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Politically motivated trade protection

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APPENDIX

Politically Motivated Trade Protection

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and Lorenzo Trimarchi

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A1 Product to Industry Concordance

As explained in Section 4, the Temporary Trade Barriers Database (TTBD) contains detailed information on AD duties and other protectionist measures (countervailing duties and safeguards). For US AD cases, it provides detailed information on the products under investigation, with petitions identified at the 10-digit Harmonized Tariff Schedule (HTS) level (or at the 5-digit Tariff Schedule of the United States Annotated for years before 1989).

To match TTBD data to the SIC4 classification, we first harmonize HS codes over time to the HS 1992 nomenclature, using the concordance tables provided by the United Nations Statistics Division.

We then match the HS codes to the SIC classification using the following procedure:¹

1. Each 10-digit HTS code is first aggregated up to the universal 6-digit Harmonized System (HS6) level. Then, each HS6 code is matched with one or more 4-digit SIC code using the crosswalk provided by Autor *et al.* (2013). Around 99% of the observations are mapped using this correspondence table.² In order to map each HS6 product to only one industry, we assign an HS6 code to the industry which accounts for the largest share of that product's US imports. This means that each HS6 product is mapped to only one 4-digit SIC industry. AD cases often target multiple HS6 products and thus may be linked to more than one SIC4 code.
2. The remaining unmatched HS6 products are mapped to a SIC code by aggregating up the information in the crosswalk to the HS4 level. In this case, a product is matched to an industry if its correspondent HS4 family maps to only one SIC4 industry. All the unmatched HS6 products are manually matched to a

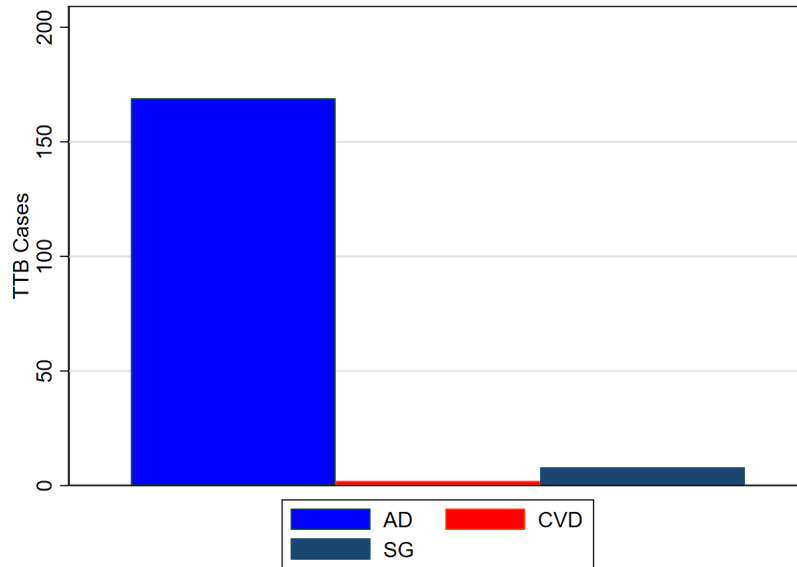
¹ Throughout, when we refer to SIC industries, we use the "sic87dd" scheme used by Autor *et al.* (2013). These codes are slightly coarser than the 1987 SIC codes.

² For the years up to 1988, descriptions of products were provided according to the Tariff Schedule of the United States Annotated (TSUSA) classification. Therefore, for AD cases before 1988, we match each TSUSA code with a corresponding HS code using the correspondence table provided by Feenstra (1996).

corresponding SIC4 industry by directly retrieving information about the corresponding AD case from the ITC case descriptions.

A2 Figures

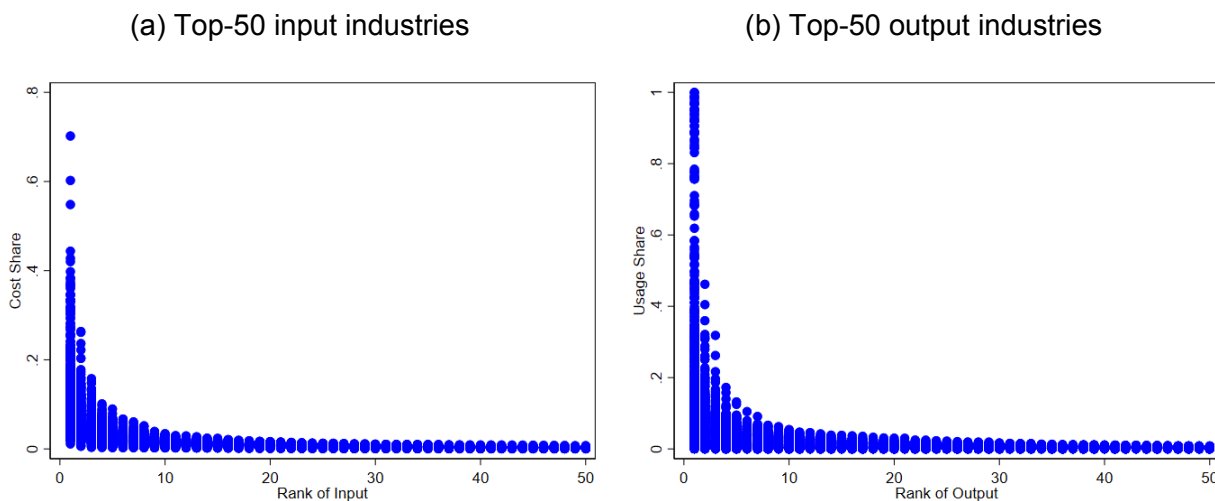
Figure A.1: US Temporary Trade Barriers



Note: The figure shows the number of US antidumping (AD) duties, countervailing duties (CVDs) and safeguards (SG) in force against the PRC during 1989–2020. CVDs bundled with AD duties are counted in the first bar.

Source: Authors' calculations using data from the Temporary Trade Barriers Database.

Figure A.2: Distribution of IO Coefficients

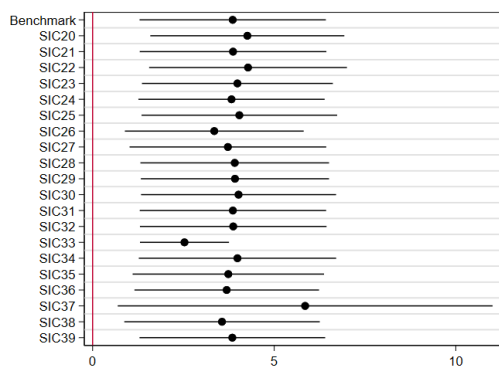


Note: The figures plot cost and usage shares for the 479 SIC4 industries (top-50 input and output industries).

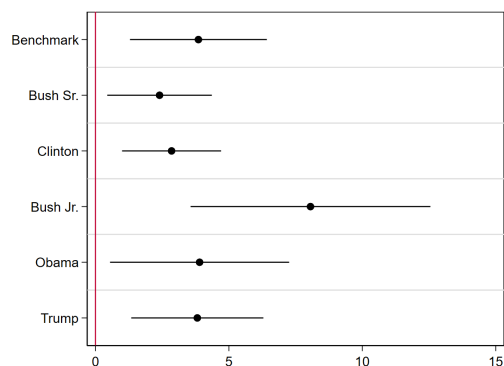
Source: Authors' calculations using data from the Bureau of Economic Analysis Input-Output Tables.

Figure A.3: Swing-State Politics and Antidumping Protection

(a) Dropping each SIC2 industry



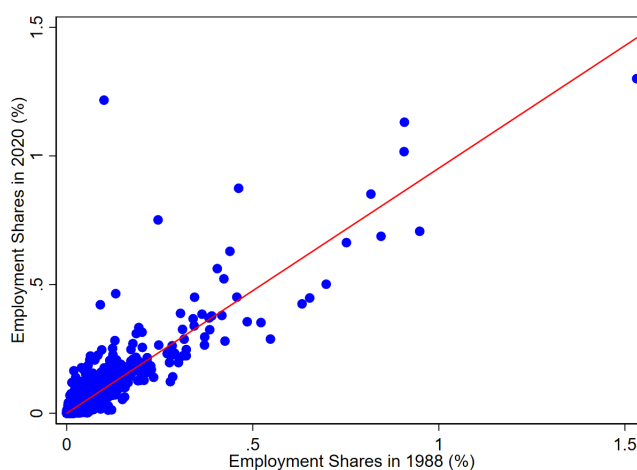
(b) Dropping each term



Note: The figures plot the ordinary least squares estimates of equation (5) in the baseline specification in column 1 of Table 1, when dropping each SIC2 industry (panel (a)) and each term (panel (b)) from the sample.

Source: Authors' calculations.

Figure A.4: SIC4 Employment Shares by State



Note: The figure plots state-level industry employment shares in 1988 and 2020.
Source: Authors' calculations using data from County Business Patterns.

A3 Descriptive Statistics

Table A.1: Top 10 Input Industries

SIC4	Input industry	Number of output industries (1)	Average cost share (2)
3312	Blast furnaces and steel mills	84	10.6%
2911	Petroleum refining	43	5.0%
2752	Commercial printing, lithographic	31	3.3%
2221	Broadwoven fabric mills, manmade	30	10.1%
2869	Industrial organic chemicals, n.e.c.	26	9.2%
2621	Paper mills	25	19.9%
3679	Electronic components, n.e.c.	23	6.0%
3089	Plastics products, n.e.c.	15	3.8%
2421	Sawmills and planing mills, general	12	1.9%
2821	Plastics materials and resins	12	12.0%

Note: The table lists the 10 most important tradable input industries i by total cost shares. Column 1 reports the number of industries j for which input i is the key input (i.e., highest cost share $\omega_{i,j}$). Column 2 reports the average cost shares of industry i (across all industries j for which i is the key input).
Source: Authors' calculations using data from the Bureau of Economic Analysis Input-Output Tables.

Table A.2: Descriptive Statistics of Main Variables

Variable	Obs.	Mean	Std. dev.	Min	Max
<i>Direct Tariff Exposure</i> _{<i>j,t</i>}	3,136	2.153%	8.520%	0.000%	100.000%
<i>Downstream Tariff Exposure</i> ¹ _{<i>j,t</i>}	3,832	1.126%	1.596%	0.000%	25.881%
<i>Upstream Tariff Exposure</i> ¹ _{<i>j,t</i>}	3,832	0.701%	1.732%	0.000%	30.878%
<i>Downstream Tariff Exposure</i> ² _{<i>j,t</i>}	3,832	1.870%	2.195%	0.019%	35.339%
<i>Upstream Tariff Exposure</i> ² _{<i>j,t</i>}	3,832	1.185%	2.647%	0.000%	47.062%
<i>Downstream Tariff Exposure</i> ³ _{<i>j,t</i>}	3,832	1.069%	1.529%	0.000%	25.881%
<i>Upstream Tariff Exposure</i> ³ _{<i>j,t</i>}	3,832	0.644%	1.654%	0.000%	30.878%
<i>Downstream Tariff Exposure</i> ⁴ _{<i>j,t</i>}	3,832	1.805%	2.124%	0.019%	35.339%
<i>Upstream Tariff Exposure</i> ⁴ _{<i>j,t</i>}	3,832	1.121%	2.561%	0.000%	47.062%
<i>Swing Industry</i> _{<i>j,T</i>}	3,136	0.058%	0.103%	0.000%	1.345%
<i>AD Experience</i> _{<i>j</i>}	3,136	1.235	3.648	0.000	64.000
<i>IV</i> _{<i>j,T</i>}	3,136	0.173%	1.498%	0.000%	41.569%

Note: The table reports descriptive statistics of the main variables used in our analysis, which are defined in Section 4. *Direct Tariff Exposure*_{*j,t*} is constructed for all manufacturing industries. *Downstream Tariff Exposure*_{*j,t*} and *Upstream Tariff Exposure*_{*j,t*} are constructed for all industries; the first two versions of these variables include the diagonal of the input-output matrix and are constructed using only direct linkages (version 1) or also higher-order linkages (version 2); the last two versions exclude the diagonal of the input-output matrix and are constructed using only direct linkages (version 3) or also higher-order linkages (version 4). The sample covers the period 1989–2020.

Source: Authors' calculations.

Table A.3: Top-10 Sectors by *Swing Industry*_{*j,T*} and *AD Experience*_{*j*}

<i>Swing Industry</i> _{<i>j,T</i>}			
Sector	Description	Average	Average
		<i>Swing Industry</i> _{<i>j,T</i>}	<i>Direct Tariff Exposure</i> _{<i>j,T</i>}
2752	Commercial printing, lithographic	0.77%	2.71%
3714	Motor vehicle parts and accessories	0.75%	3.85%
3089	Plastics products, n.e.c.	0.72%	2.01%
2711	Newspapers	0.51%	0.00%
3711	Motor vehicles and car bodies	0.51%	0.00%
3499	Fabricated metal products, n.e.c.	0.43%	6.41%
3812	Search and navigation equipment	0.39%	0.00%
3312	Blast furnaces and steel mills	0.38%	11.95%
2599	Furniture and fixtures, n.e.c.	0.36%	11.65%
3599	Industrial machinery, n.e.c.	0.34%	4.17%
<i>AD Experience</i> _{<i>j</i>}			
Sector	Description	<i>AD Experience</i> _{<i>j</i>}	Average
			<i>Direct Tariff Exposure</i> _{<i>j,T</i>}
3312	Blast furnaces and steel mills	64	11.95%
2819	Industrial inorganic chemicals, n.e.c.	13	4.31%
3714	Motor vehicle parts and accessories	12	3.85%
2869	Industrial organic chemicals, n.e.c.	10	18.93%
3999	Manufacturing industries, n.e.c.	8	3.28%
3991	Brooms and brushes	7	13.28%
3494	Valves and pipe fittings, n.e.c.	7	10.94%
3496	Misc. fabricated wire products	7	4.69%
2821	Plastics materials and resins	7	3.29%
2399	Fabricated textile products, n.e.c.	7	2.86%

Note: The table lists the top-10 SIC4 sectors with the highest average value of the variable *Swing Industry*_{*j,T*} during 1989-2020 (top panel) and the highest value of *AD Experience*_{*j*} in 1980-1988 (bottom panel), with the corresponding average antidumping (AD) protection.
Source: Authors' calculations.

Table A.4: Largest Manufacturing Industries

Industries with $Swing\ Industry_j > US\ Industry_j$	
3714	Motor vehicle parts and accessories
3312	Blast furnaces and steel mills
3499	Fabricated metal products, n.e.c.
3599	Industrial machinery, n.e.c.
3089	Plastics products, n.e.c.
3711	Motor vehicles and car bodies
2752	Commercial printing, lithographic
2051	Bread, cake, and related products
Industries with $Swing\ Industry_j < US\ Industry_j$	
3721	Aircraft
3728	Aircraft parts and equipment, n.e.c.
2621	Paper mills
2011	Meat packing plants
2711	Newspapers
3812	Search and navigation equipment
2599	Furniture and fixtures, n.e.c.

Note: The table lists the largest 15 manufacturing industries in the US, based the variable $US\ Industry_j = \frac{\sum_s L_{s,j}}{\sum_s \sum_j L_{s,j}}$, where $L_{s,j}$ is employment in industry j in state s in 1988. The top (bottom) panel includes the industries for which $US\ Industry_j$ is higher (lower) than $Swing\ Industry_j$. This is the average between 1989 and 2020 of the variable $Swing\ Industry_{j,T} = \frac{\sum_s L_{s,j} \times Swing\ State_{s,T} \times EV_s}{\sum_s \sum_j L_{s,j} \times Swing\ State_{s,T} \times EV_s}$.

Source: Authors' calculations.

A4 The Identity of Swing States and State-Level Characteristics

Our identification strategy relies on exogenous political shocks, driven by changes in the identity of swing states across electoral terms. One may be concerned that the variable $Swing State_{s,T}$ could be correlated with state-level characteristics. An example would be the extent to which industries in that state have been protected or exposed to import competition, or the degree to which employment has been declining. In what follows, we show that these characteristics do not predict which states are classified as swing states during a term—i.e., in which states Democratic and Republican candidates get between 47.5% and 52.5% of the share of the votes in midterm House elections. To this purpose, we estimate:

$$Swing State_{s,T} \times EV_s = \beta_0 + \beta_1 X_{s,T} + \delta_s + \delta_T + \varepsilon_{s,T}. \quad (13)$$

Recall that $Swing State_{s,T}$ is a dummy variable identifying battleground states based on the outcome of the House elections during term T , while EV_s is the number of electoral votes assigned to state s at the start of our sample period. $X_{s,T}$ captures state-level variables that may be correlated with the identity of swing states. These variables are constructed by combining the corresponding industry-level variables with industry-state employment shares, i.e., $X_{s,T}$ is equal to $\sum_j \phi_{j,s} X_{j,T}$, where $\phi_{s,j}$ is the 1988 share of employment in manufacturing industry j in state s over total employment in that state. We construct these variables using data on the 4 years before the midterm elections to define the identity of swing states in term T . The state fixed effects (δ_s) account for time-invariant state characteristics, while term fixed effects (δ_T) account for changing macroeconomic conditions.

Table A.5 reports the results of estimating (13) with different $X_{s,T}$. In line with the theoretical model of Conconi *et al.* (2017) and the empirical results presented in Section 5.1, we focus on first terms, during which swing-state politics shapes US antidumping (AD) protection.³ In columns 1 and 2, we verify that the identity of swing states is uncorrelated with state-level trade protection, captured by the variable *Trade Protection* _{s,T} . The first (second) version of this variable is based on the share of products in an industry that are subject to AD duties (whether products within an industry are subject to AD duties). The coefficient of this variable is insignificant, indicating that whether a state is classified as swing is independent of the extent to which its industries were previously protected. This finding addresses concerns that the results of Table 1 may be driven by reverse causality. This, of course, does not imply that protectionist measures have no effects on vote outcomes. What is crucial for our identification strategy is that the extent to which a state has been protected during an electoral term does not affect whether it is going to be a swing state at the end of the term, i.e., whether the difference in vote shares between the Democratic and Republican candidates in the midterm House elections falls below the 5% threshold.

³ The sample used in these regressions starts in 1993. This allows us to have the same number of observations across specifications: data on trade flows start in 1991, so we cannot construct *Import Exposure* _{s,T} for the 1989–1992 term (this would require having trade data from the 1986 midterm elections). The results of Table A.5 are unaffected if we include this term when constructing the other state-level variables: in this case, the number of observations in columns 1–2 and 5–6 increases to 250, but the coefficients of *Trade Protection* _{s,T} and *Employment Growth* _{s,T} remain insignificant.

Table A.5: Identity of Swing States and State-Level Characteristics

	(1)	(2)	(3)	(4)	(5)	(6)
<i>Trade Protection</i> _{<i>s,T</i>}	231.620 (230.645)	63.554 (69.790)				
<i>Import Exposure</i> _{<i>s,T</i>}			-0.040 (17.375)	7.323 (12.883)		
<i>Employment Growth</i> _{<i>s,T</i>}					-0.016 (0.126)	-0.026 (0.146)
State FE	Yes	Yes	Yes	Yes	Yes	Yes
Term FE	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.46	0.30	0.45	0.45	0.45	0.45
Observations	200	200	200	200	200	200

Note: The table reports ordinary least squares estimates of equation (13). The dependent variable is *Swing State*_{*s,T*} (a dummy variable equal to 1 if state *s* is classified as swing based on the mid-term House elections during term *T*) multiplied by EV_s (the number of electoral votes allocated to state *s* before the start of our sample period). All state-level controls are constructed combining the corresponding industry-level variables with industry-state employment shares. *Trade Protection*_{*s,T*} measures state-level trade protection during term *T*. In column 1 (2), this variable is based on the share of products in an industry that are subject to AD duties (whether products within an industry are subject to AD duties). *Import Exposure*_{*s,T*} captures state-level exposure to import competition during term *T*. In column 3 (4), this variable is constructed using US trade data with the People's Republic of China only (all countries). *Employment Growth*_{*s,T*} measures the growth rate of employment in state *s* during term *T*. In column 5 (6), this variable is constructed using data on manufacturing industries (all industries). The sample covers all executive first terms during 1993–2020. Standard errors in parentheses are clustered at the state level. ***, **, and * denote significance at the 1%, 5%, and 10% levels.

Source: Authors' calculations.

In columns 3 and 4, we test whether the identity of swing states is associated with state-level exposure to imports, captured by the variable *Import Exposure*_{*s,T*}. This test is important, as previous studies show that import competition from the People's Republic of China (PRC) affected US electoral outcomes (Autor *et al.* 2020; Che *et al.* 2022). We construct two versions of the import exposure variable: the first (second) version is constructed using US trade data with the PRC only (all countries). The estimates show that the identity of swing states does not depend on previous exposure to import competition.

Finally, some studies suggest that trade protection favors declining industries (an example is Brainard and Verdier 1997). We thus check if the identity of swing states is associated with employment growth. We construct two versions of the variable

$Employment\ Growth_{s,T}$: the first (second) is based on state-level employment in manufacturing industries (all industries). The results reported in columns 5 and 6 show that the extent to which employment has been declining in a state is uncorrelated with whether the vote margin in that state falls below the 5% threshold.

A5 Additional Results and Robustness Checks

Table A.6: Swing-State Politics and Antidumping Protection
(Second Terms)

	Baseline	All	AD	Presidential	Manuf.
	(1)	TTBs	dummy	elections	industries
	(1)	(2)	(3)	(4)	(5)
$Swing\ Industry_{j,T}$	1.772 (7.715)	1.507 (7.700)	-7.075 (31.567)	6.801 (13.907)	0.125 (1.548)
Sector Fixed Effects	Yes	Yes	Yes	Yes	Yes
Term Fixed Effects	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.49	0.49	0.56	0.49	0.49
Observations	1,176	1,176	1,176	1,176	1,176

AD=Antidumping, HS=Harmonized System, SIC=Standard Industrial Classification, TTB=Temporary Trade Barrier.

Note: The table reports ordinary least squares estimates of equation (5). In columns 1, 4, and 5, the dependent variable is $Trade\ Protection_{j,T}$, the share of HS6 products within SIC4 industry j that are subject by AD duties during term T ; in column 2, it is the share of products subject to any temporary trade barrier (AD duties, countervailing duties, or safeguards); in column 3, it is a dummy variable equal to 1 if any product in industry j is subject to AD duties. The variable $Swing\ Industry_{j,T}$ is defined in equation (4). In columns 1–4, the denominator of this variable includes all industries; in column 5, it includes only manufacturing industries. In columns 1–3 and 5 (column 4), swing states are identified using data on the outcome of congressional (presidential) in the middle (at the end) of term T . The sample covers all executive second terms during 1989–2020. Observations are weighted by 1988 employment. Sector fixed effects are defined at the SIC4 level. Standard errors are clustered at the SIC3 industry level; ***, **, and * denote significance at the 1%, 5%, and 10% levels.

Source: Authors' calculations.

Table A.7: IV and AD Protection
(Controlling for Swing Industry)

	Baseline (1)	All TTBs (2)	AD dummy (3)	Presidential elections (4)	Manuf. industries (5)	Excluding Trump (6)
$IV_{j,T}$	0.387*** (0.074)	0.440*** (0.087)	2.147*** (0.259)	0.346*** (0.034)	0.082*** (0.016)	0.302*** (0.064)
$Swing\ Industry_{j,T}$	0.802 (1.454)	0.330 (1.788)	26.151*** (9.344)	-0.246 (1.160)	0.289 (0.326)	1.210 (1.444)
Sector Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Term Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.50	0.50	0.56	0.50	0.56	0.51
Observations	1,960	1,960	1,960	1,960	1,960	1,568

AD=Antidumping, HS=Harmonized System, SIC=Standard Industrial Classification, TTB=Temporary Trade Barrier.

Note: The table reports ordinary least squares estimates of equation (5). In columns 1, 4, 5, and 6, the dependent variable is $Trade\ Protection_{j,T}$, the share of HS6 products within SIC4 industry j that are subject by AD duties during term T ; in column 2, it is the share of products subject to any temporary trade barrier (AD duties, countervailing duties, or safeguards); in column 3, it is a dummy variable equal to 1 if any product in industry j is subject to AD duties. The variable $IV_{j,T}$ is defined in equation (9). In columns 1–4 and 6, the denominator of the variable $Swing\ Industry_{j,T}$ used to construct $IV_{j,T}$ includes all industries; in column 5, it includes only manufacturing industries. In columns 1–3 and 5–6 (column 4), swing states are identified using data on the outcome of congressional (presidential) in the middle (at the end) of term T . In columns 1-5 (column 6), the sample covers all executive first terms during 1989–2020 (1989–2016). Observations are weighted by 1988 employment. Sector fixed effects are defined at the SIC4 level. Standard errors are clustered at the SIC3 industry level; ***, **, and * denote significance at the 1%, 5%, and 10% levels.

Source: Authors' calculations.

Table A.8: Trade Protection and Employment Along Supply Chains
(OLS Estimates)

	Manufacturing industries	All industries			
	(1)	including diagonal (2)	including diagonal (3)	excluding diagonal (4)	excluding diagonal (5)
<i>Direct Tariff Exposure</i> _{<i>j,T</i>}	-0.067 (0.095)				
<i>Downstream Tariff Exposure</i> _{<i>j,T</i>}		-2.379** (1.087)	-1.803* (0.990)	-2.580** (1.175)	-1.963* (1.042)
<i>Upstream Tariff Exposure</i> _{<i>j,T</i>}		0.903 (0.702)	0.575 (0.627)	0.686 (0.651)	0.425 (0.599)
Sector Fixed Effects	Yes	Yes	Yes	Yes	Yes
Term Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	1,567	1,915	1,915	1,915	1,915
Adjusted R^2	0.36	0.50	0.50	0.50	0.50

AD=Antidumping, SIC=Standard Industrial Classification.

Note: The table reports ordinary least squares estimates of equations (11) and (12). The dependent variable $\Delta L_{j,T}$ is the log change in employment in SIC4 industry j during term T . The tariff variables capture exposure to AD protection, as measured by (1)–(3). In columns 2 and 3, the downstream and upstream measures include the diagonal of the input output-matrix and account for direct linkages only or also for higher-order linkages; in columns 4 and 5, they exclude the diagonal of the input-output matrix and respectively account for direct linkages only or also for higher-order linkages. The regressions include the corresponding direct, downstream and upstream *Swing Industry* variables (coefficients not reported). In columns 1 (2–3), the sample includes all manufacturing industries (all industries) and covers all first terms during 1989–2016. Observations are weighted by 1988 employment. Sector fixed effects are defined at the SIC4 level. Standard errors are clustered at the SIC3 industry level; ***, **, and * denote significance at the 1%, 5%, and 10% levels.

Source: Authors' calculations.

Table A.9: Reduced-Form Results for Table 5

	Manufacturing industries	All industries			
	(1)	including diagonal (2)	including diagonal (3)	excluding diagonal (4)	excluding diagonal (5)
$IV_{j,T}$	1.272*** (0.401)				
<i>Downstream</i> $IV_{j,T}$		-1.476 (0.998)	-1.804* (1.039)	-1.548 (0.990)	-1.810* (1.044)
<i>Upstream</i> $IV_{j,T}$		3.541** (1.544)	3.251** (1.416)	2.063 (1.571)	2.137 (1.483)
Sector Fixed Effects	Yes	Yes	Yes	Yes	Yes
Term Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	1,567	1,915	1,915	1,915	1,915
Adjusted R^2	0.38	0.50	0.50	0.50	0.50

AD=Antidumping, SIC=Standard Industrial Classification.

Note: The table reports the reduced-form results of the two-stage least squares estimates of Table 5. The dependent variable $\Delta L_{j,T}$ is the log change in employment in SIC4 industry j during term T . The tariff variables capture exposure to AD protection, as measured by (1)–(3). In columns 2 and 3, the downstream and upstream measures include the diagonal of the input output-matrix and account for direct linkages only or also for higher-order linkages; in columns 4 and 5, they exclude the diagonal of the input-output matrix and respectively account for direct linkages only or also for higher-order linkages. The regressions include the corresponding direct, downstream and upstream *Swing Industry* variables (coefficients not reported). In columns 1 (2–3), the sample includes all manufacturing industries (all industries) and covers all first terms during 1989–2016. Observations are weighted by 1988 employment. Sector fixed effects are defined at the SIC4 level. Standard errors are clustered at the SIC3 industry level; ***, **, and * denote significance at the 1%, 5%, and 10% levels.

Source: Authors' calculations.

Table A.10: Effects of Trade Protection on Employment Along Supply Chains
(All TTBs)

	Manufacturing industries	All industries			
	(1)	including diagonal (2)	including diagonal (3)	excluding diagonal (4)	excluding diagonal (5)
<i>Direct Tariff Exposure</i> _{<i>j,T</i>}	3.399** (1.614)				
<i>Downstream Tariff Exposure</i> _{<i>j,T</i>}		-3.036** (1.486)	-2.836** (1.398)	-2.748* (1.466)	-2.767* (1.457)
<i>Upstream Tariff Exposure</i> _{<i>j,T</i>}		3.723** (1.544)	2.389** (1.079)	2.758 (2.117)	1.682 (1.319)
Sector Fixed Effects	Yes	Yes	Yes	Yes	Yes
Term Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	1,567	1,915	1,915	1,915	1,915
KP F-statistic	22.0	38.3	51.7	22.8	37.1

AD=Antidumping, SIC=Standard Industrial Classification, TTB=Temporary Trade Barrier.

Note: The table reports two-stage least squares estimates of equations (11) and (12). The dependent variable $\Delta L_{j,T}$ is the log change in employment in SIC4 industry j during term T . The tariff variables capture exposure to all temporary trade barriers (AD duties, countervailing duties, and safeguards), as measured by (1)–(3), instrumented using the corresponding IV variables. In columns 2 and 3, the downstream and upstream measures include the diagonal of the input output-matrix and account for direct linkages only or also for higher-order linkages; in columns 4 and 5, they exclude the diagonal of the input-output matrix and respectively account for direct linkages only or also for higher-order linkages. The regressions include the corresponding direct, downstream and upstream *Swing Industry* variables (coefficients not reported). The sample covers all first terms during 1989–2016 and includes all manufacturing industries (all industries) in column 1 (columns 2–5). Observations are weighted by 1988 employment. Sector fixed effects are defined at the SIC4 level. Standard errors are clustered at the SIC3 industry level; ***, **, and * denote significance at the 1%, 5%, and 10% levels. Source: Authors' calculations.

Table A.11: Effects of Trade Protection on Employment Along Supply Chains
(Alternative AD Measure)

	Manufacturing industries	All industries			
	(1)	including diagonal (2)	including diagonal (3)	excluding diagonal (4)	excluding diagonal (5)
<i>Direct Tariff Exposure</i> _{<i>j,T</i>}	4.213** (1.963)				
<i>Downstream Tariff Exposure</i> _{<i>j,T</i>}		-0.727** (0.297)	-0.578** (0.259)	-0.659** (0.309)	-0.570** (0.273)
<i>Upstream Tariff Exposure</i> _{<i>j,T</i>}		0.607** (0.274)	0.373** (0.175)	0.379 (0.295)	0.246 (0.187)
Sector Fixed Effects	Yes	Yes	Yes	Yes	Yes
Term Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	1,567	1,915	1,915	1,915	1,915
KP F-statistic	22.4	54.4	25.9	33.2	27.4

AD=Antidumping, SIC=Standard Industrial Classification.

Note: The table reports two-stage least squares estimates of equations (11) and (12). The dependent variable $\Delta L_{j,T}$ is the log change in employment in SIC4 industry j during term T . The tariff variables capture exposure to AD protection (based on whether products in an industry are subject to AD duties), as measured by (1)–(3), instrumented using the corresponding IV variables. In columns 2 and 3, the downstream and upstream measures include the diagonal of the input output-matrix and account for direct linkages only or also for higher-order linkages; in columns 4 and 5, they exclude the diagonal of the input-output matrix and respectively account for direct linkages only or also for higher-order linkages. The regressions include the corresponding direct, downstream and upstream *Swing Industry* variables (coefficients not reported). The sample covers all first terms during 1989–2016 and includes all manufacturing industries (all industries) in column 1 (columns 2–5). Observations are weighted by 1988 employment. Sector fixed effects are defined at the SIC4 level. Standard errors are clustered at the SIC3 industry level; ***, **, and * denote significance at the 1%, 5%, and 10% levels. Source: Authors' calculations.

Table A.12: Effects of Trade Protection on Employment Along Supply Chains
(Including Trump)

	Manufacturing industries	All industries			
	(1)	including diagonal (2)	including diagonal (3)	excluding diagonal (4)	excluding diagonal (5)
<i>Direct Tariff Exposure</i> _{<i>j,T</i>}	3.048** (1.389)				
<i>Downstream Tariff Exposure</i> _{<i>j,T</i>}		-1.247* (0.681)	-1.323* (0.780)	-1.261* (0.695)	-1.553* (0.847)
<i>Upstream Tariff Exposure</i> _{<i>j,T</i>}		2.637** (1.295)	1.835* (1.017)	1.366 (1.987)	0.988 (1.354)
Sector Fixed Effects	Yes	Yes	Yes	Yes	Yes
Term Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	1,958	2,393	2,393	2,393	2,393
KP F-statistic	27.5	26.7	43.9	24.3	24.0

AD=Antidumping, SIC=Standard Industrial Classification.

Note: The table reports two-stage least squares estimates of equations (11) and (12). The dependent variable $\Delta L_{j,T}$ is the log change in employment in SIC4 industry j during term T . The tariff variables capture exposure to AD protection, as measured by (1)–(3), instrumented using the corresponding IV variables. In columns 2 and 3, the downstream and upstream measures include the diagonal of the input output-matrix and account for direct linkages only or also for higher-order linkages; in columns 4 and 5, they exclude the diagonal of the input-output matrix and respectively account for direct linkages only or also for higher-order linkages. The regressions include the corresponding direct, downstream and upstream *Swing Industry* variables (coefficients not reported). The sample covers all first terms during 1989–2020 and includes all manufacturing industries (all industries) in column 1 (columns 2–5). Observations are weighted by 1988 employment. Sector fixed effects are defined at the SIC4 level. Standard errors are clustered at the SIC3 industry level; ***, **, and * denote significance at the 1%, 5%, and 10% levels.

Source: Authors' calculations.

A6 Effects of Trade Protection on Imports

To examine the employment effects of politically motivated trade protection on imports of products targeted by AD, we estimate the following regression by two-stage least squares on executive first terms:

$$\Delta Imports_{j,T} = \beta_0 + \beta_1 Direct\ Tariff\ Exposure_{j,T} + \beta_2 Swing\ Industry_{j,T} + \delta_j + \delta_T + \varepsilon_{j,T}, \quad (14)$$

where $\Delta Imports_{j,T}$ is the growth rate of US imports from the PRC in SIC4 industry j during term T . In all specifications, we include SIC4 sector and term fixed effects (δ_j and δ_T). Since the dependent variable is expressed in differences, the sector fixed effects allow us to control for (linear) sectoral trends (e.g., the extent to which an industry is declining or being automated). The tariff exposure variable is defined in equation (1), and it is instrumented by $IV_{j,T}$, which is defined as the interaction between $Swing\ Industry_{j,T}$ and $AD\ experience_j$ (see equation (9)). To account for the effects of other policies that may be used to favor important industries in swing states (e.g., federal subsidies), we include the variable $Swing\ Industry_{j,T}$ not interacted with AD experience. If AD protection is effective in reducing imports from the PRC, the estimated β_1 coefficient should be negative and significant.

The results of estimating (14) are reported in column 1 of Table A.13. The baseline specification of column 1 excludes observations corresponding to US sectors with zero imports from the PRC. The coefficient of $Direct\ Tariff\ Exposure_{j,T}$ is negative and significant at the 1% level, and indicates that a one standard deviation increase in predicted trade protection leads to a 43 percentage point decrease in the growth rate of imports. Column 2 shows that the results are robust to including sectors with zero imports at the start or at the end of a term.⁴

⁴ In this specification, the dependent variable is $\Delta Imports_{j,T}$, constructed as $\ln(1 + Imports_{j,t}) - \ln(1 + Imports_{j,t-4})$.

Several studies have shown that AD duties targeting one country can lead to an increase in imports from non-targeted countries (e.g., Konings *et al.* 2001; Prusa 1997). In columns 3 and 4 of Table A.13, we examine whether AD protection against the PRC led not only to a decrease in imports from the PRC (trade destruction), but also to an increase in US imports from non-targeted countries (trade diversion). To this purpose, we reestimate (14) but replace the dependent variable with the growth rate of US imports from the rest of the world. In column 3 (4), this variable excludes (includes) zeros. We find no evidence of trade diversion: the coefficient of *Direct Tariff Exposure*_{*j,T*} is not significant.

Overall, the results of Table A.13 show that AD duties against the PRC driven by swing-state politics lead to a decrease in imports of the targeted products, without significant effects on imports from other countries.

Table A.13: Effects of Trade Protection on Imports

	People's Republic of China		Rest of the World	
	(1)	(2)	(3)	(4)
<i>Direct Tariff Exposure</i> _{<i>j,T</i>}	-28.990*** (9.173)	-26.073*** (8.491)	-8.671 (9.869)	-8.623 (9.848)
SIC4 FE	Yes	Yes	Yes	Yes
Term FE	Yes	Yes	Yes	Yes
Observations	1,480	1,568	1,561	1,568
KP F-statistic	23.1	22.4	22.3	22.4

Note: The table reports 2SLS estimates of equation (14). In columns 1–2 (3–4), the dependent variable is the log change in US imports from the People's Republic of China (from non-targeted countries) in SIC4 industry *j* during term *T*. Columns 1 and 3 (2 and 4) exclude (include) observations corresponding to zero imports. Observations are weighted by 1988 employment. Standard errors are clustered at the SIC3 industry level; ***, **, and * denote significance at the 1%, 5%, and 10% levels.

Source: Authors' calculations.