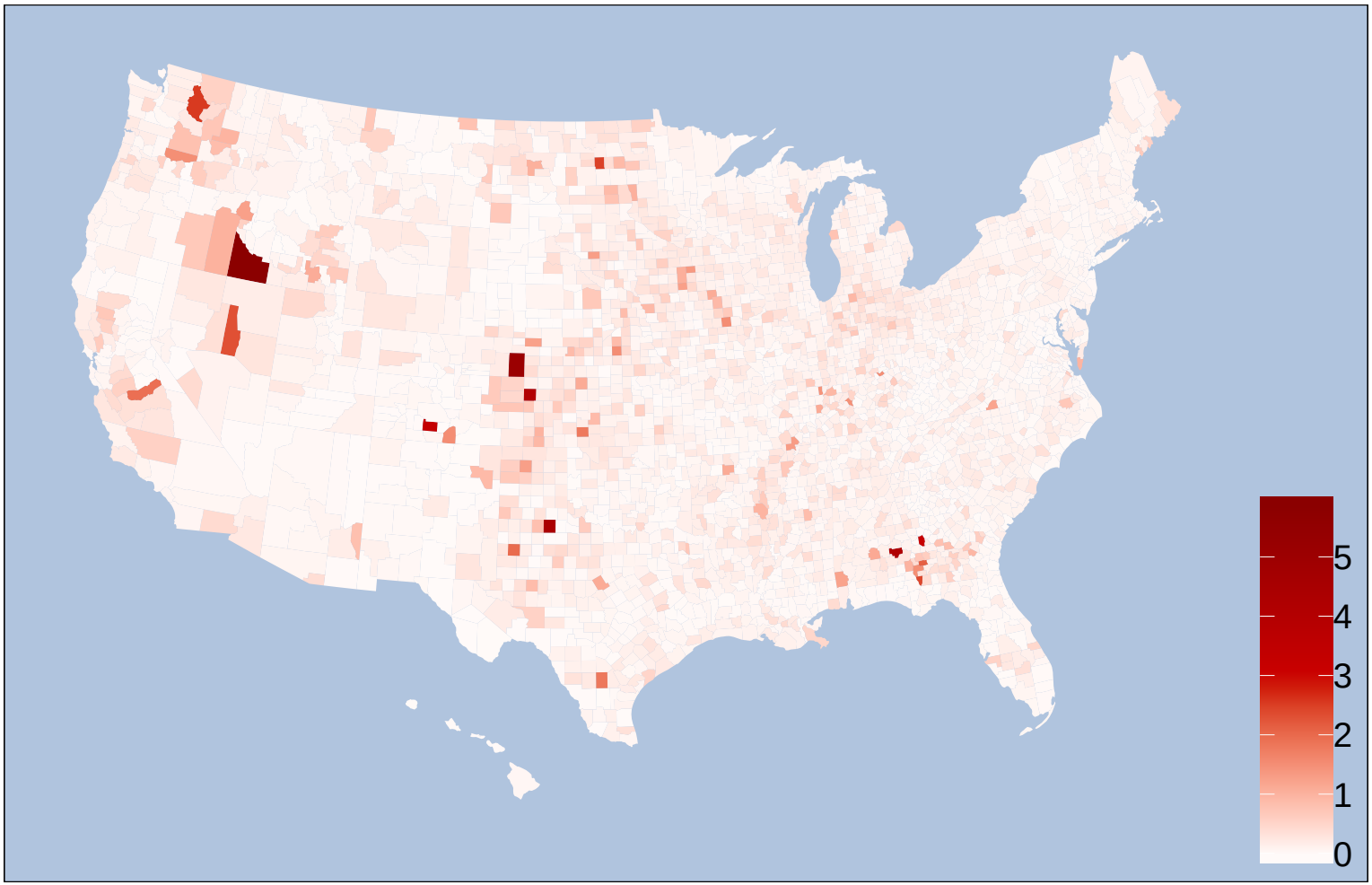
▸ Summary Statistics



Geographic Distribution of the 2018 Trade Shock:

Retaliatory Tariffs

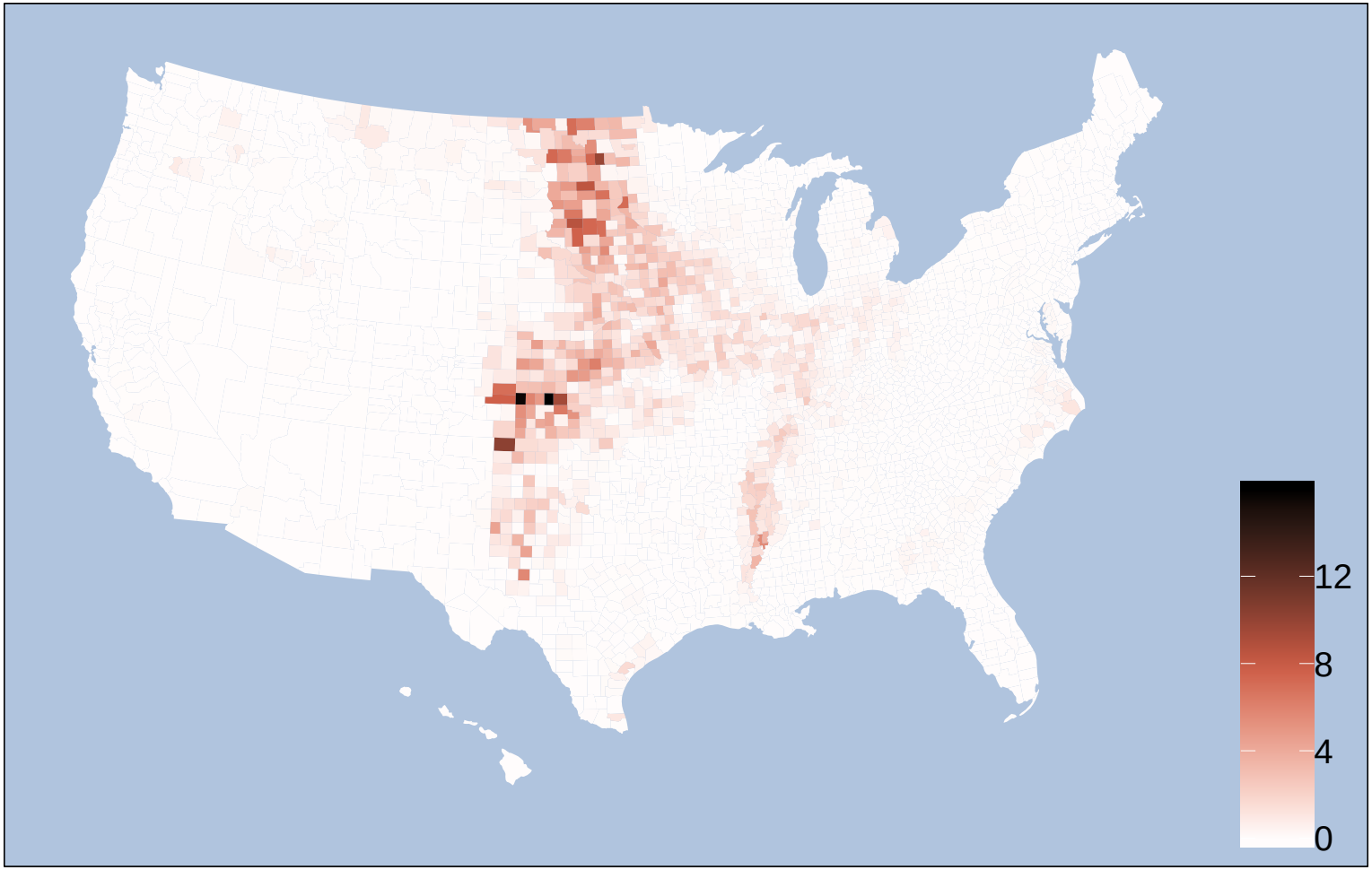
▸ Summary Statistics



Geographic Distribution of the 2018 Trade Shock:

Agricultural Subsidies under the MFP

▸ Summary Statistics



The Political Shadow of the Trade War

A Simple Exercise: compare the pattern of voting with the geographic distribution of the trade war.

Along the way, control for:

- historical voting patterns‡
- local demographics‡
- local economic conditions‡
- local economic composition‡
- idiosyncratic race characteristics/up-ballot drivers
- ⋆ local healthcare coverage: ACA "vulnerability"

‡ included as levels and pre-trends

Note: We drop Alaska, which does not report county-level election outcomes.

Results are robust with and without Pennsylvania.

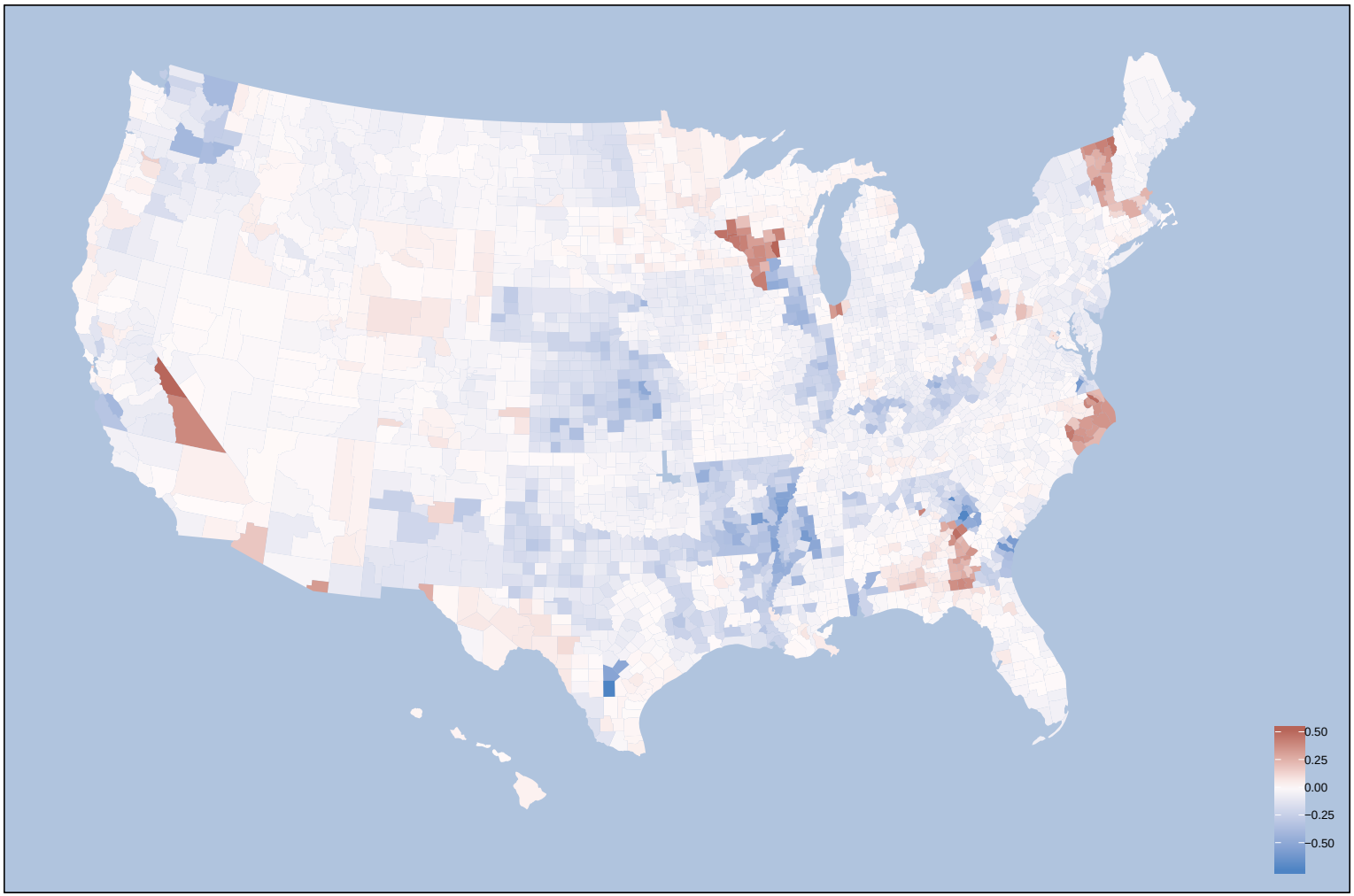
Data (2): Election Outcomes, Controls, Health Care

- Election outcomes: Leip's Election Atlas
  - Total votes by county and congressional district (CD) by candidate and party in 2012- 2018 elections
- Local economic conditions: US Census, 2016 County Business Patterns; American Community Survey (ACS)
  - unemployment, (log) mean household income
  - employment shares by sector (agriculture, mining, manufacturing)
  - share of population with college degree
  - population shares by age group, gender, and race
- Health insurance coverage: ACS
  - health insurance coverage (2013-17 avg)
  - change in coverage since ACA (2013-17 – 2008-12)

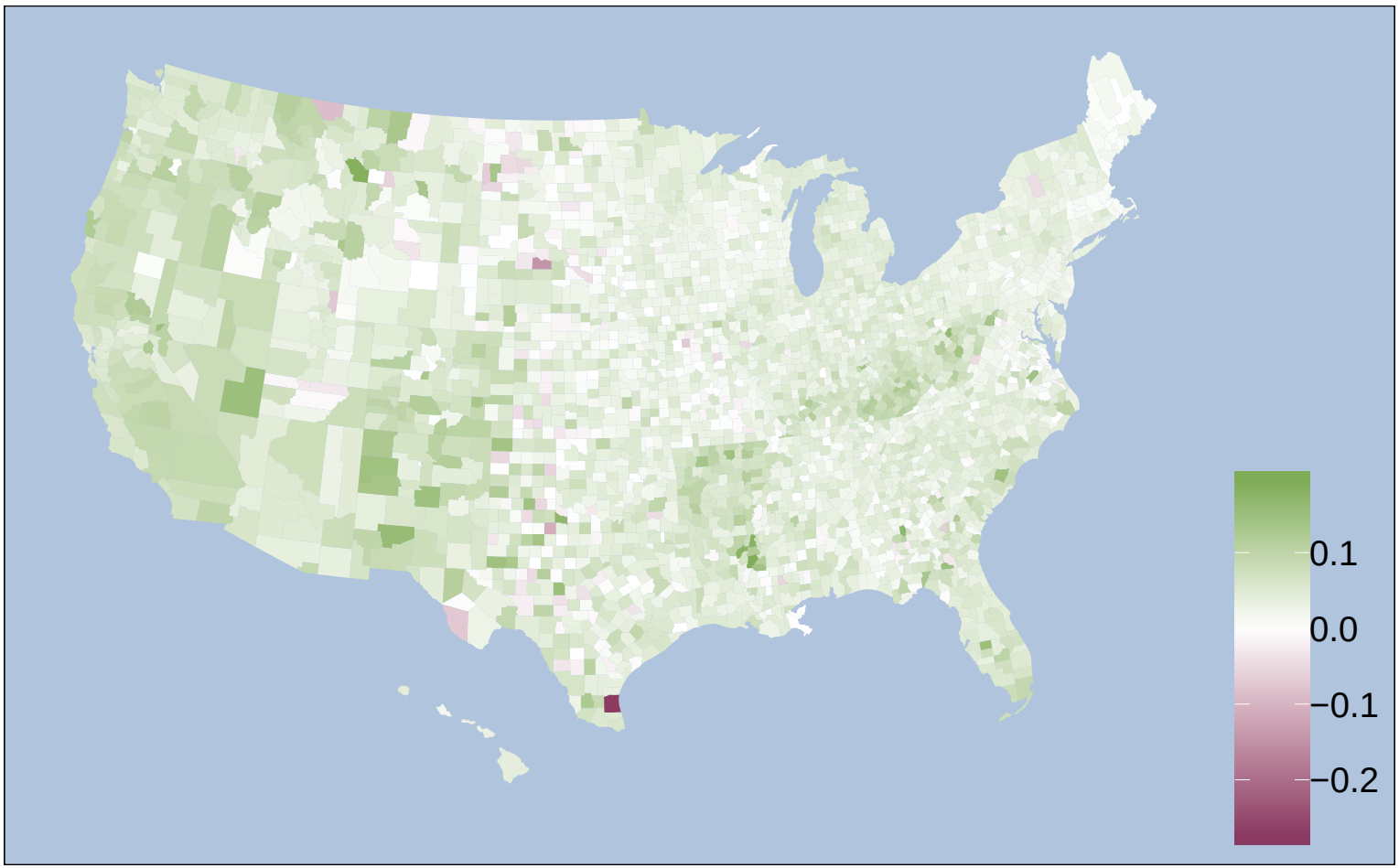
▸ Summary Statistics

The 2018 "Blue Wave"

Change in Republican Vote Share, House Elections, 2016-2018



Change in Health Insurance Coverage since ACA Passage



Election Outcomes and the 2018 Trade Shock

County-level Outcomes

$$\begin{aligned}\Delta RVoteSh_c^{18,16} &= \beta_1 TS_c^{US} + \beta_2 TS_c^{R} + \alpha_1 AgSubs_c \\ &\quad + \alpha_2 AgSubs_c \times TS_c^{R} + \delta HInsur_c \\ &\quad + \eta R_c + \gamma RVoteSh_c^{P16} + \Gamma X_c + D_s + \epsilon_c\end{aligned}$$

- $\Delta RVoteSh_c^{18,16}$: 2016-2018 change Republican House vote share
- TS_c^{US} and TS_c^{R}: US and Retaliatory Tariff Shocks, respectively
- $AgSubs_c$: agricultural subsidy under the 2018 MFP
- $HInsur_c$ includes health insurance coverage and its post-ACA increase.
- R_c includes change in R House vote share between 2014-2016 and 2012-2014
- $RVoteSh_c^{P16}$: R vote share in 2016 Presidential Election.
- X_c: vector of county-level initial characteristics covering demographics, employment shares by sector, and economic conditions – and their pre-trends.
- D_s: state fixed effects (to capture up-ballot influences)

SEs (two-way) clustered by State and Commuting Zone

Election Outcomes and the 2018 Trade Shock

Dep. variable: **Δ Rep House v-share (2018-16)**

	(1)		(2)		(3)	
Panel A: Average Effect of Tariff Shock						
US tariff shock	0.006	[0.010]	0.005	[0.010]	0.006	[0.010]
Retaliatory tariff shock	**-0.034**	[0.015]	**-0.036**	[0.016]	**-0.041**	[0.016]
Retaliatory tariff shock × Ag. subsidy					**0.015**	[0.007]
Ag. subsidy					0.004	[0.007]
Health insurance share (2013-17 avg.)			**0.263**	[0.092]	**0.258**	[0.093]
Δ Health insurance share (2013-17 minus 2008-12)			**-0.248**	[0.108]	**-0.245**	[0.107]
Lag Δ Rep. House vote share (2016 minus 2014)	**-0.451**	[0.090]	**-0.449**	[0.090]	**-0.450**	[0.090]
Lag Δ Rep. House vote share (2014 minus 2012)	**-0.205**	[0.042]	**-0.201**	[0.041]	**-0.201**	[0.041]
Republican Presidential vote share (2016)	-0.063	[0.040]	-0.067	[0.039]	-0.067	[0.039]
County initial controls and pre-trends	Y		Y		Y	
State FEs	Y		Y		Y	
Observations	3,011		3,011		3,011	
R^2	0.672		0.675		0.675	

▸ Table Notes

Initial Observations

- Republican support fell in counties most exposed to retaliatory tariffs.
- But there's no discernable relationship between Republican support and US tariff protection. (Is this because downstream "pro trade" linkages offset upstream protectionist forces?)
- Republican losses associated with retaliatory tariff exposure were smaller in counties that benefitted most from Ag bailouts.
- Republican support declined in counties with greater post-ACA gains in health insurance coverage.
- Note: also clear pattern of mean reversion, consistent with political science orthodoxy.

On Causal Identification

Potential Threats to Causal Interpretation

1. Could some omitted variable(s) be driving both vote share change and exposure to the trade shock?
2. Were swing counties more likely to be targeted, and is that the effect we're picking up?

Our Approach

1. Use lots of controls, including pre-trends in R-vote share between 2014-16 and 2012-14. Upshot: if omitted variables were operative before 2016, pre-trends should control for them.
2. Estimate effects within county "competitiveness" bins.
3. Placebo Test: do tariffs predict vote changes in 2012-16? ▸ OK
4. PSA Sniff Test, per Altonji et al (2005), Oster (2019)? ▸ OK

Next Questions

1. Were some voters/counties more sensitive than others?
   (We look at "swing counties")

2. Did some tariffs matter more than others?
   (We look at China vs. others; Ag vs. other)

3. Are these effects big enough to matter?
   (We do a counterfactual "counting up" exercise)

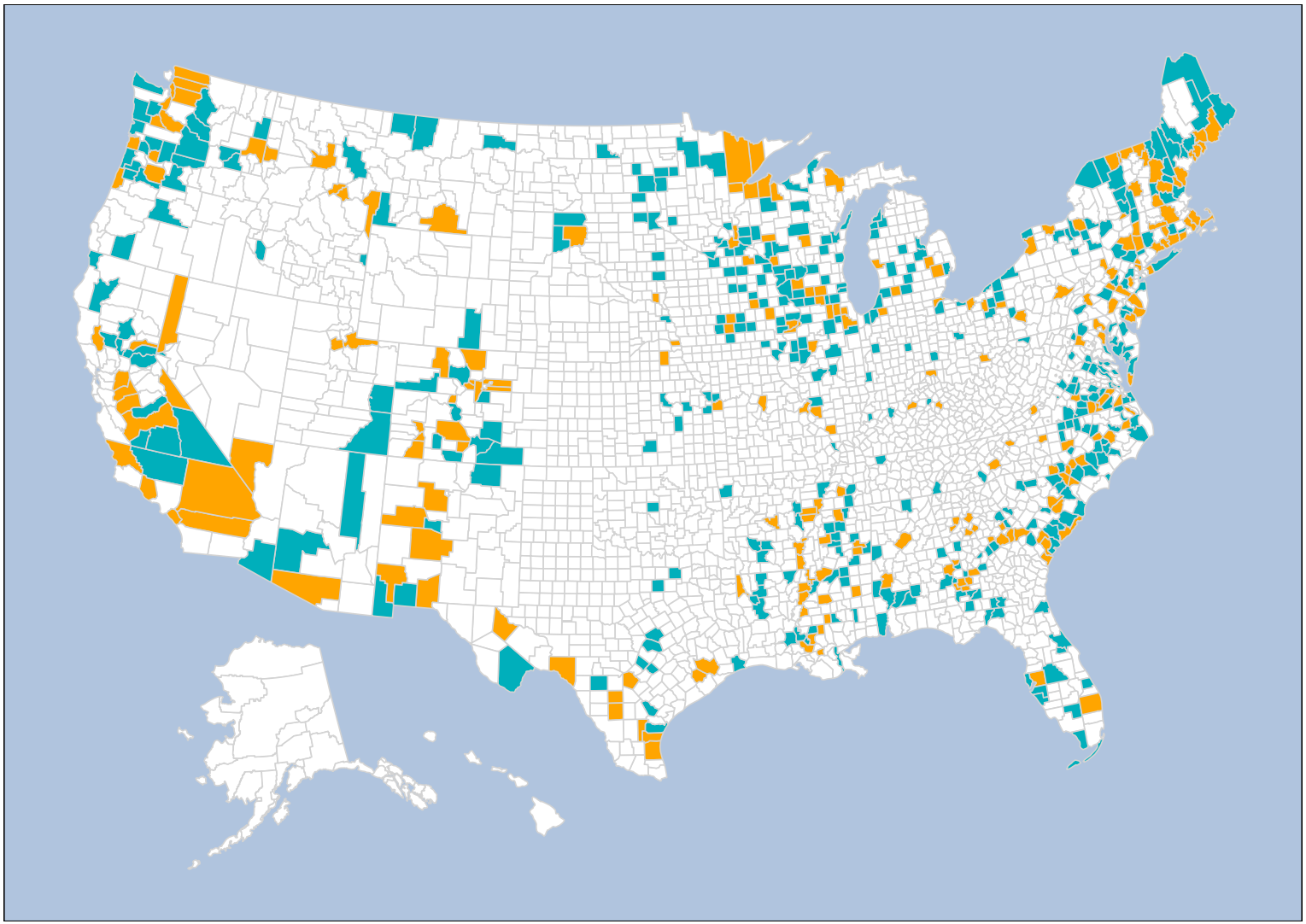
Election Outcomes and the 2018 Trade Shock

Panel B: Heterogeneous Effects by Competitiveness Bins

Depvar Δ Rep House v-share (2018-16)

US tariff shock × **1**(Pres. vote ∈ [0, 0.3])	0.112	[0.069]	0.103	[0.069]	0.105	[0.070]
US tariff shock × **1**(Pres. vote ∈ (0.3, 0.4])	-0.017	[0.068]	-0.022	[0.065]	-0.019	[0.066]
US tariff shock × **1**(Pres. vote ∈ (0.4, 0.5])	-0.013	[0.035]	-0.009	[0.035]	-0.004	[0.035]
US tariff shock × **1**(Pres. vote ∈ (0.5, 0.6])	0.033	[0.021]	0.032	[0.021]	0.031	[0.021]
US tariff shock × **1**(Pres. vote ∈ (0.6, 0.7])	-0.005	[0.009]	-0.007	[0.009]	-0.007	[0.009]
US tariff shock × **1**(Pres. vote ∈ (0.7, 1])	-0.004	[0.006]	-0.005	[0.006]	-0.004	[0.006]
Retaliatory tariff shock × **1**(Pres. vote ∈ [0, 0.3])	-0.083	[0.059]	-0.089	[0.062]	-0.091	[0.064]
Retaliatory tariff shock × **1**(Pres. vote ∈ (0.3, 0.4])	-0.046	[0.090]	-0.045	[0.089]	-0.054	[0.096]
Retaliatory tariff shock × **1**(Pres. vote ∈ (0.4, 0.5])	**-0.153**	[0.050]	**-0.166**	[0.045]	**-0.178**	[0.050]
Retaliatory tariff shock × **1**(Pres. vote ∈ (0.5, 0.6])	-0.021	[0.024]	-0.023	[0.023]	-0.022	[0.024]
Retaliatory tariff shock × **1**(Pres. vote ∈ (0.6, 0.7])	0.001	[0.016]	0.001	[0.016]	-0.001	[0.016]
Retaliatory tariff shock × **1**(Pres. vote ∈ (0.7, 1])	-0.003	[0.008]	-0.004	[0.007]	-0.005	[0.007]
Retaliatory tariff shock × Ag. subsidy × **1**(Pres. vote ∈ [0, 0.3])					0.261	[0.443]
Retaliatory tariff shock × Ag. subsidy × **1**(Pres. vote ∈ (0.3, 0.4])					0.194	[0.168]
Retaliatory tariff shock × Ag. subsidy × **1**(Pres. vote ∈ (0.4, 0.5])					**0.473**	[0.173]
Retaliatory tariff shock × Ag. subsidy × **1**(Pres. vote ∈ (0.5, 0.6])					-0.060	[0.039]
Retaliatory tariff shock × Ag. subsidy × **1**(Pres. vote ∈ (0.6, 0.7])					-0.011	[0.008]
Retaliatory tariff shock × Ag. subsidy × **1**(Pres. vote ∈ (0.7, 1])					0.002	[0.005]
Health insurance share (2013-17 avg.)			**0.303**	[0.092]	**0.303**	[0.090]
Δ Health insurance share (2013-17 minus 2008-12)			**-0.250**	[0.107]	**-0.252**	[0.108]
Lag Δ Rep. House vote share (2016 minus 2014)	**-0.448**	[0.085]	**-0.447**	[0.085]	**-0.445**	[0.085]
Lag Δ Rep. House vote share (2014 minus 2012)	**-0.199**	[0.040]	**-0.195**	[0.040]	**-0.193**	[0.040]
Main effects: **1**(Pres. vote ∈ (0.3, 0.4]),...	Y		Y		Y	
Double interactions: Ag. subsidy × **1**(Pres. vote ∈ [0, 0.3]),...	N		N		Y	
County initial controls and pre-trends and State FEs	Y		Y		Y	
Observations	3,011		3,011		3,011	
R^2	0.696		0.700		0.701	

"Swing Counties" in 2018: Where Retaliatory Tariffs Bite



Heterogenous Effects by Product Type:

Agricultural Tariffs vs. Everything Else

Dep. variable: Δ **Republican House vote share (2018-2016)**	(1)		(2)		(3)	
Retaliatory tariff shock from CHN, CAN, MEX, EU:	All four		All four		CHN only	
Panel A: Average Effect of Tariff Shock						
US tariff shock	0.008	[0.012]	0.007	[0.012]	0.003	[0.010]
Retaliatory tariff shock, Ag.	**-0.032**	[0.016]	**-0.039**	[0.016]	**-0.040**	[0.017]
Retaliatory tariff shock, Ag. × Ag. subsidy			**0.014**	[0.008]	**0.015**	[0.008]
Retaliatory tariff shock, non-Ag.	**-0.049**	[0.034]	**-0.052**	[0.035]	**-0.059**	[0.039]
Retaliatory tariff shock, non-Ag. × Ag. subsidy			0.016	[0.030]	0.030	[0.042]
Ag. subsidy			0.004	[0.007]	0.004	[0.006]
Health insurance share (2013-17 avg.)	0.262	[0.092]	0.257	[0.093]	0.254	[0.093]
Δ Health insurance share (2013-17 minus 2008-12)	-0.250	[0.107]	-0.247	[0.106]	-0.249	[0.106]
Lag Δ Rep. House vote share (2016 minus 2014)	-0.449	[0.090]	-0.450	[0.090]	-0.450	[0.090]
Lag Δ Rep. House vote share (2014 minus 2012)	-0.201	[0.041]	-0.201	[0.041]	-0.201	[0.041]
Republican Presidential vote share (2016)	-0.067	[0.039]	-0.066	[0.039]	-0.067	[0.039]
County initial controls and pre-trends	Y		Y		Y	
State FEs	Y		Y		Y	
Observations	3,011		3,011		3,011	
R^2	0.675		0.675		0.675	

▸ Table Notes ▸ Heterogenous Effects by Competitiveness Bins

Big Enough to Matter? A counterfactual exercise...

Basic idea

Use county-level data on realized trade war exposure and healthcare, combined with our estimates of the "electoral elasticity" of support for Republican candidates to calculate counterfactual vote totals for each county in the absence of the estimated:

1. (production-side) political consequences of the trade war
2. political "bump" from the Ag bailout (but with the tariffs)
3. political consequences of ACA "Repeal and Replace" push

Note: We have to be very careful about how to aggregate from counties to Congressional Districts.

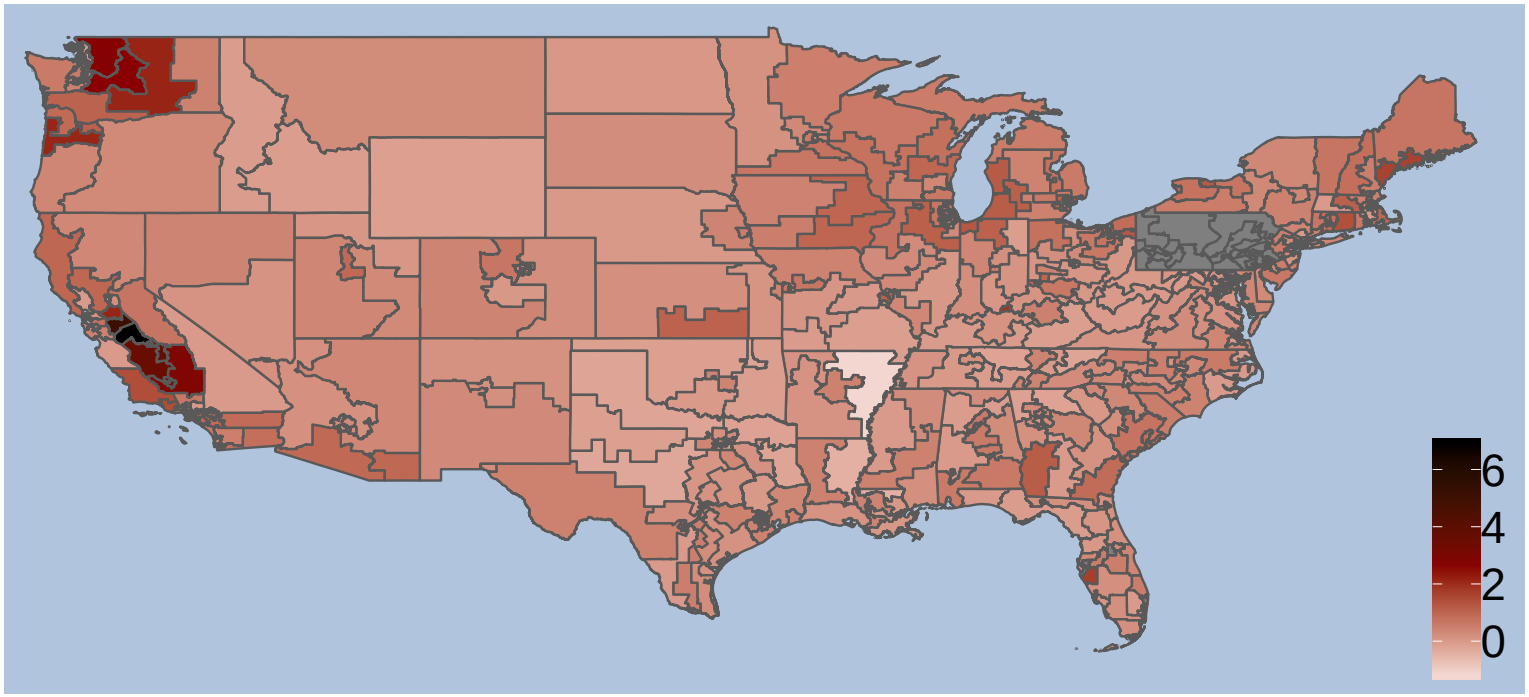
Counterfactual 2018 House Elections*

	Data	Counterfactuals		
		Remove retal. tariffs and Ag. subsidies	Remove Ag. subsidies only	Remove health insurance gains
	A: Implied shift in Republican vote share			
National change: All counties	-0.048	-0.043	-0.048	-0.039
By competitiveness bins:				
1(Pres. vote $\in [0, 0.3]$)	-0.019	-0.016	-0.019	-0.007
1(Pres. vote $\in (0.3, 0.4]$)	-0.043	-0.039	-0.043	-0.033
1(Pres. vote $\in (0.4, 0.5]$)	-0.045	-0.034	-0.045	-0.035
1(Pres. vote $\in (0.5, 0.6]$)	-0.065	-0.057	-0.065	-0.056
1(Pres. vote $\in (0.6, 0.7]$)	-0.056	-0.054	-0.057	-0.048
1(Pres. vote $\in (0.7, 1]$)	-0.066	-0.067	-0.065	-0.057
	B: Implied net gain of CDs for the Democratic party			
Actual swing:	Gain of 36			
Assumed county-by-CD weights:				
Uniform vote share within county	53	48	53	46
Non-uniform, based on 2016	24	16	25	15
Non-uniform, based on 2018	36	31	36	28

*Pennsylvania is excluded due to (dramatic) redistricting between 2016 and 2018.

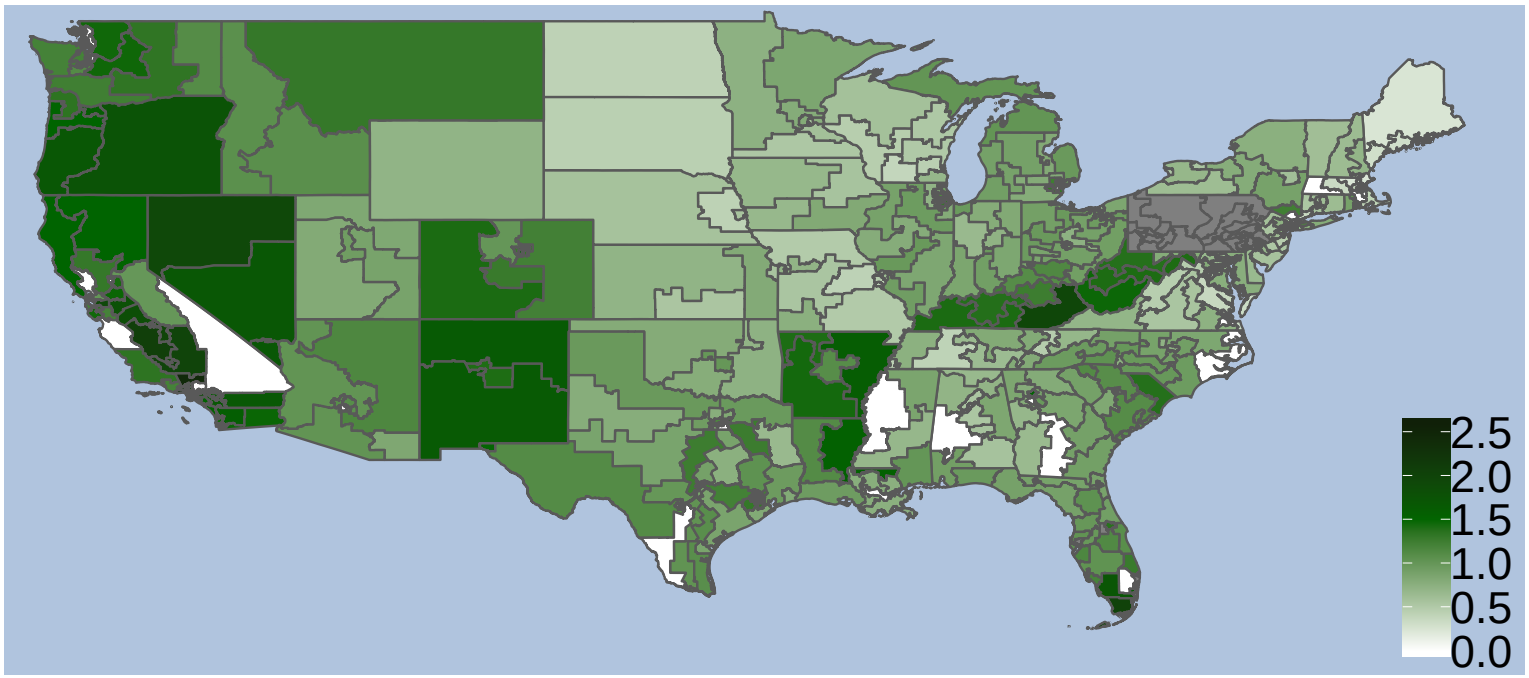
Counterfactual Results, in pictures

Counterfactual ↑ in Republican Vote Share, absent the Trade War



Counterfactual Results, in pictures

Counterfactual ↑ in Republican Vote Share, absent the ACA effect



Counterfactual Results, in words

If our estimated coefficients are indeed causal and correct, and *ceteris paribus*‡:

- Retaliatory tariffs may have cost the Republicans 5 House seats in 2018.
- The agricultural bailout may have preserved votes, but not seats.
- Republican efforts to repeal and replace 'Obamacare' may have cost 8 House seats.
- Together, the trade war and healthcare may have cost Republicans 15 seats: combined effect was greater than the sum of the parts.

‡ These counterfactuals necessarily exclude any potential consumer-side or rhetorical influence of the trade war.

Summary of Findings

We find:

- Evidence that voters may have punished Republicans for the trade war, especially in swing counties;
- But healthcare seemingly mattered more on average & in more places; and
- Agriculture bailouts may have bolstered Republican support, but mostly in Republican strongholds.

Supplementary Slides

Placebo Tests

Back

Dep. variable:	(1)		(2)		(3)	
Δ Republican House vote share (2016-2014)						
US tariff shock	-0.001	[0.016]	-0.001	[0.016]	0.000	[0.016]
Retaliatory tariff shock	-0.003	[0.025]	-0.005	[0.025]	-0.007	[0.026]
Retaliatory tariff shock × Ag. subsidy					-0.002	[0.011]
Ag. subsidy					0.015	[0.011]
Health insurance share (2013-17 avg.)			0.261	[0.216]	0.249	[0.216]
Δ Health insurance share (2013-17 minus 2008-12)			0.242	[0.337]	0.244	[0.336]
Republican Presidential vote share (2016)	-0.025	[0.076]	-0.034	[0.076]	-0.034	[0.076]
County initial controls and pre-trends	Y		Y		Y	
State FEs	Y		Y		Y	
Observations	3,011		3,011		3,011	
R^2	0.378		0.380		0.381	
Δ Republican Presidential vote share (2016-2012)						
US tariff shock	-0.002	[0.003]	-0.003	[0.003]	-0.002	[0.003]
Retaliatory tariff shock	0.009	[0.006]	0.007	[0.006]	0.006	[0.006]
Retaliatory tariff shock × Ag. subsidy					-0.001	[0.002]
Ag. subsidy					0.007	[0.003]
Health insurance share (2013-17 avg.)			0.241	[0.043]	0.235	[0.043]
Δ Health insurance share (2013-17 minus 2008-12)			-0.139	[0.070]	-0.138	[0.069]
Republican Presidential vote share (2016)	0.013	[0.025]	0.008	[0.024]	0.008	[0.024]
County initial controls and pre-trends	Y		Y		Y	
State FEs	Y		Y		Y	
Observations	3,016		3,016		3,016	
R^2	0.872		0.878		0.879	

Table Notes

Proportional Selection Assumption (PSA) Tests

Back

Dependent Variable: Δ Republican House Vote Share (2018-16)

Treatment Variable	Base Controls Estimate	R^2	Full Controls Estimate	R^2	$(\delta = 1, R_{max} = 1)$ Bias-Adjusted Estimate	δ to match $\beta = 0$
US tariff shock	.022	.022	.0057	.675	-.007	.49
Retaliatory tariff shock	-.039	"	**-.041**^{a}	"	**-.045**	**3.02**
Retaliatory tariff shock × Ag	.002	"	**.015**^{b}	"	**.023**	**-2.25**
Ag subsidy	-.018	"	.004	"	0	0
Health insurance share	.194	"	.258^a	"	5.26	1.48
Δ Health insurance share	-.189	"	**-.245**^{b}	"	**-.293**	**24.57**

a indicates significance at the 1% level; b at the 5% level.

Base Controls: State fixed effects and dummy variable to indicate split counties;

Full Controls: age, gender, and race shares, employment shares in agriculture, mining, and manufacturing, unemployment rate, log mean household income, and share of population with some college education, 2016 Presidential vote share, lagged changes in House vote share (2016-14) and (2014-2012), and indicator variables for counties contested by only one party in 2016 or 2018.

Summary Statistics

	Mean	Std. Dev.	10th pct.	50th pct.	90th pct.
A: Voting outcomes					
Republican House vote share (2018)	0.629	0.191	0.376	0.661	0.835
Republican House vote share (2016)	0.692	0.221	0.404	0.712	1.000
Δ Republican House vote share (2018 minus 2016)	-0.064	0.125	-0.224	-0.043	0.026
Δ Republican House vote share (2016 minus 2014)	0.035	0.148	-0.078	0.015	0.219
Δ Republican House vote share (2014 minus 2012)	0.023	0.137	-0.112	0.035	0.130
Republican Presidential vote share (2016)	0.667	0.161	0.435	0.701	0.845
B: Tariff shocks and other explanatory variables					
US Tariff Shock	0.219	0.370	0.012	0.106	0.506
… on Agricultural products	0.003	0.017	0.000	0.000	0.005
… on non-Agricultural products	0.216	0.370	0.009	0.104	0.505
Retaliatory Tariff Shock	0.166	0.294	0.019	0.094	0.335
… on Agricultural products	0.075	0.273	0.000	0.007	0.174
… of which, levied by China	0.074	0.267	0.000	0.007	0.170
… of which, levied by Canada, Mexico, EU	0.002	0.007	0.000	0.000	0.004
… on non-Agricultural products	0.091	0.115	0.008	0.058	0.205
… of which, levied by China	0.059	0.084	0.005	0.036	0.129
… of which, levied by Canada, Mexico, EU	0.032	0.056	0.002	0.017	0.075
Estimated Ag. subsidy per worker (2018)	0.429	1.080	0.000	0.027	1.345
Health insurance share (2013-17 avg.)	0.889	0.051	0.823	0.897	0.945
Δ Health insurance share (2013-17 minus 2008-12)	0.040	0.031	0.008	0.038	0.076
Total population (2016)	103,348	332,515	5,178	25,873	209,267

Notes: Summary statistics across $N = 3,108$ counties, excluding Alaska. ▸ More

Summary Statistics, cont.

C: Counties by electoral competitiveness

By Republican vote share (2016 Pres.)	Number of counties	Avg. pop. (2016)	Total pop. (2016)	US Tariff Shock	Retaliatory Tariff Shock	Ag. subsidy per worker
1(Pres. vote $\in [0, 0.3]$)	98	559,293	54,810,720	0.111	0.131	0.084
				(0.136)	(0.436)	(0.292)
1(Pres. vote $\in (0.3, 0.4]$)	148	332,467	49,205,044	0.148	0.103	0.124
				(0.160)	(0.165)	(0.473)
1(Pres. vote $\in (0.4, 0.5]$)	243	299,096	72,680,235	0.188	0.121	0.127
				(0.196)	(0.180)	(0.531)
1(Pres. vote $\in (0.5, 0.6]$)	395	132,167	52,205,954	0.242	0.160	0.205
				(0.302)	(0.227)	(0.666)
1(Pres. vote $\in (0.6, 0.7]$)	665	71,730	47,700,374	0.269	0.163	0.350
				(0.449)	(0.254)	(0.833)
1(Pres. vote $\in (0.7, 1]$)	1,559	28,610	44,603,198	0.209	0.184	0.617
				(0.389)	(0.333)	(1.329)

Notes: Summary statistics across $N = 3,108$ *counties, excluding Alaska.* More

Heterogenous Effects by Product Type and Competitiveness Bins

Dep. variable: **Δ Republican House vote share (2018-2016)**	(1)		(2)		(3)	
Retaliatory tariff shock from CHN, CAN, MEX, EU:	All four		All four		CHN only	
US tariff shock × **1**(Pres. vote ∈ [0, 0.3])	0.175	[0.062]	0.179	[0.061]	0.166	[0.069]
US tariff shock × **1**(Pres. vote ∈ (0.3, 0.4])	-0.004	[0.071]	-0.001	[0.072]	0.001	[0.072]
US tariff shock × **1**(Pres. vote ∈ (0.4, 0.5])	0.031	[0.035]	0.034	[0.036]	0.017	[0.034]
US tariff shock × **1**(Pres. vote ∈ (0.5, 0.6])	-0.023	[0.030]	-0.022	[0.031]	0.002	[0.025]
US tariff shock × **1**(Pres. vote ∈ (0.6, 0.7])	-0.009	[0.012]	-0.009	[0.012]	-0.010	[0.009]
US tariff shock × **1**(Pres. vote ∈ (0.7, 1])	-0.003	[0.007]	-0.003	[0.007]	-0.005	[0.006]
Retaliatory tariff shock, Ag. × **1**(Pres. vote ∈ [0, 0.3])	-0.040	[0.047]	-0.045	[0.049]	-0.062	[0.055]
Retaliatory tariff shock, Ag. × **1**(Pres. vote ∈ (0.3, 0.4])	0.049	[0.103]	0.048	[0.107]	0.015	[0.108]
Retaliatory tariff shock, Ag. × **1**(Pres. vote ∈ (0.4, 0.5])	-0.115	[0.035]	-0.127	[0.037]	-0.150	[0.037]
Retaliatory tariff shock, Ag. × **1**(Pres. vote ∈ (0.5, 0.6])	-0.038	[0.019]	-0.037	[0.019]	-0.036	[0.020]
Retaliatory tariff shock, Ag. × **1**(Pres. vote ∈ (0.6, 0.7])	0.001	[0.017]	-0.002	[0.020]	-0.003	[0.021]
Retaliatory tariff shock, Ag. × **1**(Pres. vote ∈ (0.7, 1])	-0.002	[0.008]	-0.005	[0.008]	-0.006	[0.008]
Retaliatory tariff shock, Ag. × Ag. subsidy × **1**(Pres. vote ∈ [0, 0.3])			1.820	[2.079]	1.972	[2.272]
Retaliatory tariff shock, Ag. × Ag. subsidy × **1**(Pres. vote ∈ (0.3, 0.4])			0.021	[0.270]	0.043	[0.272]
Retaliatory tariff shock, Ag. × Ag. subsidy × **1**(Pres. vote ∈ (0.4, 0.5])			0.404	[0.182]	0.440	[0.187]
Retaliatory tariff shock, Ag. × Ag. subsidy × **1**(Pres. vote ∈ (0.5, 0.6])			-0.053	[0.033]	-0.066	[0.036]
Retaliatory tariff shock, Ag. × Ag. subsidy × **1**(Pres. vote ∈ (0.6, 0.7])			-0.014	[0.013]	-0.013	[0.014]
Retaliatory tariff shock, Ag. × Ag. subsidy × **1**(Pres. vote ∈ (0.7, 1])			0.005	[0.005]	0.005	[0.006]
Health insurance share (2013-17 avg.)	0.292	[0.091]	0.293	[0.090]	0.299	[0.092]
Δ Health insurance share (2013-17 minus 2008-12)	-0.219	[0.103]	-0.218	[0.104]	-0.225	[0.104]
Lag Δ Rep. House vote share (2016 minus 2014)	-0.453	[0.085]	-0.452	[0.085]	-0.447	[0.085]
Lag Δ Rep. House vote share (2014 minus 2012)	-0.194	[0.039]	-0.192	[0.039]	-0.190	[0.038]
Main effects: **1**(Pres. vote ∈ (0.3, 0.4]),...	Y		Y		Y	
Double interactions: Ag. subsidy × **1**(Pres. vote ∈ [0, 0.3]),...	N		Y		Y	
Double interactions: Retaliatory tariff shock, non-Ag. × **1**(Pres. vote ∈ [0, 0.3]),...	N		Y		Y	
Triple interactions: Retaliatory tariff shock, non-Ag. × Ag. subsidy × **1**(Pres. vote ∈ [0, 0.3]),...	N		Y		Y	
County initial controls and pre-trends	Y		Y		Y	
State FEs	Y		Y		Y	
Observations	3,011		3,011		3,011	
R^2	0.704		0.706		0.707	

▸ Table Notes ▸ Back

Table Notes from Summary Statistics

Summary statistics across $N = 3,108$ counties, excluding Alaska. Voting outcomes in Panel A are from the Election Atlas; the Republican vote share is the number of votes for the Republican candidate out of total votes cast for the Democrat and Republican candidates. For Panel B, the US Tariff Shock, Retaliatory Tariff Shock, and agricultural subsidy measures are each in units of $1,000 per worker. The share of the civilian non-institutionalized population with health insurance is from the American Community Survey (five-year average series). The total county population data in 2016 are from the US Census resident population estimates. Panel C provides descriptive statistics on counties by electoral competitiveness bins, based on the Republican vote share in the 2016 Presidential election. For each bin, we report the number of counties, average population per county, total population across all counties, mean US Tariff Shock, mean Retaliatory Tariff Shock, and mean estimated Ag. subsidy per worker. Note that the total population is reported as a count variable. The standard deviations of the two tariff shock variables and the Ag. subsidy variable are reported in parentheses.

▸ Back

Table Notes from Baseline Regressions

All estimates are from least squares regressions, with observations weighted by total county population in 2016. The sample excludes counties in Pennsylvania (due to congressional redistricting), and counties where the same party won uncontested in both 2016 and 2018. All columns control for: county age, gender, and race shares in 2016 (from the US Census), as well as pre-trends between 2013-2016; county employment shares in agriculture, mining, and manufacturing respectively in 2016 (from the County Business Patterns), as well as pre-trends between 2013-2016; the county unemployment rate, log mean household income, and share with some college education in 2013-2017 (from the American Community Survey), as well as pre-trends between 2008-2012 and 2013-2017. All columns also include: (i) four indicator variables for counties contested by only one party in 2016 or 2018, but not both years; and (ii) an indicator variable for counties that are split across multiple congressional districts. We control in Panel B for the main effects of $\mathbf{1}(\text{Pres. vote} \in (0.3, 0.4]),\ldots, \mathbf{1}(\text{Pres. vote} \in (0.7, 1])$, and in Column 3 for the double interaction terms in Ag. subsidy $\times$ $\mathbf{1}(\text{Pres. vote} \in [0, 0.3]),\ldots,$ Ag. subsidy $\times$ $\mathbf{1}(\text{Pres. vote} \in (0.7, 1])$, although the coefficients are not reported to save space. Standard errors are two-way clustered by state and commuting zone.

▸ Back

Table Notes from Agricultural vs. other Tariffs

The retaliatory tariff shock examined in Columns 1-2 is that imposed by China, Canada, Mexico and the EU; Column 3 limits the retaliatory tariff shock to that imposed by China only. In Panel B, we control for the main effects of $\mathbf{1}(\text{Pres. vote} \in (0.3, 0.4]),\ldots,\ \mathbf{1}(\text{Pres. vote} \in (0.7, 1])$ in all columns. Columns 2-3 further include the double interactions in the Ag. subsidy and the presidential vote competitiveness bins, the double interactions in the non-agricultural retaliatory tariff shock and the competitiveness bins, as well as the triple interactions in the non-agricultural retaliatory tariff shock, the Ag. subsidy, and the competitiveness bins; coefficients are not reported to save space. Standard errors are two-way clustered by state and commuting zone.

▸ Back

Table Notes from Placebo Regressions

All estimates are from least squares regressions, with observations weighted by total county population in 2016. The sample excludes counties in Pennsylvania (due to congressional redistricting), and counties where the same party won uncontested in both 2016 and 2018. All columns control for: county age, gender, and race shares in 2016 (from the US Census), as well as pre-trends between 2013-2016; county employment shares in agriculture, mining, and manufacturing respectively in 2016 (from the County Business Patterns), as well as pre-trends between 2013-2016; the county unemployment rate, log mean household income, and share with some college education in 2013-2017 (from the American Community Survey), as well as pre-trends between 2008-2012 and 2013-2017. All columns also include: (i) four indicator variables for counties contested by only one party in 2016 or 2018, but not both years; and (ii) an indicator variable for counties that are split across multiple congressional districts. Standard errors are two-way clustered by state and commuting zone.

▸ Back