Appendix (For online publication)

In Appendix A, we include a timeline of key events in U.S.-China trade relations. In Appendix B, we show that the time-varying effects of the NNTR and trade-war gaps on China's exports to the United States, shown in Figure 3(a), are robust to a range of alternative approaches.

A Key dates in U.S.-China relations

10/1949 People's Republic of China is established.

12/1950 The trade embargo on China begins.

06/1971 The trade embargo is lifted and China gains access to U.S. markets at NNTR rates.

02/1972 Nixon visits China and issues the Shanghai Communiqué.

01/1979 The United States and China normalize relations with the Joint Communiqué on the Establishment of Diplomatic Relations.

04/1979 The Taiwan Relations Act is passed by Congress and signed by Carter.

02/1980 China gains access to U.S. markets at NTR rates under the Jackson-Vanik amendment.

11/1980 Reagan is elected President of the United States.

07/1982 The Six Assurances are sent by the United States to Taiwan.

08/1982 The Third Communiqué between the United States and China is issued.

05/1984 Reagan visits China.

06/1986 China applies for observer status to the GATT.

10/2000 Bill is signed granting China Permanent NTR status upon joining the WTO.

12/2001 China joins the WTO.

03/2018 Broad tariffs are proposed on Chinese goods.

02/2020 Phase one of the trade deal between the United States and China begins.

11/2020 Biden is elected President of the United States.

B Robustness: Empirics

Alternative fixed effects. In our baseline, we use a country-product (ig) fixed effect that captures trade relative to the year before the trade war. We use a good-time (gt) fixed effect to control for changes in U.S. demand for good g. These fixed effects are relatively standard in the literature. However, we also control for bilateral shocks at the sectoral level by including an i-HS sections-t fixed effect. In columns 2 and 3 of Table A1, we show that imposing less restrictive it or more restrictive i-HS 2-digit-t fixed effects yields similar results. In both cases, the time-varying path of the two gaps is very similar to our baseline (column 1), albeit slightly smaller in magnitude: the elasticities, on average, are 10 to 15 percent smaller than the baseline.

Alternative samples. Our baseline sample focuses on HS-6 goods that were exported to the United States in every year of our sample period and were not affected by the tariffs the Trump administration imposed on countries other than China.[11] Column 4 of Table A1 relaxes the first restriction and allows for the sample of goods to be unbalanced. Column 5 further relaxes both restrictions, thus including the full sample of goods. Overall, the time-varying paths of elasticities are very similar. Column 6 reports results when we define the year as beginning in January and ending in December. In this case, we reference the effects to the year 2017. As expected, the 2018 effect is small, as tariffs had only been in place for part of the year. Hence, the jump in elasticities from the first to the second year is even larger under our baseline July to June definition of a year. Nevertheless, between 2020 and 2023, the elasticity grows by almost 60 percent compared with the corresponding 45-percent growth between 2021 and 2024 in our baseline.

China supply effects and other destinations. In our baseline, we focus on U.S. imports only and use imports from other countries to control for U.S. good-specific demand shocks through the gt fixed effects. The results are virtually unchanged when we include Chinese exports to all 27 countries of the European Union ("EU-27") and include Chinese good-specific supply shocks (i.e., igt fixed effects). To do so, we aggregate over all other countries except China and use CIF import values since Eurostat does not report FOB values (and thus exclude controls for shipping costs). Column 7 of Table A1 reports the results. As a placebo test to further rule out unobserved supply shocks that spuriously correlate with the tariff gaps, we estimate (2) using EU-27 imports only. Column 8 shows there is no significant pattern in response to either of the gaps.

Gap measures. Our baseline trade-war gap, X_g^{TW}, is calculated as the log of the difference between the average applied tariff to China between 2020–2023 and 2013–2017, at the HS-6 level. The NNTR-gap, X_g^{NNTR} is calculated as the log of the difference between the six-digit NNTR rate and, again, the average applied tariff to China between 2013–2017, at the HS-6 level. The baseline HS-6 NNTR rate is the median HS-8 rate within the HS-6 subheading. Column 2 of Table A2 shows that the NNTR-gap elasticities increase slightly when we use the average over the HS-8 NNTR rates instead of the median. Column 3 considers the simple

[11] These were mostly steel and aluminum products targeted by the 2017 Section 232 tariffs and goods affected by the 2019 tariffs imposed on Mexico to deter migration. We obtain this set of goods from Fajgelbaum et al. (2020).

average over HS-10 products to compute the trade-war gap and the reference of the NNTR gap, computed as in column 2. The pattern is virtually the same as in the baseline.

Finer aggregation. Our baseline level of aggregation of goods is at the 6-digit HS level, the level commonly used in the literature (Handley et al., 2020). Columns 4 and 5 of Table A2 show that our results are similar to our baseline estimates when we use a more disaggregate definition of goods, at the 8- or 10-digit level, respectively.

Quarterly frequency. The quarterly data are better suited to capture changes in trade flows at a higher frequency but require controlling for seasonal fluctuations that potentially differ by good and source. Figure A1 plots the elasticity of imports to the trade-war gap in the quarterly data. The quarterly data are through the fourth quarter of 2023, although the fourth quarter of 2023 is based on data through November.

Figure A1: Tariff gap elasticities at the quarterly frequency

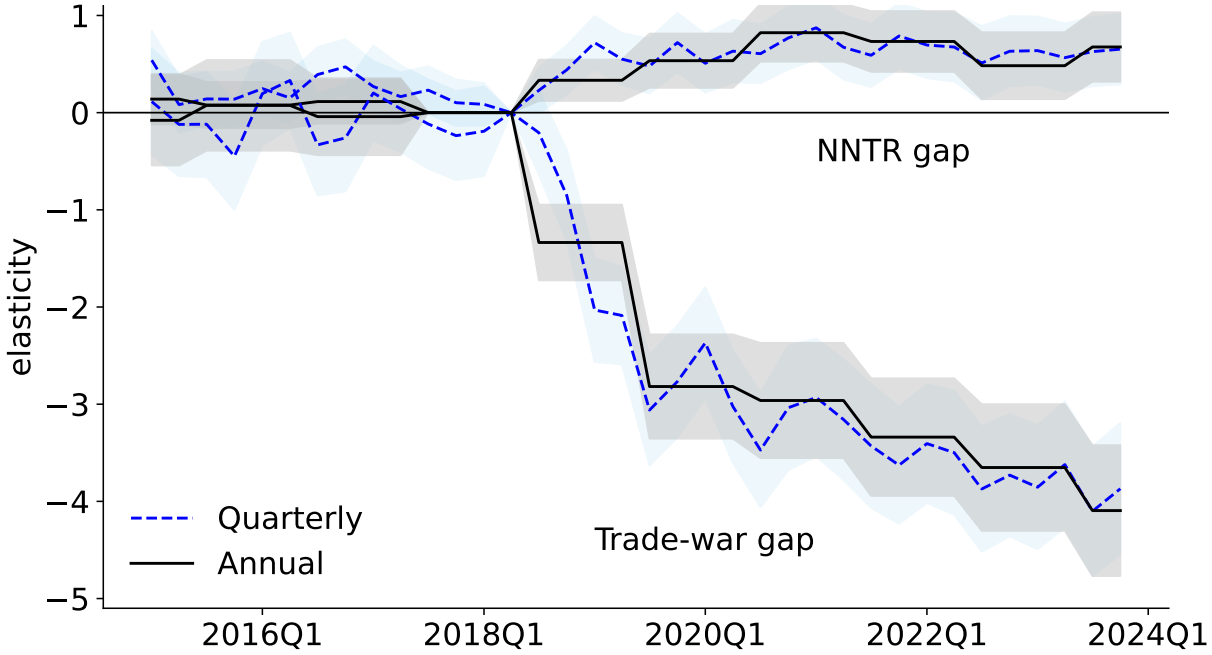

Table A1: Robustness: Gap elasticities

				Alternative Samples			w/Chinese Exports to	
	Baseline	Alternative FEs		Unbalanced	Full	Jan-Dec	US & EU-27	EU-27
Dep. Var. v_{igt}	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\mathbb{1}\{_{j=\text{CHN}}^{t=t'}\}X_g^{\text{TW}}$								
2015	-0.08	-0.19	0.06	-0.07	-0.18	0.02	0.37	-0.51^{*}
	(0.24)	(0.22)	(0.29)	(0.25)	(0.28)	(0.22)	(0.37)	(0.29)
2016	0.07	-0.03	0.20	0.22	0.18	-0.03	0.27	-0.30
	(0.24)	(0.22)	(0.28)	(0.25)	(0.27)	(0.17)	(0.34)	(0.26)
2017	-0.04	-0.06	-0.06	-0.01	0.08	0.00	-0.05	-0.15
	(0.20)	(0.18)	(0.25)	(0.21)	(0.21)	—	(0.29)	(0.20)
2018	0.00	0.00	0.00	0.00	0.00	-0.36^{**}	0.00	0.00
	—	—	—	—	—	(0.17)	—	—
2019	-1.34^{***}	-1.34^{***}	-1.37^{***}	-1.20^{***}	-1.16^{***}	-2.39^{***}	-1.29^{***}	-0.03
	(0.20)	(0.18)	(0.26)	(0.21)	(0.22)	(0.23)	(0.28)	(0.21)
2020	-2.82^{***}	-2.70^{***}	-2.75^{***}	-2.70^{***}	-2.72^{***}	-2.87^{***}	-2.59^{***}	-0.15
	(0.27)	(0.24)	(0.34)	(0.28)	(0.28)	(0.29)	(0.36)	(0.24)
2021	-2.96^{***}	-2.77^{***}	-3.08^{***}	-2.71^{***}	-2.61^{***}	-3.24^{***}	-3.23^{***}	0.39
	(0.30)	(0.27)	(0.37)	(0.31)	(0.30)	(0.29)	(0.39)	(0.27)
2022	-3.34^{***}	-3.02^{***}	-3.02^{***}	-3.11^{***}	-2.95^{***}	-3.27^{***}	-3.10^{***}	-0.04
	(0.31)	(0.27)	(0.39)	(0.32)	(0.32)	(0.31)	(0.42)	(0.30)
2023	-3.65^{***}	-3.31^{***}	-2.98^{***}	-3.50^{***}	-3.41^{***}	-3.81^{***}	-3.78^{***}	0.17
	(0.33)	(0.29)	(0.40)	(0.34)	(0.33)	(0.31)	(0.42)	(0.30)
2024	-4.09^{***}	-3.74^{***}	-3.38^{***}	-3.88^{***}	-3.77^{***}		-4.06^{***}	0.38
	(0.34)	(0.31)	(0.41)	(0.34)	(0.34)		(0.45)	(0.34)
$\mathbb{1}\{_{i=\text{CHN}}^{t=t'}\}X_g^{\text{NNTR}}$								
2015	0.14	0.22^{**}	0.24^{*}	0.17	0.00	0.12	0.21	-0.13
	(0.13)	(0.11)	(0.14)	(0.14)	(0.15)	(0.12)	(0.19)	(0.18)
2016	0.08	0.13	0.10	0.14	-0.02	0.19^{**}	0.07	-0.14
	(0.12)	(0.10)	(0.13)	(0.13)	(0.14)	(0.09)	(0.16)	(0.12)
2017	0.11	0.13	0.08	0.18	0.13	0.00	0.18	-0.10
	(0.12)	(0.09)	(0.12)	(0.12)	(0.12)	—	(0.16)	(0.11)
2018	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00
	—	—	—	—	—	(0.10)	—	—
2019	0.33^{***}	0.23^{***}	0.39^{***}	0.37^{***}	0.31^{***}	0.54^{***}	0.27^{*}	0.01
	(0.11)	(0.09)	(0.12)	(0.11)	(0.12)	(0.13)	(0.15)	(0.11)
2020	0.53^{***}	0.45^{***}	0.42^{***}	0.65^{***}	0.62^{***}	0.72^{***}	0.52^{***}	-0.06
	(0.14)	(0.12)	(0.15)	(0.16)	(0.16)	(0.16)	(0.19)	(0.13)
2021	0.82^{***}	0.65^{***}	0.63^{***}	0.91^{***}	0.83^{***}	0.69^{***}	0.83^{***}	-0.09
	(0.15)	(0.13)	(0.16)	(0.16)	(0.15)	(0.15)	(0.20)	(0.14)
2022	0.73^{***}	0.50^{***}	0.63^{***}	0.68^{***}	0.66^{***}	0.59^{***}	0.74^{***}	-0.08
	(0.16)	(0.14)	(0.17)	(0.16)	(0.16)	(0.17)	(0.23)	(0.19)
2023	0.48^{***}	0.21	0.34^{*}	0.56^{***}	0.48^{***}	0.54^{***}	0.58^{**}	-0.19
	(0.18)	(0.15)	(0.19)	(0.18)	(0.17)	(0.18)	(0.23)	(0.17)
2024	0.68^{***}	0.49^{***}	0.44^{**}	0.70^{***}	0.60^{***}		0.63^{***}	-0.10
	(0.18)	(0.15)	(0.20)	(0.18)	(0.18)		(0.24)	(0.18)
log Shipping Cost	-2.54^{***}	-2.52^{***}	-2.59^{***}	-2.55^{***}	-2.56^{***}	-2.51^{***}		
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)		
gt, ig FEs	✓	✓	✓	✓	✓	✓		✓
i-HS Section-t FEs	✓			✓	✓	✓		✓
it FEs		✓						
i-HS2-t FEs			✓					
jgt, igt, jig FEs							✓	
ji-HS Section-t FEs							✓	
N	1,000,546	1,007,327	983,947	1,073,617	1,124,477	901,540	124,852	62,740
Adjusted R^2	0.88	0.88	0.88	0.88	0.88	0.88	0.95	0.95

Notes: The table reports estimates of (2). Columns 2 and 3 use less restrictive source-time and more restrictive source-HS2-time fixed effects, respectively. Column 4 uses an unbalanced panel and Column 5 uses the full sample, including goods that are part of trade disputes that do not discriminate only against China. Column 6 uses the conventional calendar year definition. Column 7 includes Chinese exports to an aggregate of the EU-27. Column 8 is a placebo test that uses only EU-27 imports. Standard errors clustered at the ig-level (and ijg level in column 7) are reported in parenthesis.$^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$.

Table A2: Robustness: Gap elasticities

		Alternative Gaps Measures		Good Level Aggregation	
	Baseline	Avg NNTR Gap	Simple Avg Gaps	HS-8	HS-10
Dep. Var. v_{igt}	(1)	(2)	(3)	(4)	(5)
$\mathbb{1}\{_{j=\text{CHN}}^{t=t'}\}X_g^{\text{TW}}$					
t=2015	-0.08	-0.08	-0.07	0.35^{*}	0.37^{**}
	(0.24)	(0.24)	(0.25)	(0.21)	(0.18)
2016	0.07	0.08	0.09	0.50^{***}	0.55^{***}
	(0.24)	(0.24)	(0.24)	(0.19)	(0.17)
2017	-0.04	-0.04	-0.02	0.29^{*}	0.37^{**}
	(0.20)	(0.20)	(0.21)	(0.17)	(0.15)
2018	0.00	0.00	0.00	0.00	0.00
	—	—	—	—	—
2019	-1.34^{***}	-1.33^{***}	-1.39^{***}	-1.33^{***}	-1.18^{***}
	(0.20)	(0.20)	(0.21)	(0.18)	(0.15)
2020	-2.82^{***}	-2.81^{***}	-2.89^{***}	-2.94^{***}	-2.85^{***}
	(0.27)	(0.27)	(0.29)	(0.22)	(0.19)
2021	-2.96^{***}	-2.96^{***}	-3.02^{***}	-3.29^{***}	-3.13^{***}
	(0.30)	(0.30)	(0.32)	(0.24)	(0.21)
2022	-3.34^{***}	-3.34^{***}	-3.41^{***}	-3.28^{***}	-3.18^{***}
	(0.31)	(0.31)	(0.32)	(0.25)	(0.21)
2023	-3.65^{***}	-3.65^{***}	-3.72^{***}	-3.83^{***}	-3.68^{***}
	(0.33)	(0.33)	(0.35)	(0.26)	(0.23)
2024	-4.09^{***}	-4.09^{***}	-4.17^{***}	-3.88^{***}	-3.80^{***}
	(0.34)	(0.34)	(0.36)	(0.28)	(0.24)
$\mathbb{1}\{_{j=\text{CHN}}^{t=t'}\}X_g^{\text{NNTR}}$					
2015	0.14	0.16	0.18	-0.01	-0.05
	(0.13)	(0.14)	(0.14)	(0.11)	(0.09)
2016	0.08	0.10	0.11	0.00	-0.09
	(0.12)	(0.13)	(0.13)	(0.09)	(0.08)
2017	0.11	0.12	0.14	0.02	0.02
	(0.12)	(0.12)	(0.12)	(0.09)	(0.08)
2018	0.00	0.00	0.00	0.00	0.00
	—	—	—	—	—
2019	0.33^{***}	0.36^{***}	0.37^{***}	0.23^{***}	0.27^{***}
	(0.11)	(0.11)	(0.11)	(0.09)	(0.08)
2020	0.53^{***}	0.59^{***}	0.62^{***}	0.27^{**}	0.29^{***}
	(0.14)	(0.15)	(0.15)	(0.11)	(0.10)
2021	0.82^{***}	0.88^{***}	0.90^{***}	0.50^{***}	0.51^{***}
	(0.15)	(0.16)	(0.16)	(0.12)	(0.10)
2022	0.73^{***}	0.75^{***}	0.78^{***}	0.49^{***}	0.56^{***}
	(0.16)	(0.16)	(0.17)	(0.13)	(0.11)
2023	0.48^{***}	0.50^{***}	0.53^{***}	0.39^{***}	0.48^{***}
	(0.18)	(0.18)	(0.18)	(0.13)	(0.12)
2024	0.68^{***}	0.73^{***}	0.78^{***}	0.54^{***}	0.43^{***}
	(0.18)	(0.19)	(0.19)	(0.14)	(0.12)
log Shipping Cost	-2.54^{***}	-2.54^{***}	-2.54^{***}	-2.52^{***}	-2.52^{***}
	(0.03)	(0.03)	(0.03)	(0.03)	(0.02)
gt, gt, ig FEs	✓	✓	✓	✓	✓
i-HS Section-t FEs	✓	✓	✓	✓	✓
N	1,000,546	1,000,546	1,000,546	1,216,526	1,713,591
Adjusted R^2	0.88	0.88	0.88	0.86	0.85

Notes: The table reports estimates of (2). Columns 2 and 3 consider alternative definitions of the gap—column 2 uses the average NNTR rate, instead of the median—and column 3 uses the simple averages of the pre- and post-war HS-10 tariffs, instead of the weighted average. Columns 4 and 5 define good g as an HS-8 and HS-10 code, respectively. Standard errors clustered at the ig-level are reported in parenthesis.* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.