

Vanguards of Globalization: Organization and Political Action among America's Pro-Trade Firms

Iain Osgood[†]

Abstract

Which firms organize to support trade? This paper identifies America's pro-trade firms and shows that their political efforts – in contributions, lobbying, and coalition-building – vastly outstrip those of trade's corporate opponents. I explain this striking divergence by integrating collective action theory into a firm-centered model of trade politics: the heavy concentration of gains from trade among a small number of firms makes both individual and collective political action easier for pro-trade firms than for producers opposed to trade. The microfoundations of this model are tested using comprehensive data on firms' public advocacy for trade, which show that size, multinationality, and heterogeneity in global networks of production and sales drive firms' pro-trade activity. Globally engaged firms have supported trade by matching pro-trade preferences with highly organized political action.

Word count: 8652.

[†] Assistant Professor, Department of Political Science, University of Michigan. Haven Hall, 505 S. State St, Ann Arbor MI 48104; iosgood@umich.edu. The author wishes to thank Kristi Begonja, Timm Betz, Ryan Brutger, Jeffry Frieden, Julia Gray, Robert Gulotty, Tobias Hofmann, In Song Kim, Cara Laskowski, Ed Mansfield, Heather Elko McKibben, Krzysztof Pelc, Beth Simmons, Dustin Tingley and Stephen Weymouth.

I comprehensively examine the efforts of a select group of US firms to support trade and globalization over the past 25 years. These firms are the core of a dynamic yet enduring *pro-trade coalition*. They are extremely active, with over 4300 unique firms supporting trade issues from the Fast Track vote in 1991 to the Trans-Pacific Partnership. Their political activity far surpasses that undertaken by anti-trade producers: the number of publicly supporting firms exceed anti-trade firms by a factor of 10, and organized pro-trade alliances are similarly preponderant. Firms that have publicly supported trade account for 56% of all PAC contributions in federal elections by corporations, while firms that have publicly opposed trade account for less than 1%. Even more striking, 88% of all lobbying on trade by corporations is undertaken by firms that have supported trade.

These stylized facts naturally lead to two research questions: What explains the decision of firms to support trade? And what explains the striking superiority of America's pro-trade firms in political organization and activity?

My answer to both questions is founded on a firm-centered model of trade preferences, which builds on recent advances in the literature.¹ The benefits of global economic integration are exceptionally concentrated. Very large firms – which dominate exporting, importing, and offshoring – are therefore supporters of trade.² This concentration of trade's benefits is compounded by differences among firms in the construction of global networks of production and sales.³ Large firms in the same industry may have very different relationships across the world, as firms specialize in selling their products to different corners of the globe and supply chains differ markedly across producers. 'Global' firms should support liberalization only with particular countries.

To test these microfoundations, I construct a panel of support for trade among US firms matched to data on firm size, revenues, employees, trade, and foreign subsidiaries by country. I find that very large firms and multinationals are much more likely to support trade, even conditional on fixed industry features. This supports the firm-centered approach to trade preferences described in recent literature. I also show that the contours of firms' global networks drive firm support for trade agreements with particular countries. For example, owning a foreign subsidiary in a foreign

¹ See, for example, Jensen et al. (2015); Kim (2017).

² See Plouffe (2017).

³ Blanchard and Matschke (2015); Jensen et al. (2015); Manger (2012); Chase (2003, 2009).

trade partner raises the probability of supporting a given trade agreement 10 times more than does owning a foreign subsidiary in any country. This explains why the supporters of any given trade agreement are few in number but have strongly held preferences.

These findings on public preferences help to explain pro-trade firms' edge in campaign contributions, lobbying, and organization. As individuals, their size, intense preferences, and vast financial resources make paying the fixed costs of political engagement both possible and profitable. As a group, their small numbers and strong pro-trade attitudes make collective action easier than for trade's opponents, who are many and have much weaker preferences on any given trade agreement. Concentrated benefits from trade therefore lead to sharp asymmetries in political interest, ability, and action, explaining why the activities of the pro-trade coalition of producers on which I focus has not been matched by a comparable anti-trade coalition of producers.

My argument builds on recent work in trade politics examining: firm-centered lobbying across industries;⁴ firm-level determinants of lobbying;⁵ industry-based drivers of firms' political activities;⁶ and surveys of firms' preferences.⁷ I particularly rely on work examining pro-globalization producers' role in defending global integration.⁸ The main theoretical contribution of this work is therefore *not* that 'firm-level factors shape trade preferences', which is now well-established. Rather, my theoretical intervention is to join firm-centered models of trade politics to the theory of collective action, advancing the literature by explaining how firm heterogeneity shapes efforts to build stable and influential coalitions around trade. In particular, the argument that firm heterogeneity in models of trade leads to unique advantages in collective action for trade's proponents is original to this paper. I match this theoretical contribution with original stylized facts, that firms which support trade dominate lobbying, campaign contributions, and coalition-building around trade in the United States. To test the foundations of this argument, I conduct the most extensive study of firm characteristics' role in driving political support for trade, as expressed expressed

⁴ Bombardini (2008); Bombardini and Trebbi (2012); Madeira (2016).

⁵ Kim (2017); Weymouth (2012).

⁶ Brutger (2015); Betz and Kerner (2016).

⁷ Kuno and Naoi (2015); ?. See also Walter (2017); Dancygier and Walter (2015) for related work on the firm-level drivers of the preferences of workers.

⁸ Milner (1988), Manger (2009), and Dür (2010).

through collective action.

My argument and findings therefore move the ‘firm-centered’ approach to trade politics forward by connecting preferences to political organization and activity. This argument contrasts with two long-running ideas in the literature. First, the literature argues that trade policy pits protection-seeking producers against pro-trade consumers, creating a protectionist bias because producers are few in number but with more intense preferences.⁹ My argument inverts this claim, holding that pro-trade firms are in fact politically privileged vis-a-vis anti-trade firms. Consequently, free trade may be achievable without institutions that empower consumers, like democracy.¹⁰ Second, the Ricardo-Viner model argues that trade sets export-competing industries against import-competing industries. As a result, large and small firms in uncompetitive industries oppose the interests of both large and small firms in competitive industries, and neither side holds any clear advantage in collective action. In my firm-centered approach, the concentration of trade’s benefits breaks this symmetry, skewing advantages in political action towards pro-trade firms. This allows pro-trade firms to devote more effort to defeating trade’s opponents outside of industry. The heavy concentration of globalization’s gains in the present era therefore explain both the preference and political action of America’s pro-trade firms.

Political Activities of Firms Around Trade

Firms’ public campaigns in support of trade are extensive in the US over the past 25 years. To show this, I examine public expressions of support for 25 trade-related issues, including all 13 US trade agreements from NAFTA to KORUS; 2 failed trade agreements (the Free Trade Agreement of the Americas and the Trans-Pacific Partnership); four extensions of Permanent Normal Trade Relations (to China, Russia, Ukraine, and Vietnam); three extensions of Fast Track or Trade Promotion Authority (from 1991, 2002 and 2015); the African Growth and Opportunity Act (AGOA); and two

⁹ Pareto (1927); Schattschneider (1935).

¹⁰ Mansfield, Milner and Rosendorff (2002); Milner and Kubota (2005); Davis and Wilf (2017); Rickard (2010); McGillivray (2004); Betz (2017).

WTO negotiating rounds.¹¹ Public position taking on these issues generally occurred through one or several ad hoc coalitions formed to support a particular agreement or policy.¹²

The firms which publicly support trade – especially those that have matched support with lobbying, campaign giving, and collective organization – are the foundation of America’s *pro-trade coalition*. The political activities of the firms in this coalition are vast in their own right, though they are also bolstered by the efforts of the pro-trade industry and peak associations they populate. I now develop two foundational stylized facts about these pro-trade firms: they are highly organized as a group, and highly engaged in political activities as individuals. These patterns are particularly striking in comparison with the small number of firms that have organized to oppose trade.

The firms in America’s highly organized pro-trade coalition

Table 1 introduces the leading pro-trade firms in the United States. Proctor and Gamble, the most regular supporter of trade among US firms, publicly supported 24 out of 25 trade issues. Many of these firms are familiar as major corporations, but also for their pro-trade activities. Boeing has been a stalwart defender of the Export-Import Bank due to its reliance on exports. Caterpillar is one of the most vocal pro-trade firms in the US: its leadership organized some of the ad hoc coalitions which have formed to support every trade issue in this data but the Jordan FTA.

These coalitions are the main source of information for the 7700 public expressions of support for trade by over 4300 unique firms in my data. Their existence is also a key stylized fact: America’s pro-trade firms and associations are exceptionally well organized *as a collective*. I count 42 unique pro-trade ad hoc coalitions formed to support the 25 issues. Their efforts are complemented by 10 permanent coalitions like the Comprehensive Market Access Coalition and the Entertainment Coalition for Free Trade. These groups participate intensively in public campaigns, Congressional hearings, submissions to the USTR, and lobbying. And of course, a wide array of industry associ-

¹¹On PTAs, see also Slapin and Gray (2014); Baccini and Dür (2012); Mansfield and Milner (2012); Dür and Lechner (2015); Gray and Slapin (2012); Lechner (2016). Pro-trade firms may demand trade relief, as in Boeing’s advocacy of countervailing duties for foreign subsidies. Unilateral forms of protection may benefit firms that nonetheless support reciprocal trade.

¹²I use other sources to identify firms’ positions, including congressional testimony and submissions to the USTR. These sources generate far fewer codings, and often confirm codings from coalition activity.

Table 1: Top public supporters of trade among firms in the US, 1991-2016.

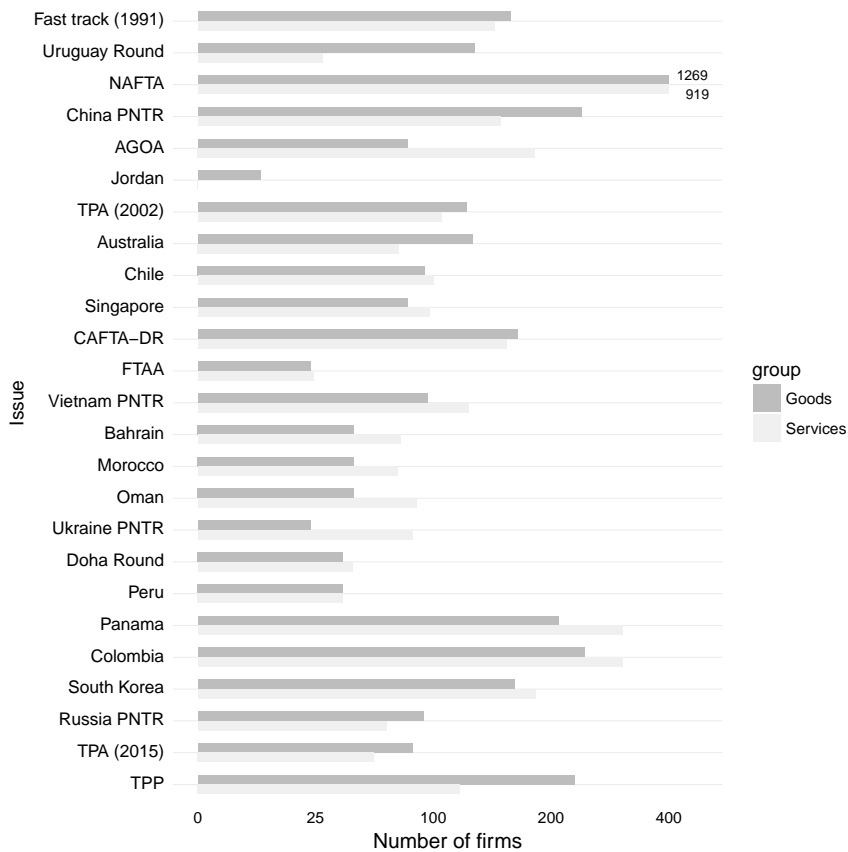
Goods-producing firms:			
Procter and Gamble	24	Ford Motor	Campbell Soup Co.
Boeing	23	Honeywell	Case New Holland
Caterpillar		Qualcomm	ConocoPhillips
Cargill	21	EDS	13 Cummins
IBM		Amway	12 Gap
United Technologies		Fluor	Guardian Industries
ExxonMobil	20	Liz Claiborne	Ingersoll-Rand
General Electric		Xerox	Mattel
Hewlett Packard		ADM	11 Nike
Merck		Cisco Systems	Nortel Networks
Microsoft		Emerson	Occidental Petroleum
DaimlerChrysler	19	Philip Morris	Air Products and Chems. 8
3M	18	Raytheon	Applied Materials
Coca-Cola		Texas Instruments	ConAgra
Intel		Abbott Laboratories	10 Dell
Johnson and Johnson		BP Amoco	Diageo North America
Eli Lilly	17	Brown-Forman	Eastman Chemical
Motorola		Bunge	FMC
PepsiCo		Dupont	General Mills
Chevron	16	International Paper	Hormel Foods
Deere and Co.		Kraft Foods	Levi's
Dow Chemical		Mars	Medtronic
Lockheed Martin		Monsanto	Textron
General Motors	15	Rockwell Automation	Warnaco
Halliburton		Goodyear	Whirlpool
Pfizer		ABB	9
Eastman Kodak	14	Avon Products	
Services industries:			
CitiGroup	23	Oracle	Fluor Corp
UPS	22	AFLAC	14 Gap
AIG	21	American Express	Marriott International
IBM		New York Life	Phil. Int. Medicine
AT&T	20	Verizon	Unisys
General Electric		Liberty Mutual	13 Wilmer Cutler etc.
Federal Express	19	Amway	12 BechTel Group 8
Microsoft		McGraw-Hill	C & M Int.
Visa Inc		Morgan Stanley	Cisco Systems
Walmart Stores		Time Warner	Counselors' Inc.
White and Case		Cleary Gottlieb etc.	11 Discovery Comms.
Deloitte and Touche	18	Principal Financial	HealthGrades Inc
JP Morgan		Accenture	10 Hemisphere
ACE group	17	ADM	Household International
Chubb		Bank of America	Mastercard
Metlife		King and Spalding	News Corp
Motorola		State Street	Pricewaterhouse Coopers
EDS	16	Akin Gump Etc.	9 Prudential Financial Inc
Halliburton	15	AOL Time Warner	West Eng. Services

Notes: Number of expressions of support out of 25 issues. Abbreviated or unofficial corporate names used to preserve space.

ations and peak associations (e.g. the US Chamber of Commerce and the American Farm Bureau Federation) join their efforts.

American producers opposed to trade have formed only four significant coalitions: the Coalition for a Prosperous America (which opposed KORUS and the TPP); an anti-TPP agriculture

Figure 1: Number of supporting firms across issues.



coalition; and two others focused on trade remedies and exchange rate manipulation.¹³ I count only 301 total firms that have publicly opposed the 25 trade issues. This organizational gap has been only partly filled by coalitions of labor unions, churches, human rights groups, family farms, and environmental NGOs that have opposed several trade agreements.

Figure 1 shows variation in the number of firms supporting trade across issues. The median firm in the data supported one issue out of 25, and the average number of issues supported per firm is 1.81 and 1.71 in goods and services, respectively. Thus, the pro-trade coalition is composed of a large number of firms that support only 1 agreement, and a smaller group of firms with a much richer and more sustained engagement which nonetheless varies across issues. Table 2 illustrates variation in rates of positiontaking by firms across subsectors. For example, 51 unique firms in

¹³These coalitions of firms and associations have been supported by peak associations like the US Business and Industry Council and the National Family Farm Coalition.

Table 2: Supporting firms across subsectors.

		All		Med/Large			Very large		
		#	Wtd.	#	Wtd.	%	#	Wtd.	%
Goods-producing firms:									
111	Crop production	51	83	21	31	.26	6	16	6.1
112	Animal production	22	35	6	10	.12	4	11	6.5
211-2	Mining	50	158	5	5	.10	36	140	4.5
311-2	Food and beverages	167	416	36	55	.19	64	264	6.7
313-6	Textiles and apparel	192	296	54	66	.54	42	115	15
321-3	Wood and paper	119	163	41	46	.15	26	57	6.3
324-5	Oil products and chemicals	209	526	63	86	.48	78	337	5.6
326-7	Plastics and mineral products	119	166	51	60	.28	19	54	4.3
331-2	Metals and metal products	242	320	103	125	.33	33	63	5.1
333	Machinery	363	566	167	216	.55	49	158	8.2
334-5	Computers and electronics	239	631	69	88	.25	84	427	4.1
336	Transportation equipment	107	243	30	41	.30	37	150	8.4
337-9	Furniture and misc.	152	201	52	60	.23	34	65	5.1
	Unknown or other	187	212	-	-	-	-	-	-
	All goods	2222	4023	735	931	.31	535	1889	5.8
Services firms:									
22	Utilities	21	34	1	1	.01	14	26	1.0
23	Construction	54	60	19	21	.01	6	10	0.2
42	Wholesale trade	169	205	62	79	.03	12	15	0.1
44-5	Retail trade	110	195	21	26	.01	42	98	1.1
48-9	Transport and warehousing	123	242	37	65	.04	29	98	1.1
51	Information	118	335	15	18	.03	50	241	2.9
52	Finance and insurance	224	609	41	105	.05	81	334	0.4
53	Real estate	43	60	10	16	.01	5	8	0.2
54	Professional services	652	1146	164	270	.09	106	312	2.7
55-6	Management and admin.	72	99	19	24	.02	7	8	0.1
61	Education	21	26	8	8	.02	2	2	0.1
62	Health care	25	39	7	10	.01	3	4	0.1
71	Arts and entertainment	12	18	1	1	.00	2	7	0.3
72	Accommodation and food	24	43	6	7	.01	8	25	0.4
81	Misc. services	23	30	8	12	.01	2	4	0.2
	Unknown and other	447	525	-	-	-	-	-	-
	All services	2145	3677	467	735	.03	383	1229	0.6

Notes: # refers to number of firms in a subsector that publicly supported trade at any point; 'Wtd.' refers to the total number of expressions of support for 25 trade policy measures. Firms with unknown industries could not be matched to a specific NAICS industry.

crop production (Column 3) ever publicly supported a trade issue, and those firms supported 83 issues (Column 4). The table also breaks down firms by size categories from Orbis, examining Medium and Large firms and then Very large firms. (The remainder are Small.) Examining this table, it is evident that public support for trade is rare across firms but even across industries.

Table 3: PAC contributions by pro-trade firms in federal elections, 1994-2016.

	Goods			Services			All
	House	Senate	Pres.	House	Senate	Pres.	
<u>Pro-trade firms among all firm PACs:</u>							
Total (\$10 Million)	31.9	14.9	0.7	37.6	17.0	0.8	104.5
% Share of PAC contributions	68.8	67.2	62.9	47.8	42.2	37.6	56.1
<u>Pro-trade firms and assoc. among all firm, assoc. and union PACs:</u>							
Total (\$10 Million)	37.8	17.8	0.8	51.3	22.3	1.0	133.6
% Share of PAC contributions	55.8	58.8	37.9	30.6	30.5	8.5	35.9
<u>Pro-trade firms and assoc. among all non-party PACs:</u>							
% Share of PAC contributions	11.5	7.2	0.6	14.5	8.4	0.7	17.3

Notes: Contributions data from Center for Responsive Politics are matched to pro-trade firms. Candidate PACs omitted from final row.

The intensive political engagement of America’s pro-trade firms

This section advances a complementary stylized fact: America’s pro-trade firms are vastly more engaged *as individuals* in campaign contributions and lobbying than both anti-trade firms (who are few) and firms that are publicly indifferent over trade (who are many). These data also answer a key question about public support for trade agreements: Why would policymakers care about the public positions of firms on trade agreements? My answer is that politicians craft policies suited to the interests of the constituencies that are politically engaged and give campaign contributions.

Table 3 shows PAC giving by firms in America’s pro-trade coalition. These firms gave around \$1.05 billion dollars in PAC contributions to candidates for the House, Senate, and Presidency from 1994 to 2016. When supporting trade associations are included, this total rises to \$1.34 billion dollars. This is 17.3% of PAC contributions excluding candidate and party PACs. These figures are even more striking within narrower classes of actors. Among corporations only, firms in the US pro-trade coalition account for 56.1% of PAC contributions. The contributions of pro-trade firms and associations account for 35.9% of all PAC contributions given by producers and unions.

Comparing publicly pro-trade firms with publicly anti-trade firms makes for a startling contrast. Pro-trade firms give 68.2% of all corporate PAC contributions by goods firms; publicly anti-trade firms give 2.0%.¹⁴ Pro-trade firms are 45.8% of giving in services; anti-trade firms are .1%.

America’s pro-trade firms have an even larger profile in lobbying, as shown in Table 4. Firms in

¹⁴The gap when contributions from industry associations are also included are 56.3% and 4.1%.

Table 4: Lobby spending on trade by pro-trade firms, 1998-2016.

	Goods	Services	All
Pro-trade firms among all firms:			
Total (\$100 Million)	68.0	19.5	87.7
% Share of lobby spending	89.5	81.4	87.8
Pro-trade firms and assoc. among all firms, assoc. and unions:			
Total (\$100 Million)	96.3	38.8	123.4
% Share of lobby spending	87.8	75.0	86.6

Notes: Data from Center for Responsive Politics. Trade-related lobbying includes any report that employs “Trade (Domestic or Foreign)” or “Miscellaneous Tariff Bills” issue codes. Expenditures are not available per issue; reports may cover multiple issue areas.

America’s pro-trade coalition account for 87.8% of all lobbying expenditures by firms recorded on lobby reports that mention trade. That number only falls to 86.6% when all other types of lobbying groups are included. What about firms that have publicly opposed trade in the United States? In goods, they account for 1.7% of corporate lobbying on trade, compared to supporting firms’ 89.5%. In services, public opponents of trade are less than .02% of lobby spending, compared to supporting firms’ 81.4%. Appendix B provides further detail confirming these broad patterns.

Explaining Firm Participation in Pro-Trade Activities

My explanation for firm’s decision to support trade – and for pro-trade firms’ vastly greater political engagement and organization on trade – begins with a simple observation: firms differ enormously in their level of engagement with international markets. Only a minority of firms actually export their products or directly import inputs in almost all industries; ownership of foreign subsidiaries is even more rare.¹⁵ Firms in an industry therefore fundamentally differ from one another: some extensively source and sell abroad while others do not avail themselves of such opportunities.¹⁶ Even among firms that do export or import, a much smaller minority of ‘superstar’ firms account for the vast majority of export sales and import purchases. In the United States, the largest 1% of

¹⁵Bernard et al. (2012) reviews the extensive empirical literature on firm heterogeneity.

¹⁶Bernard, Jensen and Schott (2009) find that 14.7% of US goods-producing firms exported in 2000. 7.3% themselves directly imported, and 3.7% had multinational production facilities. The corresponding numbers (1.0%, 0.6%, and 0.2%, respectively) are even lower in services. Similar patterns have been found in the EU, Japan, and many other countries. See Tomiura (2007); Mayer and Ottaviano (2008).

all exporting goods-producers – that is 1673 firms – accounted for 80.9% of all goods exports in 2000. 77.6% of imports were bought by the top 1% of importing firms.¹⁷

The firms which dominate export, import, and foreign production are very large.¹⁸ This nexus between size and global engagement arises because exporting and importing are costly, requiring significant new investments to engage foreign markets. Such costs can only be borne by firms that are sufficiently productive (that is, with low enough costs relative to prices) so these costs can be absorbed into higher markups on a larger volume of sales (Bernard et al., 2003; Tomiura, 2007).

This intra-industry heterogeneity in global engagement leads to a third view of the distributive consequences of trade liberalization, which contrasts with the prevailing industrial (Ricardo-Viner) and factoral (Stolper-Samuelson) models of trade politics. Because firms in an industry differ in their ability to engage global markets, policy changes which facilitate trade or foreign investment have redistributive consequences within industries (Melitz, 2003). For example, firms that export can increase their profits when foreign markets reduce their barriers to trade. Firms that don't export make no such gains, and lose profits if liberalization is reciprocal and increases competition in the home market. Similarly, firms that are productive enough to source intermediates or final goods from abroad will benefit from reduced barriers to trade in their home market. Domestic firms which can't take advantage of these opportunities see no such gains and face heightened competition as their domestic competitors are able to sell more cheaply.

Recent work in the literature on firms and trade emphasizes another facet of heterogeneity: even similarly-sized firms in the same industry can differ markedly in the sets of countries in which they actually undertake exporting or importing.¹⁹ For example, a large US food company may specialize in selling to the countries of the Middle East; or an auto company may extensively source parts from Mexico even as its competitor sources from South Korea and China. For this reason, the distributive consequences of a proposed trade agreement with a particular country may differ

¹⁷The top 10% of exporters and importers account for 96.3% and 95.0% of these activities, respectively.

¹⁸Bernard and Jensen (1999), for example, find that exporting firms in the US are roughly twice as large in terms of sales and employment as non-exporting firms. Tomiura (2007) finds that Japanese importers and multinationals are 224.8% and 70.5% larger, respectively.

¹⁹See, for example, Eaton, Kortum and Kramarz (2011); Manova and Zhang (2012).

markedly even among ‘globally competitive’ firms.

The firm-centered approach to trade has scope conditions. The literature on firm heterogeneity and exporting emphasizes product differentiation: where consumers have a taste for varieties of a product, a country may both export and import varieties of that good. Amidst this intra-industry trade, a firms’ attitudes towards trade are driven by whether or not they export (Kim, 2017). The literature on firm heterogeneity in importing and foreign production holds that opportunities for the profitable extension of the global supply chain must exist to activate firm size as a driver of support for trade (Manger, 2012; Jensen et al., 2015; Blanchard and Matschke, 2015). The rise of global supply chains enable importing and multinational firms to knit together low-cost and efficient global production networks to produce and deliver goods at higher profit. In this way, two characteristic features of modern international trade – intra-industry trade and globalization of the supply chain – drive the firm-centered politics described here.

The model of preferences: size, multinationality, and global networks

Firm-level implications Combining these pieces, I describe several microfoundational relationships governing support for trade among firms. The simplest is that larger and more global firms are more likely to support trade agreements and other policies which facilitate trade and investment.

Hypothesis 1.

Larger firms and firms that own foreign affiliates will be more likely to support any given trade issue than smaller firms.

Similar claims have been tested with surveys of firms in Japan and Costa Rica.²⁰ This paper fills an empirical gap in this extant literature by focusing on public expressions of support by firms in the United States. This *public position taking* is a politically meaningful expression of interest which, unlike data on lobbying, clearly identifies the orientation (pro or con) of firms.

Firm-partner level implications My discussion suggests that firms support trade liberalization with

²⁰See Plouffe (2017). Jensen et al. (2015) and Blanchard and Matschke (2015) show that trade policies respond to the features of firms’ global supply chains, too.

countries with whom they have strong extant or future relationships. This focus on heterogeneity in global networks serves a key purpose in testing my model of support for trade because a correlation between firm size and support for trade is liable to several interpretations. For example, larger firms might simply be more active across all political issues, and so the pro-trade attitudes of firms on any given issue might not be as deeply or sincerely felt as I have argued above. Support ought to arise from meaningful interests driven by characteristics of specific trade partners.

Matching data on the political activity of firms to administrative data on firms' export (and import) activity is currently infeasible. A compelling second-best approach is available.

Hypothesis 2.

Firms will be more likely to support a trade agreement with a particular partner if that firm's industry has significant opportunities to engage in exporting and importing **and** if the firm is larger.

This hypothesis implies an interactive effect between size and opportunities to export and import. Simply being large is not sufficient to generate support for a trade agreement with some country if there are no opportunities for trade or investment. Likewise, smaller firms should not support trade agreements just because their industry exports to or imports from a country, because they are likely to be shut out of much of the benefits of this trade. But large firms in industries that export a lot to (or source a lot from) a foreign country are likely to be precisely the firms doing the exporting (or importing).

A similar hypothesis relates the characteristics of firms' subsidiaries to their attitudes toward trade. Due to the availability of data on multinational activities of firms disaggregated by country, this hypothesis can be tested using a first-best firm-level approach:

Hypothesis 3.

Firms which own a subsidiary in a particular country should be more likely to support a trade agreement with that country.

I highlight at this point that, in most cases, firm support for trade is expressed by joining one of the ad hoc public coalitions that I described above. My analysis of firms' public attitudes towards

trade is therefore mainly an analysis of which firms decide to join in the collective efforts of firms and associations on behalf of global integration. This connects my discussion of coalitions to the firm-level empirical analysis below, but also makes clear the need for a theory of public action – whether individual or collective – by firms.

Incentives for individual political activity and collective organization around trade

The main implication of the firm-centered approach to trade is that larger firms are likelier to support trade liberalization because they export, import, and invest abroad; small and medium-sized firms are more likely to oppose trade. Heterogeneity in firms' postures towards foreign markets reinforces the high concentration of liberalization's benefits among a subset of very large firms. These distributive consequences have implications for the relative costs and benefits that pro- and anti-trade firms encounter when they undertake both individual and collective forms of political engagement, explaining the patterns I uncovered above about the sharp disparity in individual and collective action by pro- and anti-trade firms.

Individual political activity includes making campaign contributions and lobbying as a firm. Larger firms are likely to find it more worthwhile to undertake these activities for three reasons. First, to the extent that lobbying and (effectively targeted) contributions on any given issue entail a fixed *per issue* investment, only firms that face large policy impacts from liberalization will find it profitable to pay this fixed cost to influence the policy outcome (Kerr, Lincoln and Mishra, 2011; Broscheid and Coen, 2003). Since a few large firms reap most of the gains from a given trade proposal, they are willing to pay such a cost. Smaller firms harmed by trade tend to face a much smaller cost from trade in absolute terms, both because they are small and because there are many of them and so costs of additional competition are spread across many firms (including the large firms that benefit on net from liberalization). They are less likely to find paying the fixed costs of political influence to be profitable. Second, pro-trade firms are likelier to have paid the long run start-up costs of political influence which last *across issues* owing to their size. Larger firms account for most lobbying in general, but also specifically in the area of trade (Drope and Hansen,

2006; Kim, 2017). This willingness to pay startup costs is also driven by the broader set of issues confronting big firms and their greater available capital to invest in long-run political influence (Epstein, 1969; Drope and Hansen, 2006). Finally, larger firms are likely to find that their voice is louder when they undertake individual action because they employ many more workers and have a much larger economic profile. Politicians are apt to listen to firms that employ many workers and generate a a lot of revenue (Hillman, Keim and Schuler, 2004, p. 839). For this reason, the marginal benefits of individual action are greater for a larger firm than a smaller firm.

Each of these arguments suggests that larger, pro-trade firms are more likely to engage in individual forms of political action around trade than smaller, anti-trade firms.

Hypothesis 4. Pro-trade firms are likely to account for more lobbying, campaign contributions, and other individual forms of political activity than anti-trade firms.

This argument concerns an aggregate outcome, the results of which are presented above as a motivating stylized fact on the dominance of pro-trade firms in lobbying and campaign contributions, both in absolute terms and relative to firms opposed to trade.

Collective political action around trade by firms has centered around two forms of engagement: firms have joined permanent peak associations and coalitions which regularly advocate for trade, like the Business Roundtable and the coalition Trade Benefits America; and, firms have also joined ad hoc and issue-specific coalitions, like the American Business Coalition for Doha and the Coalition for US-Russia Trade. For firms whose interests align with these coalitions, the coalitions' efforts represent a public good. All firms that will benefit from the agreement entering into force gain those benefits regardless of whether they have contributed to the political campaign on behalf of that agreement or not. The same holds for firms opposed to the agreement. Political efforts both for and against trade agreements are therefore likely to be subject to a collective action problem, where some firms attempt to free ride on the political efforts of others (Alt and Gilligan, 1994).

The larger firms which support trade are more likely to overcome this collective action problem and form successful coalitions than the smaller firms which oppose trade for two reasons. First, the supporters of any given trade issue are relatively few in number, while the opponents are

many in number. The collective action problem is generally worse with greater numbers because: any individual contribution is less efficacious; monitoring and use of 'social incentives' are harder; more of the public goods' benefits are externalities; and, the share of group members which must contribute to secure the public good is often higher (Olson, 1965; Palfrey and Rosenthal, 1984). Second, the firms that support trade have relatively intense preferences while the opponents have weaker preferences, as described above. This exaggerates the challenges associated with convincing anti-trade firms to make contributions to effective collective efforts to resist liberalization. These arguments then suggest that collective political action is more likely for pro-trade firms, which is the final implication of the model.

Hypothesis 5. The collective organizational efforts of pro-trade firms are likely to be much greater than those of anti-trade firms.

These arguments then rationalize the second stylized fact described at the beginning of the paper, that pro-trade firms have much more successfully organized both temporary and permanent groups to lobby on behalf of trade.

The superior cost-benefit calculus for political action among pro-trade firms is likely to be reinforced by political institutions that facilitate the influence of very large corporations. The US encourages corporate input (on trade issues) through generous and increasingly loophole-laden limits on contributions, and a highly institutionalized system of lobbying. Industrial trade advisory committees (ITACs), Congressional hearings, and notice and comment periods provide further avenues for large, politically savvy firms to make their voices heard.

Summing up these tendencies, the large firms in the pro-trade coalition possess three distinct features which contribute to political power: they confront a more forgiving cost-benefit analysis when they consider individual political action; they find it easier to overcome the collective action problem to collectively organize; and US political institutions enable the exploitation of these assets. Unlike in the industry-centered Ricardo-Viner approach, the efficacy and ease of both individual and collective political action is clearly asymmetric in favor of the firms that support trade. For example, in the Ricardo-Viner approach some large firms would favor while others would op-

pose trade; in approaches with firm heterogeneity, all of the politically adept large firms fall on one side of the trade cleavage. Pro-trade preference coincides with key facets of political power among firms, explaining the diminished intensity of conflict among producers over trade.

Of course, pro-trade firms are not simply pushing on an open door when it comes to securing trade liberalization, and so exploiting their advantages in political action remain critical. First, there are a few small pockets of well-organized protectionism in US industry, and an array of trade remedies available to these sectors which enable them to resist open international borders. Second, there is strong opposition to trade agreements from labor unions and workers concerned about displacement from foreign imports and offshoring.²¹ Third, many other progressive and left-wing groups have organized to oppose US trade agreements, on environmental, human rights, labor rights, and developmental grounds. Fourth, voters are susceptible to populist rhetoric on trade;²² by extension, so are their political representatives in Congress and the Executive branch. Finally, pro-trade producers must still fight for the resources – time, attention, and political capital – to see trade agreements placed on the agenda and pushed over the finish line.

Data and Empirical Tests of the Model of Participation

I have demonstrated that pro-trade firms are individually and collectively more active in trade politics than anti-trade firms, and argued that this arises because trade's supporters are 1) large and 2) have interests in particular countries which give them strongly held preferences for integration with those countries. Completing my argument requires showing that the latter two conditions hold by testing Hypotheses 1-3. To do so, I match by hand firms that have supported trade by joining the public activities of America's pro-trade coalition to firm-level data from Orbis.

The Orbis data has several strengths exploited here. Many of the firms that publicly support trade are private and Orbis has the most comprehensive publicly available data on private firms. Orbis classifies firms into industries, facilitating matching firms to data on trade flows. Orbis is

²¹Owen (2015, 2017); Rommel and Walter (2018); Mansfield and Mutz (2013).

²²Mansfield and Mutz (2009); Naoi and Kume (2011). See Baker (2005); Naoi and Kume (2015) on the countervailing force of consumerism.

also relatively strong at classifying firms into coarsely defined size categories. Orbis' information on revenues and employees are generally highly reliable for publicly traded firms but not for private firms; I therefore re-test all claims about firm size among public firms only using firm revenues.²³ Finally, Orbis is unique in providing detailed information on corporate structure, including on the number and location of foreign subsidiaries of firms.

To develop a comparison set of non-supporting US firms, I conduct a stratified random sample of 100000 US firms that Orbis categorizes as Small, and 100000 firms categorized as Medium, Large or Very large, among both goods and services. Sampling weights are constructed using the complete population of firms by size. All regression models weight the sampled non-supporting firms using the true population size distribution; supporting firms are given a weight of 1 because I have the population of such firms.

These firm-level data are matched with publicly available trade data from the US Census Bureau's "NAICS Related Party Database" aggregated to the 4-digit NAICS level. I select the years 2005-14 to give a long snapshot of an industry's trade relationship with a particular partner that averages over year-to-year variability in trade flows. I only consider agreements for which there is a defined set of foreign trade partners when examining trade data in the main text. I match public support for the two GATT/WTO rounds and three votes on trade promotion authority to trade data with the entire world in the online appendix. I use the following trade flows which are always specific to the 4-digit NAICS industry and the partner(s) in some agreement: US exports; US imports not arising from related parties; related-party imports (as a proxy for the activities of US multinationals at the industry level); and a measure of imported intermediate inputs constructed using BEA input-output tables.

Empirical strategy

Each of the hypotheses above specifies a firm-level feature, perhaps in interaction with a feature of a trade partner, that is expected to drive firms' expressions of support for a trade agreement or other trade issue. The unit of analysis is therefore the firm-partner (or firm-issue). I represent

²³Appendix A validates Orbis against other firm-level sources.

a generic firm with the subscript f and partner/issue with the subscript p . The main outcome is notated Support_{fp} and is dichotomous. It equals 1 when a particular firm supported some issue. All firms are part of a single (4-digit NAICS) industry, which is represented by the subscript i .

In attempting to establish that some firm or industry characteristic contributes to support for trade, a recurring set of potentially confounding factors arise. First, particular industries may differ in their characteristics in ways that confound the links between firm-level variables and outcomes. For example, if export-competitive industries have larger firms, then we would find a spurious link between firm size and support for trade that is not driven by firm-level features. I therefore use industry fixed effects (μ_i).²⁴ Second, more firms support some agreements than others, which may generate an unwarranted link between partner-industry characteristics and support. For example, more firms may have supported NAFTA for idiosyncratic reasons relating to the construction of the main ad hoc group. I therefore employ partner/issue fixed effects (μ_p).

Third, it is essential to show that the links between firm size and support hold conditionally on the import and export flows between the US and its trade partners, to distinguish my firm-centered approach from the industry-centered Ricardo-Viner model. I therefore control for the Exports, Imports, Related party imports, and Inputs of the US and the trade agreement partners. Finally, where firm features differ across agreements, it is possible to control for arbitrary unmeasured firm-level features that may explain support for trade. For example, suppose that larger and more productive firms are more likely to support trade, in general, and more likely to have subsidiaries in various countries. This threat to estimating the impact of partner-specific patterns of trade and foreign investment is handled with firm fixed effects (μ_f).

Fixed effects provide control for unmeasured firm, industry, and partner features. However, fixed effects reduce the amount of variation off of which estimates are formulated, and may strip away relevant aspects of variation rather than unmeasured confounding. I therefore examine models without fixed effects and then sequentially add in the fixed effects, to show that my results are not driven by opaque aspects of the variation that remains once firm, industry, and partner inter-

²⁴Fixed effects are at the 4-digit level for goods, and at the 3-digit level for services industries. Industry fixed effects are accounted for when firm fixed effects are employed due to the hierarchical structure of the data.

cepts are partialled out.

To test Hypothesis 1 on the role of firm size and multinationality, I employ subsets of the following complete model specification:

$$\begin{aligned} \text{Support}_{fp} = & \beta_{1-4} \cdot \text{Size}_f + \beta_5 \cdot \text{Foreign subsidiary}_f + \\ & \gamma_1 \cdot \ln \text{Exports}_{ip} + \gamma_2 \cdot \ln \text{Imports}_{ip} + \gamma_3 \cdot \ln \text{RP Imports}_{ip} + \\ & \gamma_4 \cdot \ln \text{Inputs}_{ip} + \mu_i + \mu_p + \epsilon_{fp}. \end{aligned}$$

In the sample of public firms, the size variable is replaced with the natural logarithm of the firm's *Revenue*. The *Foreign subsidiary* variable equals 1 if a firm has any foreign subsidiary.

To test the second hypothesis, I use an interaction model. To economize on space and focus on the most relevant variation, I consider the difference between Very large firms and all other firms.

$$\begin{aligned} \text{Support}_{fp} = & \beta_1 \cdot \ln \text{Exports}_{ip} + \beta_2 \cdot \ln \text{Exports}_{ip} \cdot \text{Very large}_f + \\ & \gamma_1 \cdot \ln \text{Imports}_{ip} + \gamma_2 \cdot \ln \text{RP Imports}_{ip} + \gamma_3 \cdot \ln \text{Inputs}_{ip} + \\ & \mu_f + \mu_i + \mu_p + \epsilon_{fp}. \end{aligned}$$

The lower order term for the firm size variable *Very large* is omitted because I have included firm fixed effects, but is included in models without the firm fixed effects. Note that this model covers Exports; I separately test the interaction with the Inputs variable.

Finally, I investigate Hypothesis 3 with the following model:

$$\begin{aligned} \text{Support}_{fp} = & \beta_1 \cdot \text{Subsidiary}_{fp} + \beta_2 \cdot \text{Foreign subsidiary}_f + \\ & \gamma_1 \cdot \ln \text{Exports}_{ip} + \gamma_2 \cdot \ln \text{Imports}_{ip} + \gamma_3 \cdot \ln \text{RP Imports}_{ip} + \\ & \gamma_4 \cdot \ln \text{Inputs}_{ip} + \mu_f + \mu_i + \mu_p + \epsilon_{fp}. \end{aligned}$$

Subsidiary_{fp} refers to whether a firm has a subsidiary in the partner(s) for a given trade agreement.

Large Firms and Multinationals Drive Pro-Trade Campaigns

Figure 2 shows the stark relationships between firm size, multinationality, and the decision to publicly support trade by joining the pro-trade coalition. The top row of the figure reports the size

distribution of firms and the second row reports the log (base 2) number of foreign subsidiaries. The left column presents these distributions for all goods-producing firms in the United States. The middle column shows goods-producing firms that have supported trade. The right column weights firms by the number of trade issues that they have supported; a firm that supported 10 issues is weighted 10 times more than a firm that supported 1 issue, for example.

The top row shows that firms which publicly support trade in the United States are vastly larger, on average, than firms that don't. This is particularly so for the major producers that Orbis classifies as Very large, who are 50 times more common among supporting firms than among the population. Figure 3 shows the same among services firms, although the overrepresentation of larger firms is even more striking: Very large firms are 108 times more common among supporting firms than in the entire population. Comparing the size distributions of firms that support with the few firms that have publicly opposed trade also reveal stark disparities.²⁵

Small and medium-sized firms are underrepresented in the pro-trade coalition, but hardly absent. This may be because smaller firms have country-specific interests. For example, a small manufacturer located near the Mexican border might benefit from NAFTA. In general, smaller firms take positions on far fewer trade agreements, which accords with a model where firms are engaged asymmetrically across foreign markets. The largest firms may have connections to many foreign markets, though not all; smaller firms may be linked to only one foreign trade partner, if any.

The second rows of Figures 2 and 3 show that firms that support trade own far more foreign subsidiaries than firms that don't. 99.2% of all US goods-producing firms and 99.8% of all services firms own zero foreign subsidiaries according to this data. These numbers drop to 79.2% and 87.9% among pro-trade firms.²⁶ Even more striking is the huge overrepresentation of firms that own many foreign subsidiaries in the pro-trade coalition. Such firms are incredibly scarce as a

²⁵See Appendix B. Turning Orbis size categories into the numbers 1 (for small) to 4 (for Very large), the average US goods firm is 1.61, the average opposing firm is a 2.04, and the average supporting firm is 2.38. Weighting by number of agreements opposed/supported, the latter two numbers are 2.07 and 2.91. In services, the average US firm size is 1.62, among opposing firms it's 1.74, and among supporting firms it's 2.35. Weighting by numbers of agreements opposed the latter numbers are 1.68 and 2.74.

²⁶Appendix B1 shows that among firms publicly opposing trade agreements, 91.9% and 93.8% own no foreign subsidiaries in goods and services, respectively.

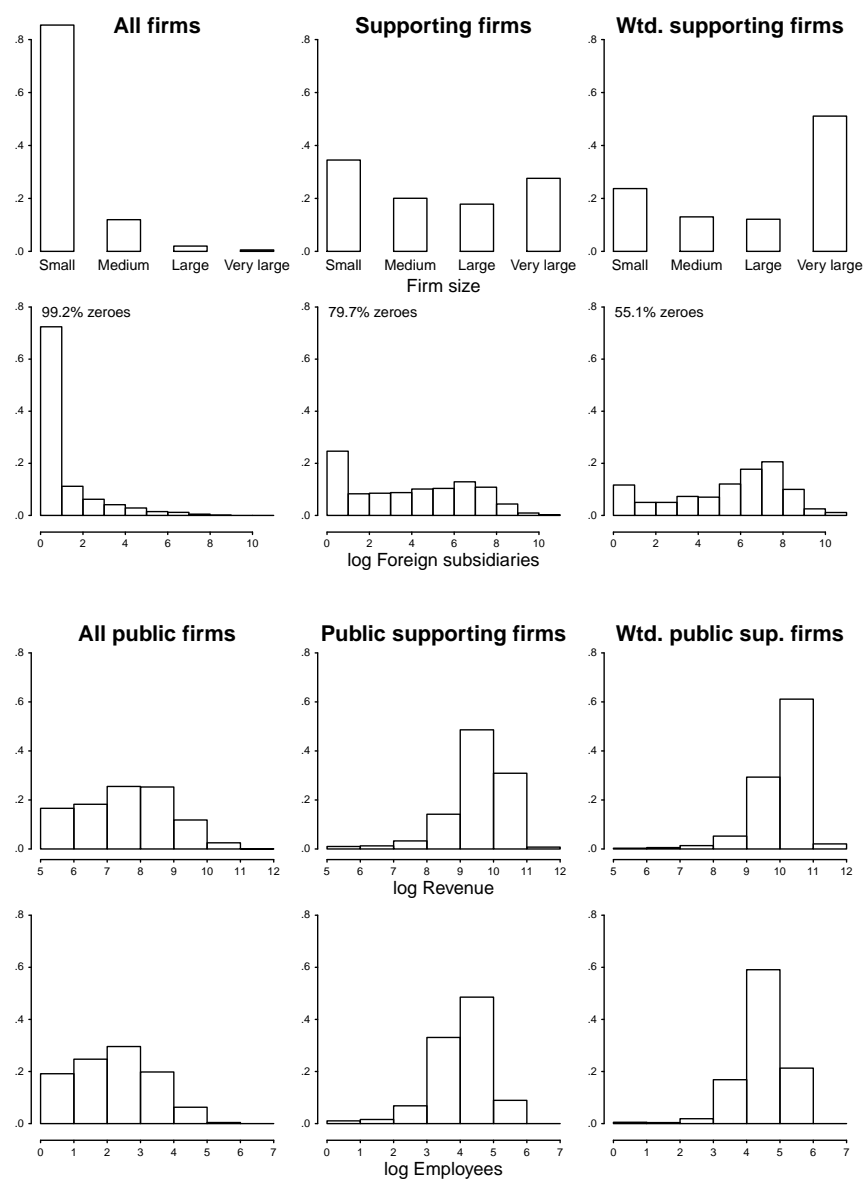


Figure 2: Size and multinationality among goods-producing firms.

share of the population as a whole, but common among pro-trade firms.

Finally, these results on firm size are reinforced looking at the distributions of Revenues and Employees among publicly traded firms in the bottom two rows of Figures 2 and 3. Even among the very large firms that make up almost all publicly traded corporations, the firms that support trade liberalization are noticeably larger.

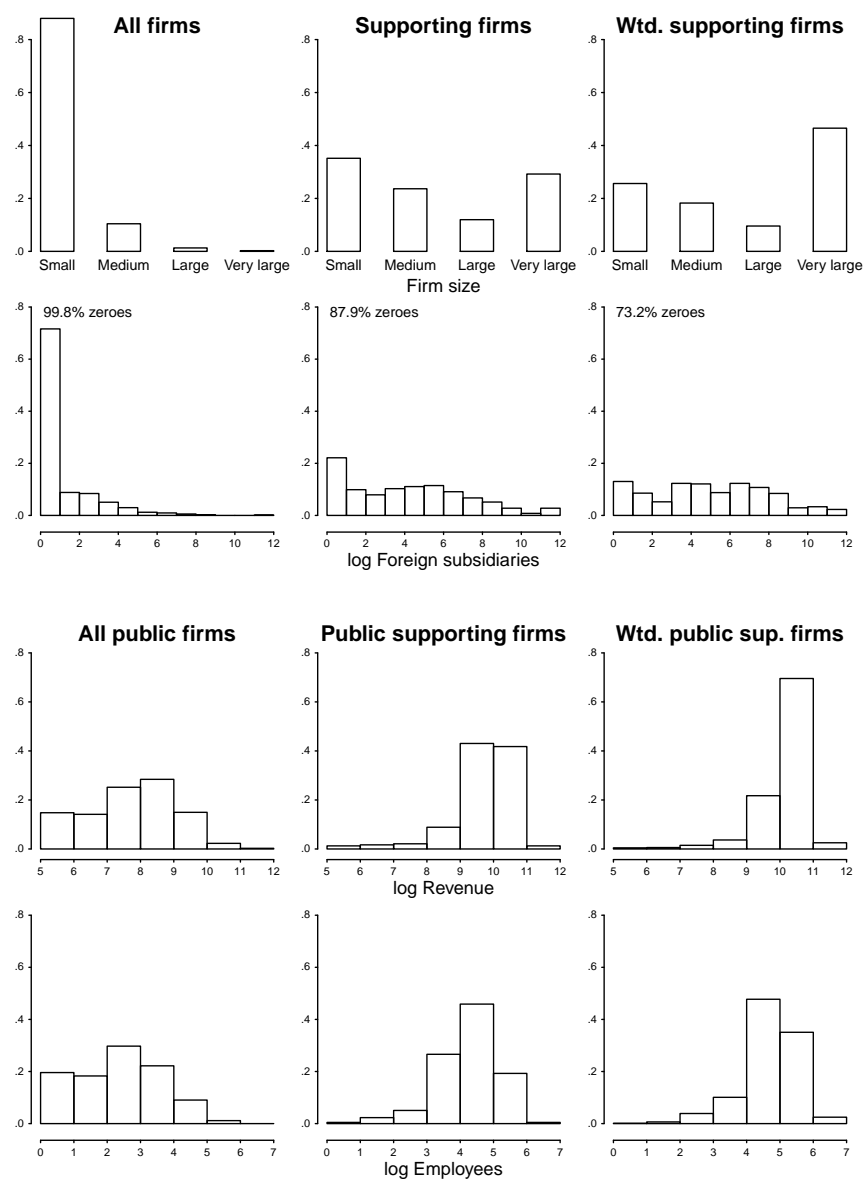


Figure 3: Size and multinationality among services firms.

Table 5 provides an alternative perspective on the links between firm size and support for trade using panel data to simultaneously examine the links between size, multinationality and support.²⁷ The first column shows the otherwise unconditional link between firm size, multinationality, and support across all trade issues. All coefficients reported are percentages. A large goods-producing

²⁷Note also that support in Figures 2 and 3 means that a firm supported one issue. Support in the regression models in Table 5 means the firm supported a particular issue p .

Table 5: Firm size, multinationality, and support.

	All firms			Public firms		
	1	2	3	4	5	6
<u>Goods-producing firms:</u>						
Intercept	0.001** (0.000)	-0.003 (0.003)	-0.015** (0.006)	-2.674*** (0.462)	-3.824+ (2.152)	-4.544+ (2.504)
Medium	0.007*** (0.001)	0.007*** (0.001)	0.009*** (0.002)			
Large	0.034*** (0.006)	0.034*** (0.003)	0.046*** (0.004)			
Very large	0.580*** (0.067)	0.583*** (0.006)	0.609*** (0.007)			
ln Revenues				0.918*** (0.143)	0.976*** (0.033)	1.008*** (0.039)
Foreign sub.	0.811*** (0.108)	0.813*** (0.007)	0.861*** (0.009)	1.326*** (0.304)	1.371*** (0.134)	1.390*** (0.157)
N	5036875	5009550	3544000	41250	41250	31460
<u>Services firms:</u>						
Intercept	0.000* (0.000)	0.000 (0.002)	-0.000 (0.002)	-3.099*** (0.757)	-4.057*** (0.441)	2.864 (4.996)
Medium	0.001*** (0.000)	0.001* (0.000)	0.001* (0.000)			
Large	0.002*** (0.001)	0.002* (0.001)	0.002** (0.001)			
Very large	0.056*** (0.012)	0.047*** (0.002)	0.051*** (0.002)			
ln Revenues				0.658*** (0.158)	0.701*** (0.066)	0.683*** (0.072)
Foreign sub.	0.260*** (0.056)	0.197*** (0.004)	0.208*** (0.004)	0.647** (0.209)	0.214 (0.162)	0.259 (0.185)
N	5017000	4942750	3954200	12675	9800	10140
Partner FE	No	Yes	Yes	No	Yes	Yes
Industry FE	No	Yes	Yes	No	Yes	Yes
Partner controls	No	No	Yes/No	No	No	Yes/No
Sample	All	All	Agrmts.	All	All	Agrmts.

Notes: All models are weighted least squares (WLS). Models 1,2,4 and 5 use WLS SEs clustered at the 4-digit NAICS level; models 3 and 6 use unclustered WLS SEs.

firm is .034 more likely to support any given trade issue than a Small firm, while a very large firm is .580 percent more likely. These figures make clear that support by a given firm for any given agreement is quite rare, but also that increasing firm size vastly increases the relative likelihood of support. A Large firms is 43 times more likely to support any given trade agreement than a Small firm; a Very large firm is 758 times more likely. This pattern is quite robust to the inclusion of partner and industry fixed effects, and measures of the exports to, and imports, from a trade partner at the industry level. This latter point is key: firm size is doing critical work to explain firm attitudes over and above the features of an industry's trade relationship with some country, lending support

to a firm-centered interpretation of trade politics. The association between firm size and support for trade is not just a result of large firms clustering in export-competitive industries. A very similar pattern holds among the large firms that make up publicly traded corporations. Increasing revenue by 100% increases the chance a publicly traded firm supports a given agreement by almost 1%.

Hypothesis 1's claim about the role of firm size also has implications at the level of the industry. Industries with an equal distribution of firms are unlikely to have the export and import superstars that drive firm support for globalization; industries which feature great heterogeneity, on the other hand, are likely to have pro-trade firms. I show in the online appendix that more firms support trade in industries where industrial concentration is greater. This test further disambiguates the RV model and a firm-centered approach, supporting the latter.

Global Firms' Orientations Drive Pro-Trade Action

Are firms motivated by the particular features of their trade partners in choosing which trade agreements to publicly support? The stakes associated with these tests are high. First, if larger firms are more likely to support *any* trade agreement, then that might be evidence for the impact of firm heterogeneity in global engagement on trade attitudes, but it also has many other plausible interpretations. Second, firms ought to be selective about which agreements to support based on the attributes of the trade partners (and their own engagement with those countries). If that is the case, then the supporters of a given agreement are likely to have deeply felt preferences driven by the concentrated benefits of trade agreements with particular partners, as I argue above.

Interaction between firm size and industry trade patterns I start by examining Hypothesis 2, that a firm's size and features of its industry's trade flows interact to generate support for trade. These results are reported in Table 6. In each of the models there is a significant interaction between firm size and the trade patterns of its industry. For example, moving firm size from not Very large to Very large, is predicted to increase the chance of support for an agreement by .43 when exports are held at their 25th percentile. At their 75th percentile, the increase is 1.11. A similar interaction effect

Table 6: Exports and imports drive support for trade among very large firms.

	All firms			Public firms		
	1	2	3	4	5	6
<u>Industry exports and firm size:</u>						
Exports	0.005*** (0.001)	0.000 (0.002)	2.025*** (0.356)	-1.221*** (0.236)	-1.337*** (0.198)	-2.951 (3.774)
Large	0.105 (0.074)	0.107*** (0.014)				
Large · Exports	0.414*** (0.054)	0.413*** (0.006)	0.813** (0.286)			
Revenue				0.248** (0.096)	0.389*** (0.061)	
Revenue · Exports				0.464*** (0.078)	0.423*** (0.027)	1.058* (0.520)
N	3551060	3547140	37660	31460	31460	4980
<u>Intermediate inputs and firm size:</u>						
Inputs	0.005*** (0.000)	-0.002 (0.002)	-0.631 (0.409)	-1.255*** (0.231)	-1.657*** (0.250)	-9.055* (4.017)
Large	0.328*** (0.070)	0.329*** (0.011)				
Large · Inputs	0.419*** (0.047)	0.419*** (0.007)	1.586*** (0.277)			
Revenue				0.529*** (0.108)	0.635*** (0.050)	
Revenue · Inputs				0.460*** (0.070)	0.439*** (0.030)	1.351** (0.512)
N	3551060	3547140	37660	31460	31460	4980
Partner FE	No	Yes	Yes	No	Yes	Yes
Industry FE	No	Yes	Yes	No	Yes	Yes
Firm FE	No	No	Yes	No	No	Yes
Partner controls	No	Yes	Yes	No	Yes	Yes
Sample	Agrmts.	Agrmts.	Agrmts.	Agrmts.	Agrmts.	Agrmts.

Notes: All models are weighted least squares (WLS). Models 1,2,4 and 5 use WLS SEs clustered at the 4-digit NAICS level; models 3 and 6 use unclustered WLS SEs. Industry FE are implicit with Firm FE in models 3 and 6.

is seen among the public firms. When exports are limited, increasing revenues from their 25th to their 75th percentile increases the chances of support by 2.32. When exports are significant, the chance of support grows by 4.98.²⁸

The results are similar when examining the import of intermediate inputs in the lower half of Table 6. To illustrate, increasing firm size in Model 1 increases the likelihood of support for trade by .46 when imported inputs trade is small (the 25th percentile) and by 1.08 when such trade is

²⁸The models also suggest that larger firms are much more moved by export opportunities than smaller firms. This accords with firm-centered model of trade, which predict that only the largest firms will benefits from liberalization. The models with firm fixed effects (3 and 6) reinforce this point on the conditioning effect of size on exports, but do not speak to the conditioning effects of exports on size.

Table 7: Foreign subsidiaries and support for trade among firms.

	All firms			Public firms		
	1	2	3	4	5	6
<u>Goods-producing firms:</u>						
Subsidiary	5.19*** (0.66)	5.18*** (0.03)	4.34*** (0.69)	9.61*** (1.44)	10.03*** (0.26)	6.96*** (1.46)
Any foreign sub.	0.52*** (0.07)	0.51*** (0.01)		1.33*** (0.27)	1.32*** (0.14)	
<u>Services firms:</u>						
Subsidiary	1.20*** (0.28)	1.19*** (0.02)	4.97*** (1.04)	2.49*** (0.73)	2.65*** (0.29)	6.38*** (1.93)
Any foreign sub.	0.15*** (0.03)	0.15*** (0.01)		0.60*** (0.17)	0.59*** (0.16)	
Partner FE	No	Yes	Yes	No	Yes	Yes
Industry FE	No	Yes	Yes	No	Yes	Yes
Firm FE	No	No	Yes	No	No	Yes
Partner controls	No	No	Yes/No	No	No	Yes/No
Sample	Agrmts.	Agrmts.	Agrmts.	Agrmts.	Agrmts.	Agrmts.

Notes: All models are weighted least squares (WLS). Models 1-2 use WLS SEs clustered at the 4-digit NAICS level; models 3-6 use unclustered WLS SEs. Industry FE are implicit with Firm FE in models 5-6.

great (at its 75th percentile). The results among publicly traded firms only are quite similar.²⁹ Overall, it appears that the impact of firms' size on public support for trade issues is meaningfully conditioned by the availability of opportunities for trade, whether export or import. The large members of the pro-trade coalition are not just habitually supporting all trade issues regardless of the partner, which may partly explain why ad hoc coalitions are such a key part of their efforts, rather than a single permanent coalition.

Subsidiary location and support for trade Hypothesis 3 suggests that firms with a subsidiary in a particular country should be more likely to have supported a trade agreement with that country. Before reporting the results of this test, I set the stage. Recall that firm support for any given trade agreement is rare. Among all firms in goods-producing industries, the chance of supporting a given trade agreement is around .01%.

How does having a foreign subsidiary in a trade agreement partner increase those chances? According to model 1 in the top half of Table 7, moving from not having to having a subsidiary to having a subsidiary in a trade partner increases the chance of supporting a deal with that partner

²⁹The online appendix recreates these findings among firms that supported the extension of TPA or the two WTO rounds.

from .006% to 5.71%. That is a factor of 1006 difference. Given the rarity of public firm support and the noise associated with any public political activities, the size of this effect is remarkable. When firm fixed effects are included, the estimate only covers the subpopulation of firms that have supported some agreement, and so the ratio of the effects is much smaller – but is still a factor of 2.38 increase. The right hand side of Table 7 re-examines all of the results from above among public firms only. Given the larger size of publicly traded firms, the estimated effects are unsurprisingly bigger. They are, however, substantively similar to the results among all firms.

What about in services, where the chance any given firm supports some trade agreement is only .0009%? As shown in the lower of Table 7, the effect of owning a subsidiary in the trade agreement partner is small in absolute terms but huge in relative terms. Owning a subsidiary in a given country increases the percentage chance of supporting an agreement with that country by 1.34%. That is a factor of 2000. Note that all of these estimates are entirely robust to country, industry, and firm fixed effects.

I also investigate in the appendix whether support for trade is driven primarily by firms with pre-existing subsidiaries in countries (who might expect those operations to expand in the wake of trade liberalization) or by firms who subsequently open up or acquire subsidiaries in countries after agreements enter into force. The evidence suggests that both patterns are operative, ownership of subsidiaries both prior to agreements and in the wake agreements is linked to support for those deals. However, the effects of prior ownership are generally stronger. This may reflect firms' inability to make accurate projections about future operations, or may arise if trade agreements are designed primarily to lock in existing relationships while excluding third parties, as with strong rules of origin (Manger, 2009, 2012).

American Trade Politics: Past, Present, and Future

Until recently, the prevailing model of American trade politics in the post-war era had two features. First, trade pits export-competitive industries against import-competing industries (Hiscox, 2001). Second, protection-seeking special interests were deemed especially influential, and it was

argued that their influence must be countered with special institutional innovations, whether domestic or international. I argue and present evidence that both of these foundations for a model of American politics are incorrect. Firm, rather than industrial, characteristics are the prime drivers of trade policy activity; and pro-trade firms are vastly more politically engaged and organized than trade's opponents among producers. Far from ubiquitous and politically influential, protectionist redoubts in American business are relatively few and often quite disorganized.

Indeed, the developments of US trade policy over the time period I examine may reflect the organization and influence of the pro-trade firms examined here. Over the past few decades the US has: contributed to the creation of a robust World Trade Organization; welcomed China and many others into an expanded GATT/WTO system; signed over a dozen preferential trade agreements; and concluded many more international agreements governing global investment and commerce. Future work ought to systematically examine whether and how the extraordinary organization of pro-trade firms I document here contributed to global economic integration, and the apparent defeat of trade's opponents among producers, progressives, and the public up to 2016.

If my argument is correct, why has opposition to trade from producers been so effective in the past? The literature on firm-centered models of trade emphasizes several scope conditions, which are each subject to change over time.³⁰ First, industrial concentration ensures the existence of very large firms to dominate trade. Concentration has grown substantially over the past few decades.³¹ Second, firm size drives preferences over 'ordinary trade' only where products are differentiated (Madeira, 2016). Primary commodities declined dramatically as a share of world trade over the 20th century, to be replaced by more differentiated manufactures and, increasingly, services. Third, declining shipping costs and improvements in logistics – along with endogenous changes in trade

³⁰In the online appendix, I contrast patterns of trade politics in the 1980s with the patterns examined here from 1991-2016. I find significant continuities across the two periods, with similar actors involved and similarly superior organization among pro-trade firms. However, the second half of the 1980s looks more like the post-1990 period than does the first: the pro-trade firms I examine here may have been spurred to organize by the last-ditch efforts of uncompetitive US manufacturers to defend against imports through trade remedies (Irwin, 2017, Ch. 12). While the use of trade remedies grew dramatically after 1979, efforts to further expand their scope were mainly defeated in the late 1980s and many protections were rolled back in the 1990s (Destler, 2005, Ch. 6).

³¹ Grullon, Larkin and Michaely (2017). Council of Economic Advisors (2016) reviews subsectoral studies.

policy – facilitated the flourishing of global production networks in the late 20th century. Thus, the antecedents of firm-driven preferences over trade converged to generate the patterns I describe at the end of the 20th century and the beginning of the 21st.

How then would my emphasis on the political advantages of pro-trade firms then explain the dramatic shift in the United States' posture towards globalization during the Trump administration? The fundamentals of the pro-trade coalition's superior individual and collective engagement on trade have not changed, nor has their apparent influence in the Congress and the Republican Party. For example, the pro-trade coalition has mobilized several coalitions to fight for NAFTA, including the Produce Coalition for NAFTA; Trade Benefits America; the Texas-Mexico Trade Coalition; the US Global Leadership Coalition; and Driving American Jobs. The Republican caucus is fighting hard against Trump administration actions on trade remedies and NAFTA.³²

What *has* changed, of course, are the policy preferences of the president. US trade policymaking has vested enormous discretion in the executive branch over the years on the assumption that the President would be favorably disposed towards trade and the US-led world order. Scholars interested in special interest groups will therefore be watching closely to see if pro-trade interests figure out how to influence an unsympathetic executive branch, and if the Congress moves to claw back authority in making trade policy. Scholars of public opinion on trade will correctly note that the 2016 election highlights the importance of mass preferences and elections. Indeed these two forces may be linked: resurgent populist opposition to globalization in both parties may partly reflect the success of the pro-trade coalition's agenda over the past decades. The fact that globalization's gains are concentrated among a small number of firms explains the organized political force of America's pro-trade firms. These same concentrated gains may also explain why many ordinary citizens feel left out of globalization's benefits, and so voted to move away from global order. America's pro-trade firms are currently engaged in a remarkable fight to preserve the pro-trade policies they have steadfastly supported over the past decades.

³²“Republicans gear up to fight Trump over NAFTA.” Shawn Donnan. FT.com; London. Oct 19, 2017. “GOP leaders fire warning shot to Trump on NAFTA.” Manu Raju. CNN.com. January 23, 2018. “Republicans Wage Trade War Against Trump”. Burgess Everett. June 6, 2018.

References

- Alt, James E and Michael Gilligan. 1994. "The Political Economy of Trading States: Factor Specificity, Collective Action Problems and Domestic Political Institutions." *Journal of Political Philosophy* 2(2):165–192.
- Baccini, Leonardo and Andreas Dür. 2012. "The New Regionalism and Policy Interdependence." *British Journal of Political Science* 42(1):57–79.
- Baker, Andy. 2005. "Who Wants to Globalize? Consumer Tastes and Labor Markets in a Theory of trade policy beliefs." *American Journal of Political Science* 49(4):924–938.
- Bernard, Andrew B and J Bradford Jensen. 1999. "Exceptional Exporter Performance: Cause, Effect, or Both?" *Journal of international economics* 47(1):1–25.
- Bernard, Andrew B, J Bradford Jensen and Peter K Schott. 2009. Importers, Exporters and Multinationals: A Portrait of Firms in the US that Trade Goods. In *Producer dynamics: New evidence from micro data*. University of Chicago Press pp. 513–552.
- Bernard, Andrew B, J Bradford Jensen, Stephen J Redding and Peter K Schott. 2012. "The Empirics of Firm Heterogeneity and International Trade." *Annu. Rev. Econ.* 4(1):283–313.
- Bernard, Andrew B, Jonathan Eaton, J Bradford Jensen and Samuel Kortum. 2003. "Plants and Productivity in International Trade." *The American Economic Review* 93(4):1268–1290.
- Betz, Timm. 2017. "Trading Interests: Domestic Institutions, International Negotiations, and the Politics of Trade." *The Journal of Politics* 79(4):1237–1252.
- Betz, Timm and Andrew Kerner. 2016. "Real Exchange Rate Overvaluation and WTO Dispute Initiation in Developing Countries." *International Organization* 70(4):797–821.
- Blanchard, Emily and Xenia Matschke. 2015. "US Multinationals and Preferential Market Access." *Review of Economics and Statistics* 97(4):839–854.
- Bombardini, M. 2008. "Firm Heterogeneity and Lobby Participation." *Journal of International Economics* 75(2):329–348.
- Bombardini, M. and F. Trebbi. 2012. "Competition and Political Organization: Together or Alone in Lobbying for Trade Policy?" *Journal of International Economics* 87(1):18–26.
- Broscheid, Andreas and David Coen. 2003. "Insider and Outsider Lobbying of the European Commission: An Informational Model of Forum Politics." *European Union Politics* 4(2):165–189.
- Brutger, Ryan. 2015. "Screening for Success: The Effect of Firm Signaling on WTO Case Selection." Working paper. http://web.sas.upenn.edu/brutger/files/2016/07/Screening_For_Success_7-11-16_Full_Version-pk3dvv.pdf.
- Chase, Kerry A. 2003. "Economic Interests and Regional Trading Arrangements: The Case of NAFTA." *International Organization* 57(1):137–174.

- Chase, Kerry A. 2009. *Trading Blocs: States, Firms, and Regions in the World Economy*. Ann Arbor, MI: University of Michigan Press.
- Council of Economic Advisors. 2016. "Benefits of Competition and Indicators of Market Power." *Council of Economic Advisors Issue Brief*. https://web.archive.org/web/20170106211932/https://www.whitehouse.gov/sites/default/files/page/files/20160414_cea_competition_issue_brief.pdf.
- Dancygier, Rafela and Stefanie Walter. 2015. "Globalization, Labor Market Risks, and Class Cleavages". In *The Politics of Advanced Capitalism*, ed. Pablo Beramendi, Silja Hausermann, Herbert Kitchelt and Hanspeter Kriese. Cambridge: Cambridge University Press pp. 133–156.
- Davis, Christina L and Meredith Wilf. 2017. "Joining the Club: Accession to the GATT/WTO." *The Journal of Politics* 79(3):964–978.
- Destler, Irving M. 2005. *American Trade Politics*. New York: Columbia University Press.
- Drope, Jeffrey M and Wendy L Hansen. 2006. "Does Firm Size Matter? Analyzing Business Lobbying in the United States." *Business and Politics* 8(2):1–17.
- Dür, Andreas. 2010. *Protection for Exporters: Power and Discrimination in Transatlantic Trade Relations, 1930-2010*. Ithaca, NY: Cornell University Press.
- Dür, Andreas and Lisa Lechner. 2015. Business Interests and the Transatlantic Trade and Investment Partnership. In *The Politics of Transatlantic Trade Negotiations: TTIP in a Globalized World*, ed. Mario Telo, Frederik Ponjaert and Jean-Frederic Morin. Farnham: Ashgate pp. 69–79.
- Eaton, Jonathan, Samuel Kortum and Francis Kramarz. 2011. "An Anatomy of International Trade: Evidence from French Firms." *Econometrica* 79(5):1453–1498.
- Epstein, Edwin M. 1969. *The Corporation in American Politics*. Prentice Hall.
- Gray, Julia and Jonathan B Slapin. 2012. "How Effective Are Preferential Trade Agreements? Ask the Experts." *The Review of International Organizations* 7(3):309–333.
- Grullon, Gustavo, Yelena Larkin and Roni Michaely. 2017. "Are US Industries Becoming More Concentrated?" Working paper. <https://pdfs.semanticscholar.org/138f/249c43bfec315227a242b305b9764d57a0af.pdf>.
- Hillman, Amy J, Gerald D Keim and Douglas Schuler. 2004. "Corporate Political Activity: A Review and Research Agenda." *Journal of Management* 30(6):837–857.
- Hiscox, Michael J. 2001. "Class versus Industry Cleavages: Inter-industry Factor Mobility and the Politics of Trade." *International Organization* 55(1):1–46.
- Irwin, Douglas A. 2017. *Clashing Over Commerce: A History of US Trade Policy*. University of Chicago Press.

- Jensen, J Bradford, Dennis P Quinn, Stephen Weymouth et al. 2015. "The Influence of Firm Global Supply Chains and Foreign Currency Undervaluations on US Trade Disputes." *International Organization* 69(04):913–947.
- Kerr, William R, William F Lincoln and Prachi Mishra. 2011. "The Dynamics of Firm Lobbying." Working paper. <https://core.ac.uk/download/pdf/6653707.pdf>.
- Kim, In Song. 2017. "Political Cleavages within Industry: Firm-level Lobbying for Trade Liberalization." *American Political Science Review* 111(1):1–20.
- Kuno, Arata and Megumi Naoi. 2015. "Framing Business Interests: How Campaigns Affect Firms' Positions on Preferential Trade Agreements." Working paper. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2671986.
- Lechner, Lisa. 2016. "The Domestic Battle over the Design of Non-Trade Issues in Preferential Trade Agreements." *Review of International Political Economy* 23(5):840–871.
- Madeira, Mary Anne. 2016. "New Trade, New Politics: Intra-industry Trade and Domestic Political Coalitions." *Review of International Political Economy* 23(4):677–711.
- Manger, Mark S. 2009. *Investing in Protection: The Politics of Preferential Trade Agreements between North and South*. Cambridge University Press.
- Manger, Mark S. 2012. "Vertical Trade Specialization and the Formation of North-South PTAs." *World Politics* 64(4):622–658.
- Manova, Kalina and Zhiwei Zhang. 2012. "Export Prices across Firms and Destinations." *The Quarterly Journal of Economics* 127(1):379–436.
- Mansfield, Edward D and Diana C Mutz. 2009. "Support for Free Trade: Self-interest, Sociotropic Politics, and Out-group Anxiety." *International Organization* 63(3):425–457.
- Mansfield, Edward D and Diana C Mutz. 2013. "US versus Them: Mass Attitudes toward Offshore Outsourcing." *World Politics* 65(4):571–608.
- Mansfield, Edward D and Helen V Milner. 2012. *Votes, Vetoes, and the Political Economy of International Trade Agreements*. Princeton University Press.
- Mansfield, Edward D, Helen V Milner and B Peter Rosendorff. 2002. "Why Democracies Cooperate More: Electoral Control and International Trade Agreements." *International Organization* 56(3):477–513.
- Mayer, Thierry and Gianmarco IP Ottaviano. 2008. "The Happy Few: The Internationalisation of European Firms." *Intereconomics* 43(3):135–148.
- McGillivray, Fiona. 2004. *Privileging Industry: The Comparative Politics of Trade and Industrial Policy*. Princeton University Press.
- Melitz, M.J. 2003. "The Impact of Trade on Intra-industry Reallocations and Aggregate Industry Productivity." *Econometrica* 71(6):1695–1725.

- Milner, Helen V and Keiko Kubota. 2005. "Why the Move to Free Trade? Democracy and Trade Policy in the Developing Countries." *International Organization* 59(1):107–143.
- Milner, H.V. 1988. *Resisting Protectionism: Global Industries and the Politics of International Trade*. Princeton, NJ: Princeton University Press.
- Naoi, Megumi and Ikuo Kume. 2011. "Explaining Mass Support for Agricultural Protectionism: Evidence from a Survey Experiment during the Global Recession." *International Organization* 65(4):771–795.
- Naoi, Megumi and Ikuo Kume. 2015. "Workers or Consumers? A Survey Experiment on the Duality of Citizens' Interests in the Politics of Trade." *Comparative Political Studies* 48(10):1293–1317.
- Olson, Mancur. 1965. *The Logic of Collective Action*. Vol. 124 Cambridge, MA: Harvard University Press.
- Owen, Erica. 2015. Labor and Protectionist Sentiment. In *The Oxford Handbook of the Political Economy of International Trade*, ed. Lisa L. Martin. Oxford: Oxford University Press pp. 119–138.
- Owen, Erica. 2017. "Exposure to Offshoring and the Politics of Trade Liberalization: Debate and Votes on Free Trade Agreements in the US House of Representatives, 2001–2006." *International Studies Quarterly* 61(2):297–311.
- Palfrey, Thomas R and Howard Rosenthal. 1984. "Participation and the Provision of Discrete Public Goods: A Strategic Analysis." *Journal of public Economics* 24(2):171–193.
- Pareto, Vilfredo. 1927. *Manual of Political Economy*. New York: AM Kelley.
- Plouffe, Michael. 2017. "Firm Heterogeneity and Trade-Policy Stances: Evidence from a Survey of Japanese Producers." *Business and Politics* 19(1):1–40.
- Rickard, Stephanie J. 2010. "Democratic Differences: Electoral Institutions and Compliance with GATT/WTO Agreements." *European Journal of International Relations* 16(4):711–729.
- Rommel, Tobias and Stefanie Walter. 2018. "The Electoral Consequences of Offshoring: How the Globalization of Production Shapes Party Preferences." *Comparative Political Studies* 5:133–56.
- Schattschneider, E. E. 1935. *Politics, Pressures and the Tariff*. New York: Prentice Hall.
- Slapin, Jonathan B and Julia Gray. 2014. "Depth, Ambition and Width in Regional Economic Organizations." *Journal of European Public Policy* 21(5):730–745.
- Tomiura, Eiichi. 2007. "Foreign Outsourcing, Exporting, and FDI: A Productivity Comparison at the Firm Level." *Journal of International Economics* 72(1):113–127.
- Walter, Stefanie. 2017. "Globalization and the Demand-Side of Politics: How Globalization Shapes Labor Market Risk Perceptions and Policy Preferences." *Political Science Research and Methods* 5(1):55–80.

Weymouth, Stephen. 2012. "Firm Lobbying and Influence in Developing Countries: A Multilevel Approach." *Business and Politics* 14(4):1-26.

SUPPORTING INFORMATION

The following additional materials are available in the online appendices:

Appendix A: Data Collection.

Appendix B: Additional Models and Results.

FOR ONLINE PUBLICATION ONLY

Online Appendix: Vanguards of Globalization: Attitudes and Political Action among America's Pro-Trade Firms

Abstract

Which firms support trade? This paper identifies America's pro-trade firms and shows that their political efforts – in contributions, lobbying, and coalition-building – vastly outstrip those of trade's corporate opponents. I explain this striking divergence by integrating collective action theory into a firm-centered model of trade politics: the heavy concentration of gains from trade among a small number of firms makes both individual and collective political action easier for pro-trade firms than for producers opposed to trade. The microfoundations of this model are tested using comprehensive data on firms' public advocacy for trade, which show that size, multinationality, and heterogeneity in global networks of production and sales drive firms' pro-trade attitudes. Globally engaged firms have supported trade by matching pro-trade preferences with highly organized political action.

Appendix A: Data Collection

Public Expressions of Support for (and Opposition to) Trade by Firms

Table 1 lists 42 unique ad hoc coalitions organizations formed to support US trade issues. In addition to these ad hoc groups, I count 10 further coalitions of firms that supported at least one of the trade issues. These are: US-ASEAN Business Council; Entertainment Coalition for Free Trade; High Tech Trade Coalition/High Tech Industry Coalition; Coalition of Service Industries; California Council for International Trade; International Intellectual Property Association; Comprehensive Market Access Coalition; Council of the Americas; Caribbean-Central American Action; the Partnership for New York City. The active firm-membership peak associations that have supported the various issues are: the American Farm Bureau; American Free Trade Association; Business Roundtable; Consuming Industries Trade Action Coalition; the Emergency Committee for American Trade; the National Association of Manufacturers; National Foreign Trade Council; United States Council for International Business; the US Business Alliance for Customs Modernization; and the US Chamber of Commerce. These do not include a wide array of state-based peak associations, often of farmers or manufacturers.

I count only four coalitions that included a significant contingent of producers that opposed trade agreements over the past 25 years. None of these are truly ad hoc to particular issues, as in the majority of the supporting coalitions above. The Coalition for a Prosperous America opposed both KORUS and the TPP. The Committee to Support US Trade Law sent a somewhat oblique letter opposing certain provisions of KORUS. The National Family Farm Coalition organized a letter opposing TPP primarily consisting of NGOs and state-based small farm associations, but also a few associations and producers. The Fair Currency Coalition (aka the China Currency Coalition) decried Chinese currency policy in the 2000s, although I can find no contemporaneous record of opposition to PNTR for China. These coalitions have been joined by permanent peak associations: The National Family Farm Coalition; the National Farmers Union; the National Farmers Organization; the US Business and Industry Council; Manufacturers for Fair Trade; the Alliance for American Manufacturing; and the Western Organization of Resource Councils.

The public coalitions (and public letters that include large lists of firms that are like coalitions) are the source for the vast majority of codings of firms as publicly supporting a particular trade issues. Likewise, the codings of firms that opposed trade issues also rely heavily on the much smaller number of firms that joined anti-trade coalitions described above. For example, if a firm joined the “Australia United States Free Trade Agreement Business Group”, then I code the firm as supporting the Australia-US Free Trade Agreement (AUSFTA). I have supplemented evidence from these coalitions with other public statements of support for these trade issues from Congressional hearings; public submissions to the USTR; statements uncovered in Congressional Research

Service and USITC reports; and other idiosyncratic sources. Many of these additional codings only serve to confirm evidence from the coalitions: for example, Congressional hearings draw heavily on firms that have joined the main coalitions that have formed to support some issues, and often solicit testimony by a firm explicitly representing the coalition. The big, consistently pro-trade firms that recur in coalitions are also quite active in the USTR's notice and comment process.

To give a sense of how these data were assembled, I provide a short example from the US-Australia Free Trade Agreement. The primary source for codings on firms supporting the agreement was the "Australia United States Free Trade Agreement Business Group" which accounted for just over 90% of the codings. I also uncovered public expressions of support in much smaller separate coalition ("Australia United States Free Trade Agreement Business Group"), Congressional testimony, CRS reports, and USITC reports, but in every one of these instances but one, the firm was already identified as a supporter from the coalition described above. The California Council for International Trade also publicly supported the agreement and supplied 22 additional codings, however 12 of these simply confirmed codings from the business coalition.

Issue	No. coalitions	Coalition name
Fast Track (1991)	1	Undersigned companies in letters to Senator Heinz and Representative Kaptur.
Uruguay Round	1	MTN Coalition/Alliance for GATT Now
NAFTA	2	USA*NAFTA AG for NAFTA
China	4	Business coalition letter to House Leadership. US-China Business Council Agriculture coalition letter to Representative Combest (organized by US-China Business Council) US Alliance for International Trade Expansion
AGOA	3	AGOA Action Committee USA for Africa Corporate Council on Africa
Jordan	0	
TPA 2002	3	USTrade US Agriculture Coalition for TPA Undersigned food and agricultural organizations in letter to Senator
Australia	2	Australia United States Free Trade Agreement Business Group America Australia Free Trade Agreement Coalition
Chile	1	US-Chile Free Trade Coalition
Singapore	1	US-Singapore Business Coalition
CAFTA-DR	2	Undersigned food and agricultural organizations letter to President Bush Business Coalition for U.S.-Central America Trade
FTAA	1	Business Coalition on the Free Trade Agreement of the Americas
Vietnam PNTR	3	Agricultural coalition letter to members of Congress Undersigned food and agriculture organizations letter to members of Congress US-Vietnam WTO Coalition
Bahrain	2	US-Bahrain Business Council (also supported Morocco, Oman) US-Middle East Free Trade Council
Morocco	1	US-Middle East Free Trade Council (also supported Bahrain, Oman)
Oman	2	US Oman Business Council US-Middle East Free Trade Council (also supported Bahrain, Morocco)
Ukraine PNTR	3	Jackson-Vanik Graduation Council

		US-Ukraine Business Council
		US-Ukraine Foundation
Doha Round	1	American Business Coalition for Doha
Peru	2	The Agricultural Coalition for U.S.-Peru Trade
		US-Peru Trade Coalition
Panama	2	Latin America Trade Coalition (also supported Colombia)
		Undersigned organizations letter to Senate Chairs (also supported Colombia, South Korea)
		Letter from a diverse spectrum of food and beverage manufacturers (also supported Colombia, South Korea)
Colombia	2	Latin America Trade Coalition (also supported Panama)
		Undersigned organizations letter to Senate Chairs (also supported Panama, South Korea)
		Letter from a diverse spectrum of food and beverage manufacturers (also supported Colombia, South Korea)
South Korea	5	Undersigned organizations letter to Senate Chairs (also supported Colombia, Panama)
		Letter from a diverse spectrum of food and beverage manufacturers (also supported Colombia, Panama)
		US-Korea FTA Business Coalition
		Letter from undersigned organizations, representing the vast majority of U.S. farmers, etc. to Congressional leaders
		US-Korea Business Council
Russia PNTR	1	Coalition for US-Russia Trade
TPA (2015)	1	Trade Benefits America
TPP	2	TPP Apparel Coalition
		US Coalition for TPP

Table 1: List of main ad hoc coalitions for each issue.

Orbis data

Each publicly pro-trade firms was matched by hand to firm-level records in Orbis, where possible. Of the 2222 goods-producing firms that supported US trade agreements, I was able to match 2002 to a firm record in Orbis. Of the 2145 services firms that supported US trade agreements, I was able to match 1481 to a firm record in Orbis. Of the 221 goods-producing firms that opposed US trade agreements, I was able to match 198 to records in Orbis. Of the 80 services firms that opposed US trade agreements, I was able to match 63 to a firm record in Orbis. Orbis data were collected in 2017. All firm-level data are the latest available in 2017.

Orbis records 1,707,426 that fall into the NAICS categories 11, 21, and 31-33 for goods manufacturers (and primary product producers). The size breakdown was: VL: 9286, L: 34091, M: 204503, S: 1459546, and these numbers are used to construct the sampling weights. Each of the 100000 VL, L, and M sampled firms from Orbis represents 2.4788 total firms in the population. Because some of the sampled firms were public supporters of trade (and are included in the population of public supporters already), I reweight the sampled non-supporters as each representing 2.487931 firms. Each sampled Small firm represents 14.59546 firms in the population as a whole. After removing the public supporting firms, the adjusted weights are 14.59984.

15,138,019 firms fall into the NAICS categories 22, 23, and 42-81 which I consider to be producers of services. The size breakdown was: VL: 40981, L: 195854, M: 1578796, S: 13322388. Each of the 100000 VL, L, and M sampled firms from Orbis represents 18.20893 total firms in the population. After correcting for sampled pro-trade firms, the adjusted weight is 18.22209. Each of the sampled S firms represents 133.436 firms in the population. After the adjustment, the weight is 133.4414.

The Orbis variables employed in the study are:

- BvD ID number: a reference code used by Bureau Van Dijk for firms, and used in this study to concord data downloaded separately from Orbis.
- Operating revenue (turnover) | Last available year | th USD, used to measure Revenue.
- Number of employees | Latest available year, used to measure Employees.
- NAICS 2012 Core code (4 digits), used to measure Industry. Supporting firms that do not have a NAICS code in Orbis are given a code by the author based on my own codings at the 6-digit level. (The modal 4-digit code of these is employed.)
- Category of the company, used to measure Size (of Small, Medium, Large or Very Large).
- Listed/Delisted/Unlisted. If Listed, firms are public.
- Subsidiary - country ISO code, used to construct existence/number of foreign subsidiaries,

and location of foreign subsidiaries (for the variables Foreign Subsidiary, # Foreign Subsidiaries, Subsidiary, and # Subsidiaries.)

I checked the Orbis data against two other firm-level databases to ensure that differing databases are not giving markedly different data. First, I randomly sampled 100 Orbis public firms from among goods producers and checked the Orbis statement of the firms' employees against the corresponding numbers in D&B Hoovers (<http://www.hoovers.com/>). The Orbis and Hoovers logged revenue figures had a correlation of .97; the logged employment figures had a correlation of .92. Second, I checked the Orbis data for a random sample of 100 supporting public firms in my data (again from the goods-producing industries). I found correlations between the Orbis and D&B Hoovers statement of the firms' revenue and employees of .97 and .96. Third, I checked a random sample of 100 private Orbis firms against the data provided in D&B Hoovers on those firms. For this test, I used only Medium, Large and Very large firms. Since I only use the coarse 4-level size category from Orbis, I attempted to reconstruct the same size variable using Orbis's definition applied to D&B Hoovers' data on firm revenue, employees, and assets. Overall, the Orbis size variable matched my reconstruction using the D&B Hoovers data in 85% percent of cases. Because many more firms are Medium than Large or Very large it is relatively easy to get a lot of matches. For this reason, I used a Fischer exact test to check that this rate of matching is better than chance. In the test, I randomly sampled from the D&B Hoovers size variable I constructed and checked the proportion of matches with the Orbis size variable. The average match rate was 73.4% and in no instance was my permuted sample a better match to Orbis than the actual D&B Hoovers size variable I constructed.

Fourth, I also checked the size and employment variables among public supporting goods-producing firms against data provided by Compustat available from <https://wrds-web.wharton.upenn.edu/wrds/>. I found correlation of .91 and .92 when comparing the Orbis measures of sales and employees against the Compustat measures. Fifth, I did the same check for all of the public services firms which supported trade agreements in the US. The correlations were .81 and .90. The somewhat low figure for the sales correlation is driven primarily by one firm for which Orbis provides an estimate of the sales. When this firm is removed, the correlation is .91 between Orbis and Compustat on firm revenues.

Trade data

All trade data are based on data from the US Census Bureau's NAICS Related Party Database, which provides imports and exports (both related and not arising from related parties) disaggregated at the 6-digit NAICS level. I aggregate the data up to the 4-digit NAICS level to match with the Orbis records. The primary variables downloaded are Exports, Imports Nonrelated Trade, and Imports Related Trade. I construct the measure of intermediate inputs using BEA input-output

tables.

Appendix B: Additional Tables and Models

Descriptive Analysis of Opposing Firms

Figures B1 and B2 provide the size distribution of goods and services firms that opposed trade agreements, respectively. These figures are analogous to Figures 2 and 3 in the main text.

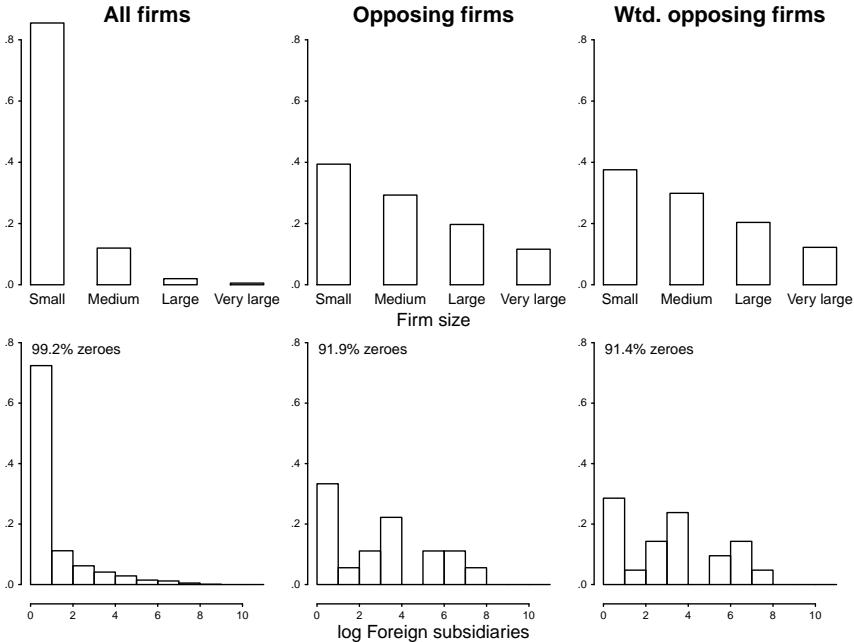


Figure B1: Size and multinationality among goods-producing firms that opposed trade issues.

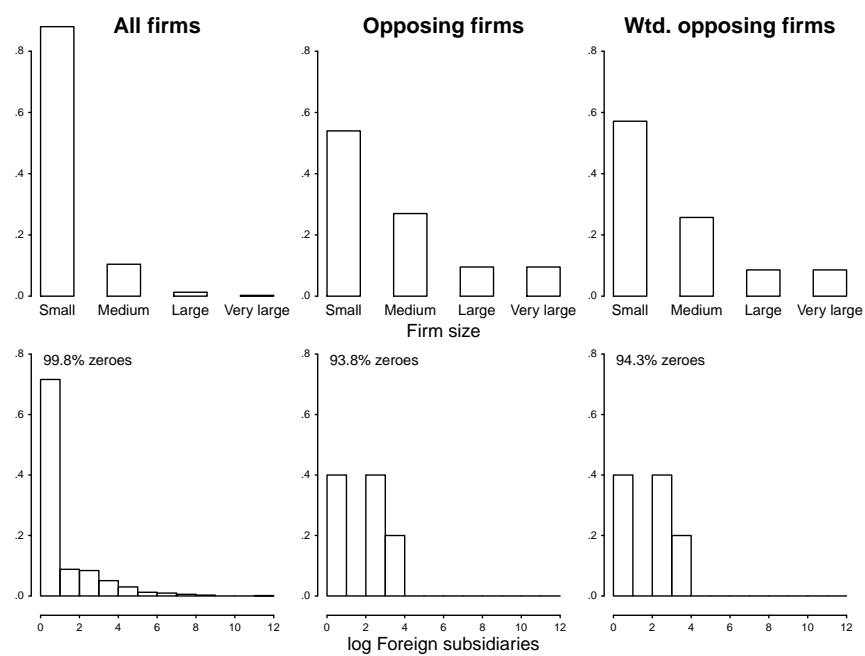


Figure B2: Size and multinationality among services firms that opposed trade issues.

Descriptive Analysis of Firms' Political Activity from 1979-1989

In this section, I examine the political activity of pro- and anti-trade firms during the era of trade politics that precedes the era in the main text. My purpose in doing this is to examine qualitatively the similarities and dissimilarities in the politics of trade during the 1980s as compared with what came after.

Data collection: In order to build up a picture of trade politics in this era, I examine public statements in Congressional hearings in the Senate Finance Committee and the House Ways and Means committee on several trade issues. Using Congressional hearings has some significant drawbacks because hearings are constructed by committee chairs that may have skewed viewpoints and political agendas. My data in the main text does not rely on Congressional hearings and so is much more systematic, while this data on the 1980s should be considered a slice from one particular kind of source. That being said, I uncover in these hearings a significant number of ad hoc coalitions from the 1980s that look very similar to the coalitions that are my main source for information on firms' and associations' positions on trade agreements in the analysis from 1991-Present. So the sources of codings don't end up looking hugely different even though my approach is much more limited for the 1980s data. I also find that Congressional hearings in the 1980s tend to be longer and more balanced than in subsequent periods, and so these are a somewhat more reliable source than they would be today.

To collect this data, I considered data on two types of issues. First, I looked at the Congressional debates over the Tokyo Round of Multilateral Trade Negotiations (1979); the US-Israel Free Trade Agreement (1984); and the US-Canada Free Trade Agreement (1988). In each of these cases, I examine whether each firm, association, or other type of witness expressed a clear statement in favor of or in opposition to the agreement. Note again that in the course of searching these documents I discovered several coalitions (with firm and association members) in the hearings. If the coalition took a clear position, then I include all of the coalitions' members as supporting that agreement.

Second, I looked at a series of debates over whether to expand the application and stringency of trade remedies which took place over the decade. These include the debate over the Trade Agreements Act of 1979; the Trade Remedies Reform Act of 1984; the Trade Law Modernization Act of 1985; Trade Reform Legislation of 1986; and Comprehensive Trade Legislation of 1987.¹ The Trade Agreements Act of 1979 passed and made some significant changes to US trade law increasing the bite of trade remedies on foreign imports, facilitated by the movement of enforcement from the Treasury to the Department of Commerce (Destler, 2005, pp.146–8). The other legislative efforts described above did not become law, although certain elements of these proposals were ultimately incorporated into the much weaker Omnibus Trade and Competitiveness Act of 1988 (Destler, 2005, pp.158–60). In all of these cases, I coded a firm or association as either being in Favor of the strengthening and more frequent use of trade remedies and other measures to counter imports; as Opposed to such measures; or as having no clear position.

These debates over trade remedies are a characteristic feature of trade politics during the 1980s. A confluence of events – fully rebuilt German and Japanese economies operating at full tilt; an appreciated dollar and weak US economy in the wake of the Volcker shock; structural change in the economy and nascent deindustrialization – combined to place trade high on the political agenda (Irwin, 2017, pp.565–73). Uncompetitive firms and industries turned towards trade remedies permitted under domestic and international trade law,

¹ I could not find published hearings on the Omnibus Trade and Competitiveness Act of 1988.

as well as multilateral innovations lying outside the GATT system like Voluntary Export Restraints (VERs) and coordinated efforts to rebalance exchange rates. Irwin (2017, pp.619-24) argues that the steady rollback of the trade remedies in the late 80s and early 90s undertaken during the first Bush and Clinton administrations was a result of both improving economic circumstances (a weaker dollar and US firms adjusting to foreign competition) as well as an increasingly well-organized pushback by competitive US firms many of whom were integrated into increasingly global supply chains. The data I examine below reinforces this point – pro-trade firms were getting organized in the 1980s. Note that the most extensive plans to increase the use of trade remedies and other protection never became law.

Overall, I ended up collecting positions taken by 848 firms; 316 trade associations; 54 peak associations; 28 non-government organizations; and 15 labor unions on these trade issues. For ease of language, I describe any actor that either supported one of the three trade agreements or opposed the strengthening of trade remedies as having taken at least one pro-trade position below. Likewise, I refer to any actor that opposed one the trade agreements or supported stronger action on trade remedies as opposing trade at least once. Some firms and associations did both across different issues, although that was actually quite rare among firms (less than 1% of firms in this data did so.)

Coalitions: One of the striking findings in the data I examined from 1991-2016 is the ubiquity of ad hoc coalitions to support trade issues and their much greater numbers relative to anti-trade ad hoc groups. The data from the 1980s show a similar pattern, although one that is slightly less extreme. I count 8 pro-trade coalitions that appear to be of short duration or ad hoc. These are: American Coalition for Trade Expansion with Canada; Maritime Coalition on the US-Canada FTA; RITAC: Retail Industry Trade Action Coalition; Citizens for the U.S.-Canada Trade Pact; The US Council; Ad hoc group of exporters and importers opposed to trade reform in 1986; and Coalition to Promote America's Trade. Their efforts are supplemented by 6 permanent coalitions: American Association of Exporters and Importers; Coalition of Service Industries; Labor-Industry Coalition for International Trade; National Foreign Trade Council; Emergency Committee for American Trade; and International Intellectual Property Alliance. These efforts were matched by the major peak associations: American Business Conference; US Chamber of Commerce; American Farm Bureau Federation; American Institute of Small Business; Business Roundtable; National Association of Manufacturers; National Foreign Trade Council; and US Council for International Business.

I counted only 5 ad hoc or permanent anti-trade coalitions. These are: Ad Hoc Subsidies Coalition; Trade Reform Action Coalition; Metalworking Trade Coalition; Fiber, Fabric & Apparel Coalition for Trade; and Coalition for International Trade Equity. I also found that the National Farmers Union and American Fair Trade Council were permanent peak associations that regularly opposed trade over the 1980s.

Thus, the broad patterns of a relatively well-organized pro-trade coalition in distinction with a relatively disorganized anti-trade coalition even hold into the 1980s. That being said, the pro-trade coalition's efforts in the 1980s are not as impressive as they end up being subsequently. No significant coalition was mustered to support the US-Israel FTA, for example, and the size of the coalitions are generally somewhat smaller in the 1980s. At least one of the anti-trade coalitions (the Trade Reform Action Coalition) had a quite impressive memberships in the 1980s, too. Although it had no firms, the coalition had an striking array of industry associations representing mainly the metals trades. Moreover, it also worth noting that the pro-trade activities are especially concentrated around the US-Canada FTA and in resisting efforts to strengthen trade remedies in 1987. Overall, the efforts to defend trade (at least that I can observe) are more impressive towards the

end of the decade than at the beginning.

Firms: I now look at some detail on the activities of individual firms across the 1980s. Overall, I find that of the 848 firms in my data, 795 (or 94%) appeared in the data as supporting trade in some way or another. Opposition to trade by individual firms is quite rare (around 7% of firms oppose trade at some point). This firm-level behavior makes for an interesting contrast with the trade associations in the data during the 1980s, where about 53% of associations supported trade at least once and 53% opposed trade at least once. (Note that some associations both supported and opposed on different issues.) This pattern is dissimilar to US trade politics from 1991-2016, where more opposition (where it occurs) is undertaken by individual firms, and the overall tilt of associations is much more pro-trade.

To give some sense of continuity among firms participating in pro-trade activities, I examined how many of the firms which supported trade in the 1980s data went on to do so from 1991-2016. Overall, about 29% of firms that supported trade in the 1980s did so again in the later period. Many of these firms are the very large firms that would go on to dominate pro-trade activities from 1991 to the present. Thus, there is a fair amount of continuity in the pro-trade coalition in moving back into the 1980s.

Finally, I end by noting how important firms are in pro-trade activity in the 1980s. Nearly 82% of the expressions of support for trade that I find in the 1980s for trade agreements come from firms – not associations or other actors. Looking at both trade agreements and the trade remedy debates, firms are 78% of the supporters of trade. Now, it is important to note that industry and peak associations may have more heft (because they represent more members), but I still find it striking how ‘firm-centered’ the trade politics is in the 1980s [although see (Milner, 1988) who finds similar patterns in the 1970s]. This is perhaps all the more so in noting how large firms dominate the agendas of the US Chamber of Commerce, National Foreign Trade Council, Coalition of Service Industries, and National Association of Manufacturers.

Conclusions: I end with three qualitative conclusions about comparing trade politics in the 1980s (a time of enormous strain from import competition and big battles over trade remedies) compared to the subsequent era of ‘globalization’. First, many of the patterns I see in US trade politics from 1991-2016 in the main text – the superior organization of pro-trade coalitions, the high rate of activity by pro-trade firms – do not look categorically different from 1979-1989. Thus, there are important elements of continuity between the period I concentrate on in the main text and the 1980s. Second, there are some differences: anti-trade associations are more active in the 1980s than subsequently (especially in pushing for stronger trade remedies); and pro-trade activities look more ‘contemporary’ in the second half of the 80s than in the first half. Some of these differences may be driven by changes in the economy as well as changes in the set of issues on the trade agenda. Third, I see a great deal of continuity in the actors participating in pro-trade politics in the 80s through to today. Many of the peak associations and permanent coalitions are the same; and so are many of the firms.

Alternative Tests Concerning Foreign Subsidiaries

In this section, I consider several variations of the tests of Hypothesis 3 in the main text. A theoretical ambiguity in the main text concerns what might be called intensive-margin and extensive-margin theories of the impact of the ownership of foreign subsidiaries on support for trade. An intensive-margin theory would emphasize that trade agreements (and other efforts to liberalize trade) make it easier for firms that own a foreign subsidiary prior to the agreement to operate that subsidiary. In this case, support for trade agreements will come from *firms that will own foreign subsidiary before the agreement*. An extensive-margin theory, in contrast, would emphasize that a trade agreement makes it easier or more profitable for firms to open up a new foreign subsidiary after the agreement is implemented. In this case, support for the trade agreement will come from *firms that will open a foreign subsidiary after the agreement*.

In both of these cases, the mechanisms are the same: the trade agreement might lower barriers in the home market enabling more production abroad for sale back home (vertical FDI); or, the agreement might lower barriers in the host market enabling deeper integration of the foreign subsidiary into supply chains rooted in the home market (Manger, 2012). Trade agreements might also introduce new protections for foreign investment and intellectual property, or create robust rules-of-origin which consolidate global supply chains within the agreement partners to the detriment of countries excluded from the agreement (Manger, 2009). These forces might lead firms to expand their pre-existing foreign subsidiaries (as in the intensive-margin account) or lead firms to open up new foreign subsidiaries (as in the extensive-margin account).

Both of these implications are entirely plausible – foreign subsidiaries could both predict and postdict support for trade agreements. However, it is important to note that they have different empirical implications. If the intensive-margin theory holds, we expect that firms that own foreign subsidiaries prior to the agreement will be more likely to support the agreement than firms that don't. If the extensive-margin theory holds, then we expect that firms that open foreign subsidiaries after the agreement will be more likely to support the agreement than firms that don't.

In order to test these two ideas, I collect data from Orbis on the date of incorporation of the foreign subsidiaries owned by US firms that have supported trade. I then construct new variables which are analogous to those presented in the main text. For example, Subsidiary (Prior) is an indicator for whether a firm owned a foreign subsidiary with a date of incorporation prior to entry into force of that agreement. Subsidiary (Post) is an indicator for whether a firm owns a subsidiary with a date of incorporation in the trade partner after the agreement was concluded. I then retest model models 3 and 6 from Table 7 in the main text. There are two sources of error which arise in the construction of these variables that must be acknowledged. First, the data of incorporation variable refers to the date of incorporation of the foreign subsidiary which may differ from the date of acquisition by the multinational firm (as in the case of M&As). This is partially mitigated because some firms are reincorporated after a merger or acquisition, and of course is not an issue with greenfield foreign investments. Orbis does not contain a variable for the date of acquisition of a subsidiary. Second, the date of incorporation variable suffers from significant missingness. This cuts down the usable variation in the data, and may introduce bias in the estimates depending on the reasons for the missingness in the dates of incorporation.

The results from these tests are presented in Tables B1 and B2. Note that models 3-4 and 7-8 recreate exactly the approach taken in models 3 and 6 of Table 7 in the main text. Models 1-2 and 5-6 omit the firm fixed effects and instead use only the industry and partner FE, however the sample is the same: only firms

that have publicly supported at least one trade agreement are included. Looking at the results overall, it appears that both foreign subsidiaries owned prior to agreements *predict* support for those agreements, and that foreign subsidiaries opened or acquired after agreements *postdict* support for those agreements. This makes sense as both are plausible arguments.

However, there is some interesting nuance in the size and significance of the effects. In general, the effect of owning a subsidiary prior to an agreement appears to be larger than the effect of owning a subsidiary after an agreement. (This same pattern is seen in unreported models which included both prior and ex post ownership variables. Note however that the two variables are quite correlated, perhaps unsurprisingly.) This pattern is stronger among the goods-producing firms, where the post-agreement subsidiary ownership variable does not attain conventional levels of statistical significance when firm fixed effects are included in the model. This pattern is somewhat less pronounced among the services firms although it is still there.

I offer several tentative explanations for this. First, PTAs may be driven by primarily defensive motives, to facilitate existing patterns of trade and investment and to construct rules of origin to exclude third parties, as argued in (Manger, 2009). Existing patterns of investment may provoke defensive PTAs rather than PTAs being designed to create new patterns of investment. Second, firms may have trouble predicting the future and so rely more heavily on present conditions (do I own a subsidiary in the trade partner now?) versus future projections (will I own a subsidiary in the trade partner in the next 5-10 years?). Third, there is less data to work with after agreements are concluded than before, and so the estimates with the ex post variables could simply be noisier. This is especially true for agreements that entered into force in 2012 – MNCs may still be adjusting. Further investigation of this pattern to see if it is systematic and to explain it in detail would be a valuable exercise for future scholarship.

Table B1: Foreign subsidiaries and support for trade among firms.

	All firms			Support		Public firms		
	1	2	3	4	5	6	7	8
<u>Goods-producing firms:</u>								
Subsidiary (Prior)	15.19*** (0.69)		8.23*** (1.32)		16.36*** (1.43)		7.53*** (1.51)	
Any foreign sub. (Prior)	6.10*** (0.37)				6.95** (2.61)			
Subsidiary (Post)		8.20*** (0.99)		1.81 (1.78)		9.30*** (1.86)		2.39 (1.79)
Any foreign sub. (Post)		10.09*** (0.40)				8.79*** (1.80)		
Partner FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	No	No	Yes	Yes	No	No	Yes	Yes
Partner controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sample	Agrmts.	Agrmts.	Agrmts.	Agrmts.	Agrmts.	Agrmts.	Agrmts.	Agrmts.

*Notes:*All models are weighted least squares (WLS). Firms which have supported at least one agreement examined only (which is required for use of firm fixed effects).

Table B2: Foreign subsidiaries and support for trade among firms.

	All firms			Support		Public firms		
	1	2	3	4	5	6	7	8
<u>Goods-producing firms:</u>								
Subsidiary (Prior)	11.76*** (1.08)		9.15*** (1.75)		12.53*** (1.94)		6.63*** (1.96)	
Any foreign sub. (Prior)	1.99*** (0.50)				-0.32 (1.94)			
Subsidiary (Post)		6.97*** (1.57)		5.47* (2.42)		5.81* (2.49)		4.45+ (2.33)
Any foreign sub. (Post)		5.26*** (0.59)				2.69 (1.82)		
Partner FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	No	No	Yes	Yes	No	No	Yes	Yes
Partner controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sample	Agrmts.	Agrmts.	Agrmts.	Agrmts.	Agrmts.	Agrmts.	Agrmts.	Agrmts.

Notes: All models are weighted least squares (WLS). Firms which have supported at least one agreement examined only (which is required for use of firm fixed effects).

Alternative Tests Examining the Role of Industrial Concentration

The role of firm size in driving support for trade can also be analyzed using the industry as the unit of analysis. To see this, recall that the trade literature contends that the benefits of trade are heavily concentrated in the hands of the largest firms. Some industries, however, lack these ‘superstars’ owing to either idiosyncratic factors (that particular segment of industry didn’t ‘draw’ any highly productive firms) or to structural factors (market forces or cost structures conduce towards a small and equitable distribution of firms, as with sharply diminishing returns to scale). Either way, we might expect that industries with a more equal distribution of firm sizes would lack firms with an intense preference for trade and globalization, and so there would be less support for trade in those industries. At the suggestion of a reader of this paper, I therefore examine whether industries with less industrial concentration have less support for trade among firms.

To do so, I examine data collected at the level of the 6-digit NAICS industry for all US trade agreements. I then fit a simple linear regression which uses as an outcome variable the logged number of firms supporting a given trade agreement in that 6-digit industry (which is added to one before logging). The primary explanatory variable in these models is either the 4-firm or 20-firm concentration ratio, a variable that falls on the unit interval which indicates what proportion of an industry’s production is accounted for by the largest 4 (or 20) firms. Larger values naturally imply a greater degree of industrial concentration. I use as controls the log Sales of the industry and the log number of firms in the industry, as well as partner (aka agreement) fixed effects.

Table B3: Industries with equally sized firms have less support for trade.

	1	2	3	4
4-firm concentration	0.20*** (0.05)	0.24*** (0.06)		
20-firm concentration			0.31*** (0.04)	0.37*** (0.05)
ln Sales	0.46*** (0.02)	0.48*** (0.03)	0.42*** (0.02)	0.44*** (0.03)
ln # Firms	-0.08*** (0.02)	-0.08*** (0.02)	-0.03+ (0.02)	-0.02 (0.02)
Partner FE	Yes	Yes	Yes	Yes

Notes: All models are least squares and use the 6-digit NAICS industry for a particular US trade agreement as the unit of analysis. Fixed effects and intercept estimates are suppressed for space.

The results presented in Table B3 corroborate the claim that more heavily concentrated industries will feature more support for trade among firms. Columns 1 and 3 examine this relationship among all US goods-producing industries (agriculture, mining, and manufacturing) for all US trade agreements; columns 2 and 4 restrict the analysis to industries that are net-exporting with the agreement partner. In either case, there is a consistently positive and strong relationship between industrial concentration and manifestations of firm support for trade. This industry-based test supports the firm-level tests provided in the main text, particularly the tests of Hypothesis 1.

Support for Fast Track/TPA and the WTO

In this section, I reexamine the findings from Table 6 on the interaction between a firm characteristics and the trade flows of a firms' industry. In this case, however, I use trade flows with the rest of the world to understand expressions of support for the two GATT/WTO negotiating rounds and for Fast Track/Trade Promotion Authority. Note that sometimes votes on Fast Track/TPA are very clearly about particular trade agreements, but I have not employed this fact in the main text. One justification for this is that Fast Track/TPA can extend for 3-6 years, and so its eventual applications are not clear ahead of time. These results are contained in Tables B4 (which looks at all firms) and B5 (which considers only public firms). The results are broadly confirmatory of Hypothesis 2.

Table B4: Trade with the rest of the world and support for multilateral liberalization, all firms.

	Support		
	1	2	3
<u>Exports with the trade partner:</u>			
Any foreign sub.	0.759*** (0.015)	0.759*** (0.015)	0.760*** (0.015)
Large	-0.041 (0.064)	-0.041 (0.064)	-0.045 (0.064)
Exports	-0.001 (0.001)	-0.001 (0.001)	
Large · Exports	0.155*** (0.016)	0.155*** (0.016)	0.157*** (0.016)
<u>Related-party imports from the trade partner:</u>			
Any foreign sub.	0.757*** (0.015)	0.757*** (0.015)	0.759*** (0.015)
Large	0.124* (0.053)	0.124* (0.053)	0.124* (0.054)
RP Imports	-0.001 (0.001)	-0.001 (0.001)	
Large · RP Imports	0.115*** (0.014)	0.115*** (0.014)	0.116*** (0.014)
<u>Imported inputs from the trade partner:</u>			
Any foreign sub.	0.759*** (0.015)	0.759*** (0.015)	0.761*** (0.015)
Large	-0.726*** (0.069)	-0.726*** (0.069)	-0.722*** (0.069)
Inputs	-0.001 (0.002)	-0.001 (0.002)	
Large · Inputs	0.379*** (0.020)	0.379*** (0.020)	0.379*** (0.020)
Country FE	No	Yes	Yes
Industry FE	No	No	Yes
Trade controls	No	No	Yes
Sample	TPA/WTO	TPA/WTO	TPA/WTO

Notes: All models are weighted least squares (WLS). World trade controls are implicit in use of industry FE in model 4.

Table B5: Trade with the rest of the world and support for multilateral liberalization, public firms.

	Support		
	1	2	3
<u>Exports with the trade partner:</u>			
Any foreign sub.	1.300*** (0.292)	1.300*** (0.292)	1.278*** (0.306)
Revenue	-0.141 (0.359)	-0.141 (0.359)	0.052 (0.398)
Exports	-0.753 ⁺ (0.390)	-0.753 ⁺ (0.390)	
Large · Exports	0.261** (0.087)	0.261** (0.087)	0.232* (0.096)
<u>Related-party imports from the trade partner:</u>			
Any foreign sub.	1.297*** (0.293)	1.297*** (0.293)	1.271*** (0.306)
Revenue	0.155 (0.280)	0.155 (0.280)	0.680 ⁺ (0.350)
RP Imports	-0.584* (0.293)	-0.584* (0.293)	
Large · RP Imports	0.190** (0.068)	0.190** (0.068)	0.077 (0.083)
<u>Imported inputs from the trade partner:</u>			
Any foreign sub.	1.271*** (0.292)	1.271*** (0.292)	1.256*** (0.305)
Revenue	-0.960** (0.331)	-0.960** (0.331)	-0.734 ⁺ (0.382)
Inputs	-1.669*** (0.413)	-1.669*** (0.413)	
Large · Inputs	0.544*** (0.095)	0.544*** (0.095)	0.499*** (0.108)
Country FE	No	Yes	Yes
Industry FE	No	No	Yes
Trade controls	No	No	Yes
Sample	TPA/WTO	TPA/WTO	TPA/WTO

Notes: All models are weighted least squares (WLS). World trade controls are implicit in use of industry FE in model 4.

Additional information on PAC contributions by pro-trade firms

In this section I provide additional detail on the PAC contributions of America’s pro-trade firms, as well as the largest contributors that have supported no trade agreements. Table B6 recreates the top third of Table 3 in the main text, using two more stringent cutoffs for being pro-trade. In the top half, pro-trade firms are those which supported at least 2 of the 25 trade issues over the past 25 years. In the bottom half, pro-trade firms those which supported at least 7 of the 25 trade issues over the past 25 years. Despite using this stricter cutoffs, the profile of pro-trade firms in corporate PAC giving is still very significant.

Table B6: PAC contributions by pro-trade firms in federal elections, 1994-2016.

	Goods			Services			All
	House	Senate	Pres.	House	Senate	Pres.	
Pro-trade firms supporting 2+ trade issues among all firm PACs:							
Total (\$10 Million)	28.6	13.0	0.6	30.9	13.5	0.6	87.6
% Share of PAC contributions	61.6	58.5	41.7	39.2	33.3	30.4	47.0
Pro-trade firms supporting 7+ trade issues among all firm PACs:							
Total (\$10 Million)	20.2	8.8	0.4	19.9	8.1	0.4	57.9
% Share of PAC contributions	43.5	39.8	28.2	25.3	20.0	18.7	31.1

Notes: Contributions data from Center for Responsive Politics are matched to pro-trade firms by the author. Candidate PACs are omitted from final row. Pro-trade Members of Congress are those with ideal points on trade bills above the median.

Figure B3 examines the profile of pro-trade firms in corporate campaign giving over time. For each two-year election cycle, I examine the proportion of corporate contributions that came from a firm that supported at least one of the trade issues that was live during that cycle. For example, the two live issues in the 1993-94 cycle were the Uruguay Round of WTO negotiations and NAFTA. I also present in the darker colors the proportion of campaign contributions coming from firms that supported all of the issues that were live in that cycle. Naturally, this second figure is smaller on average. This figure helps to provide more nuance to the results in Table 3.

Table B7 reports the 40 largest corporate PAC contributors (in goods) that supported any trade agreement and the 40 largest contributors that supported no trade agreement. Several preliminary observations are worth mentioning about the non-pro-trade firms. First, a few of them come from well known redoubts of protectionism – such as the sugar or steel industry, such as American Crystal Sugar and Nucor. Second, another large group of these firms are foreign firms (Airbus, Novo Nordisk) who generally are not major participants in the US pro-trade coalition, or who are excluded from my data when they support liberalization with their own home market. Third, some of the firms are not goods producers (e.g. AmerisourceBergen, a pharmaceutical distributor). This mismatch arises because some of the Center for Responsive Politics’ industry codes cover both goods and services (e.g. pharmaceutical manufacturers and distributors). Fortunately, such miscodings are not too common.

In examining the contributions of the top 40 pro-trade and non-pro-trade goods firms, several things are worth mentioning. First, the top pro-trade firms are not just episodically pro-trade. The top 40 supported 486 issues out of 1000 (25 issues times 40 firms) presented to them, which is an extremely high rate of engagement on trade issues. This rate only falls from 48.6% to 34.6% for the top 100 firms. Second, the top

Figure B3: Corporate PAC giving by firms expressing support for trade in each election cycle. Live issues are considered for each cycle only for both firms supporting at least 1+ issue, and for firms supporting all issues.

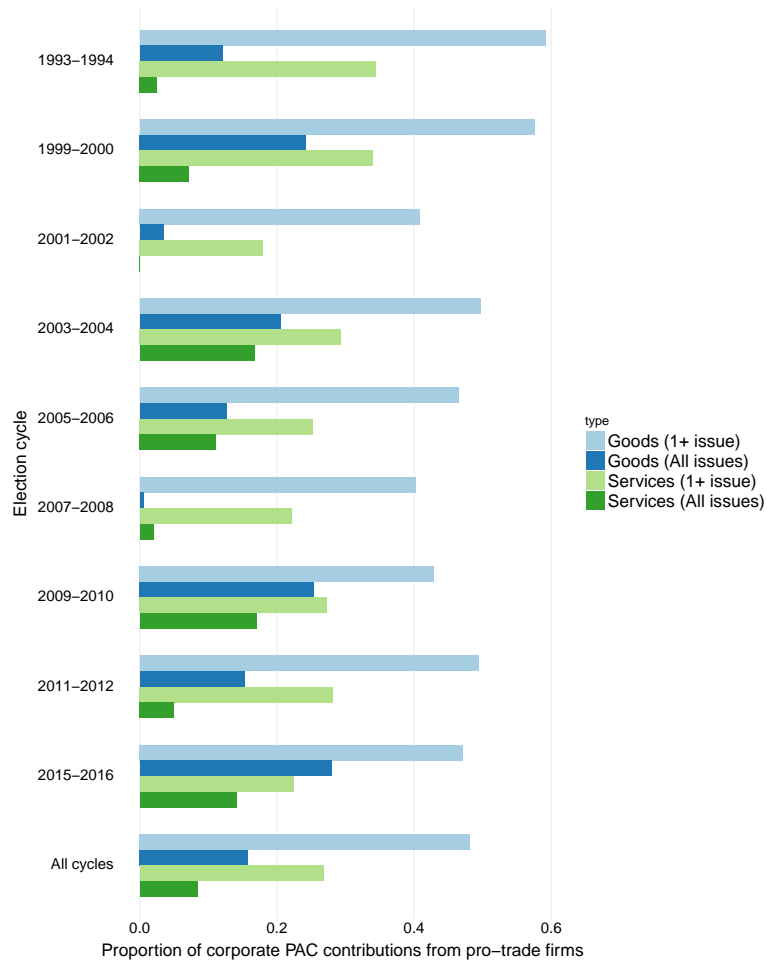


Table B7: Top 40 PAC contributors among pro-trade goods firms and firms supporting no trade agreements, 1994-2016.

Pro-trade firms			All other firms		
Name	Total	# Supported	Name	Total	# Opposed
Lockheed Martin	18524	16	American Crystal Sugar	14412	0
Honeywell International	17999	14	Koch Industries	12582	0
Boeing Co	14811	23	BAE Systems	6963	0
General Electric	14345	20	McKesson Corp	5570	0
Northrop Grumman	13467	6	SAIC	4329	0
Altria Group	13437	7	AstraZeneca PLC	4306	0
Raytheon Co	12428	11	Orbital ATK	4245	0
Pfizer Inc	11282	15	Roche Holdings	3873	0
Exxon Mobil	10954	20	Sanofi	3448	0
General Dynamics	10852	4	Chesapeake Energy	3306	0
United Technologies	9555	21	California Dairies Inc	2818	1
Microsoft Corp	8725	20	Finmeccanica SpA	2759	0
Reynolds American	8615	1	L-3 Communications	2699	0
Merck and Co	7716	20	Express Scripts	2687	0
Anheuser-Busch InBev	7614	4	AmerisourceBergen Corp	2380	0
GlaxoSmithKline	7281	5	CRH PLC	2369	0
Amgen Inc	6639	3	Arch Coal	2231	0
Eli Lilly and Co	6476	17	Cardinal Health	2171	0
Ford Motor Co	6281	14	Flowers Foods	1865	0
International Paper	5912	10	Nucor Corp	1850	2
Chevron Corp	5768	16	Caremark RX	1778	0
Caterpillar Inc	5626	23	TRW Automotive	1756	0
Coca-Cola Co	5560	18	Alpha Natural Resources	1664	0
General Motors	5534	15	Tesoro Corp	1646	0
Abbott Laboratories	5452	10	CEMEX SA de CV	1630	0
Deere and Co	4890	16	Shaw Group	1548	0
Valero Energy	4694	1	Computer Sciences Corp	1547	0
Johnson and Johnson	4665	18	Exelis Inc	1522	0
Textron Inc	4566	1	Peabody Energy	1512	0
Intel Corp	3850	18	Lorillard Inc	1510	0
Harris Corp	3736	4	Novo Nordisk	1390	0
Weyerhaeuser Co	3724	5	Murray Energy	1374	0
Halliburton Co	3588	15	Trinity Industries	1359	0
Occidental Petroleum	3437	9	Siebel Systems	1295	0
Bayer AG	3394	4	Triumph Group	1290	0
ConocoPhillips	3333	9	Thermo Fisher Scientific	1087	0
Chrysler Group	3282	19	Constellation Brands	1063	0
Dow Chemical	3278	16	Airbus Group	1047	0
Huntington Ingalls Industries	3274	1	Sierra Nevada Corp	1044	0
PepsiCo Inc	3270	17	Unisys Corp	997	0

Notes: Contributions data from Center for Responsive Politics are matched to pro-trade firms by the author. Totals are in thousands of dollars. # supported is the number out of 25 trade issues supported by the firm.

40 pro-trade firms gave 2.59 more over 1994-2016 than the top 40 non-pro-trade firms.² Given the fact that many of the other firms are certainly not anti-trade (they are merely indifferent or not publicly active), this shows the overwhelming profile of pro-trade firms in campaign contributions.

Table B8 reports the same patterns among the top 40 services firms. One distinct pattern among the top non-pro-trade services firms (in comparison with goods firms) is that many come from industries where goods are relatively non-tradable. For example, DTE Eenergy (a utilities company), Comcast Corporation,

² This figure holds steady at 2.64 comparing the top 100 of each type of firm.

Table B8: Top 40 PAC contributors among pro-trade services firms and firms supporting no trade agreements, 1994-2016.

Pro-trade firms			All other firms		
Name	Total	# Supported	Name	Total	# Opposed
ATandT Inc	34425	20	Comcast Corp	12064	0
United Parcel Service	24829	22	Blue Cross/Blue Shield	9990	0
Verizon Communications	19852	14	CME Group	8941	0
Bank of America	17464	7	USAA	7310	0
Deloitte LLP	15895	18	Exelon Corp	7056	0
PricewaterhouseCoopers	13788	8	UBS AG	6943	0
AFLAC Inc	13745	14	Bloomin' Brands	5718	0
FedEx Corp	13718	19	NextEra Energy	5054	0
Ernst and Young	13218	3	American Airlines Group	4879	0
Union Pacific Corp	13035	2	DLA Piper	4671	0
JPMorgan Chase and Co	12799	18	CenturyLink	4644	0
New York Life Insurance	11583	14	HSBC Holdings	4583	0
Wal-Mart Stores	11304	19	Express Scripts	4457	0
KPMG LLP	10205	4	Holland and Knight	4261	0
Berkshire Hathaway	10160	1	General Atomics	4259	0
Home Depot	9709	3	UnitedHealth Group	4199	0
Massachusetts Mutual Li	8603	1	Dominion Resources	4127	0
Wells Fargo	7950	1	United Continental Holdings	3809	0
CSX Corp	7742	1	Chicago Board Options Exchange	3737	0
Citigroup Inc	7209	23	SoftBank Corp	3698	0
Norfolk Southern	6848	2	Pacific Mutual Holding	3658	0
Goldman Sachs	6117	7	Navient Corp	3602	0
Metlife Inc	5850	17	DTE Energy	3576	0
Morgan Stanley	5580	12	Humana Inc	3535	0
Liberty Mutual	5105	13	Financial Services Roundtable	3328	0
Akin, Gump et al	4718	9	PGandE Corp	3273	0
Credit Suisse Group	4408	5	Crawford Group	3218	0
Duke Energy	4386	1	FMR Corp	3195	0
Prudential Financial	4155	8	Zurich Financial Services	3141	0
Capital One Financial	4118	3	FirstEnergy Corp	3111	0
KandL Gates	4096	1	Entergy Corp	3103	0
Cigna Corp	4095	7	Southern Co	3057	0
Alphabet Inc	4052	7	Real Estate Roundtable	3044	0
American Express	4038	14	Dentons	3038	0
Edison International	3969	1	iHeartMedia Inc	3028	0
American Electric Power	3959	2	Caesars Entertainment	2982	0
McDonald's Corp	3727	6	Loews Corp	2923	0
Northwestern Mutual	3701	6	Cox Enterprises	2771	0
Bechtel Group	3662	8	National Amusements Inc	2739	0
Parsons Corp	3273	2	Motorola Solutions	2603	0

Notes: Contributions data from Center for Responsive Politics are matched to pro-trade firms by the author. Totals are in thousands of dollars. # supported is the number out of 25 trade issues supported by the firm.

and Blue Cross/Blue Shield all stand out as representing relatively non-tradable industries. Overall, the activities of the top pro-trade services contributions look very similar to the activities among pro-trade goods firms. First, the top 40 pro-trade contributions are extremely politically active, supporting trade for 34.2% of all possible issues. That figure remains at 24.1% for the top 100 firms. Second, the total contributions of the top 40 pro-trade firms are 2.07 times the contributions of the top 40 non-pro-trade firms. That ratio falls to 1.63 among the top 100 contributors.

Additional information on lobbying by pro-trade firms

This section provides some additional information on lobbying behavior by pro-trade firms which complements analysis provided on contributions above. Figure B4 provides evidence on variation in lobbying over time by pro-trade firms. Each bar represents the proportion of lobbying on trade or tariffs that was conducted by firms that had publicly supported at least one (or all) of the live trade issues over the two-year period. The extent to which pro-trade firms dominate lobbying on trade issues is remarkable. For a typical two-year period, about 70% of lobbying expenditures on trade come from firms that have supported trade *over those two years*. This proportion is only somewhat smaller (about 61%) for services firms.

Table B9 provides details on the 40 largest goods firms lobbying, and not lobbying, on trade issues. As with campaign contributions, the top lobbying firms are incredibly active in publicly supporting trade agreements. These 40 firms publicly supported trade issues 547 times out of 1000 total possible, for a rate of support of 54.7. This rate falls to 39.2% for the top 100 lobbying firms. The total lobbying expenditures of the top 40 lobbying firms that supported trade exceed those of the top 40 lobbying firms that didn't support trade by a factor of 9.99. Among the top 100, this factor is over 10.

Table B10 shows much the same patterns among services firms. The top 40 services firms supported trade in 38.6% of all possible instances, while the top 100 did so in 28.6% of all possible cases. Lobby expenditures of the top 40 services firms that supported trade exceed those of the firms that did not support by trade by a factor of 5.84. For the top 100, this ratio rises to 6.25. Overall, the most active lobbying firms are vastly more likely to be pro-trade than anti-trade.

References

- Destler, Irving M. 2005. *American Trade Politics*. New York: Columbia University Press.
- Irwin, Douglas A. 2017. *Clashing Over Commerce: A History of US Trade Policy*. University of Chicago Press.
- Manger, Mark S. 2009. *Investing in Protection: The Politics of Preferential Trade Agreements between North and South*. Cambridge University Press.
- Manger, Mark S. 2012. "Vertical Trade Specialization and the Formation of North-South PTAs." *World Politics* 64(4):622–658.
- Milner, H.V. 1988. *Resisting Protectionism: Global Industries and the Politics of International Trade*. Princeton, NJ: Princeton University Press.

Figure B4: Corporate lobbying by firms expressing support for trade in each election cycle. Live issues are considered for each cycle only for both firms supporting at least 1+ issue, and for firms supporting all issues.

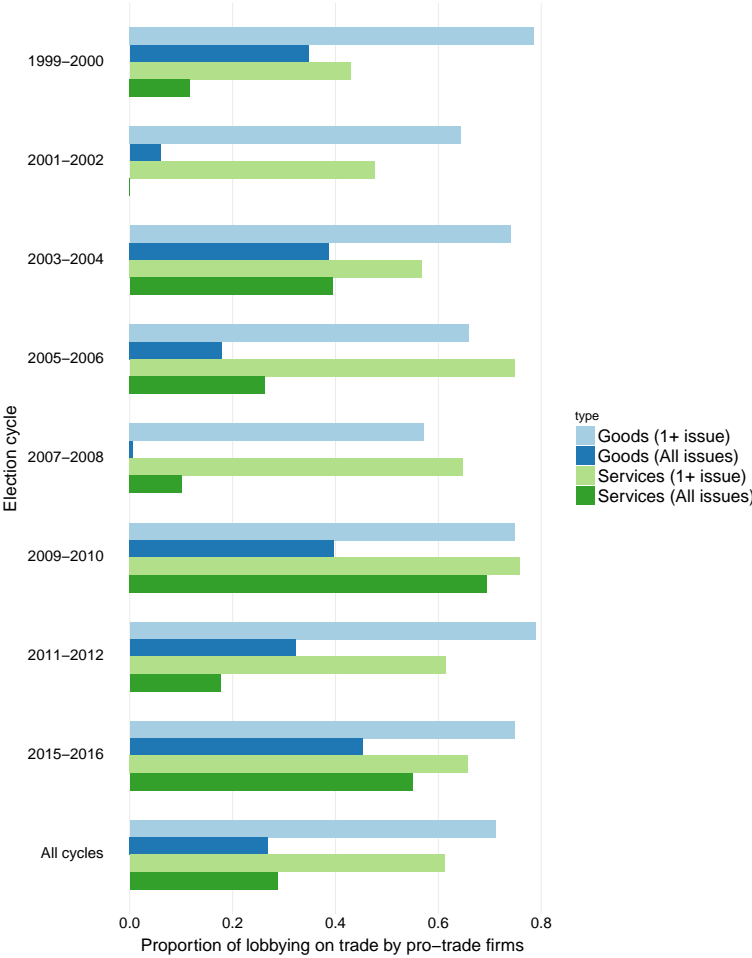


Table B9: Top 40 lobbying firms among pro-trade goods firms and firms supporting no trade agreements, 1998-2014.

Pro-trade firms			All other firms		
Name	Total	# Supported	Name	Total	# Opposed
General Electric	339100	20	US Steel	52270	2
Boeing Co	246805	23	Nissan North America	28826	0
General Motors	245471	15	L-3 Communications	26982	0
Dow Chemical	199808	16	AstraZeneca Pharmaceuticals	26519	0
Exxon Mobil	192860	20	Nucor Corp	24232	2
Lockheed Martin	184811	16	Michelin North America	22272	0
Pfizer Inc	157470	15	Genentech Inc	20199	0
Microsoft Corp	140431	20	ArcelorMittal USA	16170	0
Northrop Grumman	138666	6	BAE Systems	15480	0
United Technologies	136595	21	Boehringer Ingelheim Corp	14940	0
Caterpillar Inc	132606	23	United Defense	12960	0
Ford Motor Co	129992	14	Takeda Pharmaceuticals North America	11522	0
DuPont Co	128566	10	Novo Nordisk Pharmaceuticals	10710	0
Bayer Corp	127614	4	Sanofi-Pasteur Inc	10704	0
Chrysler Group	127574	9	Sanofi-Aventis	9883	0
Eli Lilly and Co	126451	17	Arkema Inc	9479	0
Chevron Corp	124739	16	Gilead Sciences	8860	0
Monsanto Co	102387	10	Volkswagen AG	8830	0
IBM Corp	97452	21	Reynolds American	8648	0
Raytheon Co	91464	11	Florida Crystals	7899	0
Honeywell International	90232	14	Kaiser Aluminum and Chemical	7790	0
Novartis Corp	88448	6	USEC Inc	7500	0
3M Co	85571	18	Arch Coal	6770	0
Textron Inc	84610	8	Sanofi US	6489	0
Merck and Co	83487	20	Biogen Idec	6375	0
Philip Morris Management	75500	7	Rio Tinto Group	6305	0
Johnson and Johnson	73400	18	MacAndrews South Corp	6030	0
Procter and Gamble	70347	24	Covidien Ltd	5990	0
Intel Corp	69480	18	Samsung Electronics America	5820	0
Coca-Cola Co	67341	18	Volvo Group North America	5390	0
Abbott Laboratories	65279	10	Schott North America	5179	0
Shell Oil	64197	4	Chesapeake Energy	5040	0
ConocoPhillips	63070	9	AK Steel	4943	0
Occidental Petroleum	62380	9	Target Corp	4760	0
Koch Industries Public Sector	61920	5	Cephalon Inc	4455	0
Altria Group	59400	7	Poet LLC	4380	0
Qualcomm Inc	59197	14	Biogen	4290	0
Altria Client Services	58740	7	EADS North America	4146	0
Motorola Inc	58106	17	SBC Communications	4140	0
Bristol-Myers Squibb	56744	7	Lenovo Group	4070	0

Notes: Contributions data from Center for Responsive Politics are matched to pro-trade firms by the author.

Table B10: Top 40 lobbying firms among pro-trade services firms and firms supporting no trade agreements, 1998-2014.

Pro-trade firms			All other firms		
Name	Total	# Supported	Name	Total	# Opposed
FedEx Corp	108277	20	Comcast Corp	54860	0
Google Inc	99750	7	Exelon Corp	49030	0
Prudential Financial	93436	8	Canadian National Railway	16502	0
ATandT Inc	87775	21	HSBC North America	13075	0
Citigroup Management Corp	82485	23	Pfaltzgraff Co	11830	0
United Parcel Service	79689	23	NextEra Energy	11150	0
Wal-Mart Stores	73880	20	iHeartMedia Inc	9745	0
MetLife Inc	72560	18	Transamerica	9430	0
American International Group	65537	22	HSBC Holdings	8520	0
JPMorgan Chase and Co	65243	18	Lowe's Companies	7928	0
Verizon Communications	64340	14	Limited Brands	7487	0
Time Warner	59591	9	Arianespace	7290	0
Disney Worldwide Services	55159	2	Reed Elsevier Inc	7020	0
Hewlett-Packard	52270	7	Zurich	6450	0
New York Life Insurance	52140	15	Comsat Corp	6440	0
AFLAC Inc	49020	15	SAP America	6235	0
Sprint Corp	43699	4	AEGON USA	4720	0
News America	42725	8	DIRECTV Group	4490	0
Delta Air Lines	41987	2	Sempra Energy	4010	0
Morgan Stanley	41660	11	Scana Corp	3710	0
Viacom Inc	33905	3	Chicago Bridge and Iron	3700	0
Facebook Inc	29523	2	Dominion Resources	3270	0
Southern Co	28200	1	Credit Suisse Securities	3120	0
L-3 Communications	26982	1	RELX Group	2950	0
Liberty Mutual Insurance	26310	13	WorldCom Inc	2779	0
Goldman Sachs	25250	7	InterDigital Inc	2717	0
Amazon.com	24770	2	NASDAQ Stock Market	2640	0
Universal Music Group	24360	1	SalesForce.com	2580	0
Principal Financial Group	24238	12	Charter Brokerage	2550	0
Visa USA	23680	20	iHeartMedia Communications	2370	0
Yahoo! Inc	20286	1	Dollar General	2295	0
Unisys Corp	19552	9	Southern California Edison	2240	0
21st Century Fox	18729	5	PPL Corp	2220	0
Chubb Corp	18640	18	Dorchester Group	2170	0
Cigna Corp	18408	7	Lafarge North America	2160	0
Chase Manhattan	14800	3	APL Ltd	2152	0
American Express	14200	14	UBS Americas	2070	0
McGraw-Hill Companies	13290	11	El Paso Corp	2060	0
Ameritech Corp	12820	2	Lloyd's of London	2060	0
Best Buy	12635	2	Burlington Northern Santa Fe Corp	2050	0

Notes: Contributions data from Center for Responsive Politics are matched to pro-trade firms by the author.