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

Abstract

This paper identifies recurrent patterns in the political activity of among American corporations that support trade. These firms have made public coalitions a central element of their pro-trade activities, and their collective efforts vastly outstrip those of trade's corporate opponents. This superiority in organization is paired with dramatically greater volumes of lobbying and campaign contributions. I explain these striking divergences 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. This explanation is supported in panel analysis of firms' public advocacy for trade, which shows 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.

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Appendix A: Data Collection

Public Expressions of Support for (and Oppposition 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 Asssociation; 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 forms 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 Supporting and Opposing Firms

Figures B1 and B2 presents information on goods-producing firms that have supported trade. 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 then among the population. (In services, Very large firms are 108 times more common among trade supporters.) Comparing the size distributions of firms that support trade with the few firms that have publicly opposed trade also reveal stark disparities.[1]

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 row of Figures B1 show that firms that support trade own far more foreign subsidiaries than firms that don't. 99.2% of all US goods-producing firms own zero foreign subsidiaries according to this data. This number drops to 79.2% among firms that have supported trade.[2] 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 share of the population as a whole, but common among pro-trade firms.

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 B1 and B2. Even among the very large firms that make up almost all publicly traded corporations, the firms that support trade liberalization are noticeably larger.

Figures B3 and B4 provide the size distribution of goods and services firms that opposed trade agreements, respectively. These figures are analogous to Figures B1 and B2 in the main text.

[1] See 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.

[2] In services, the equivalent numbers are 99.8% and 87.9% respectively. Appendix B1 shows that among firms publicly opposing trade agreements, 91.9% and 93.8% own no foreign subsidiaries in goods and services, respectively.

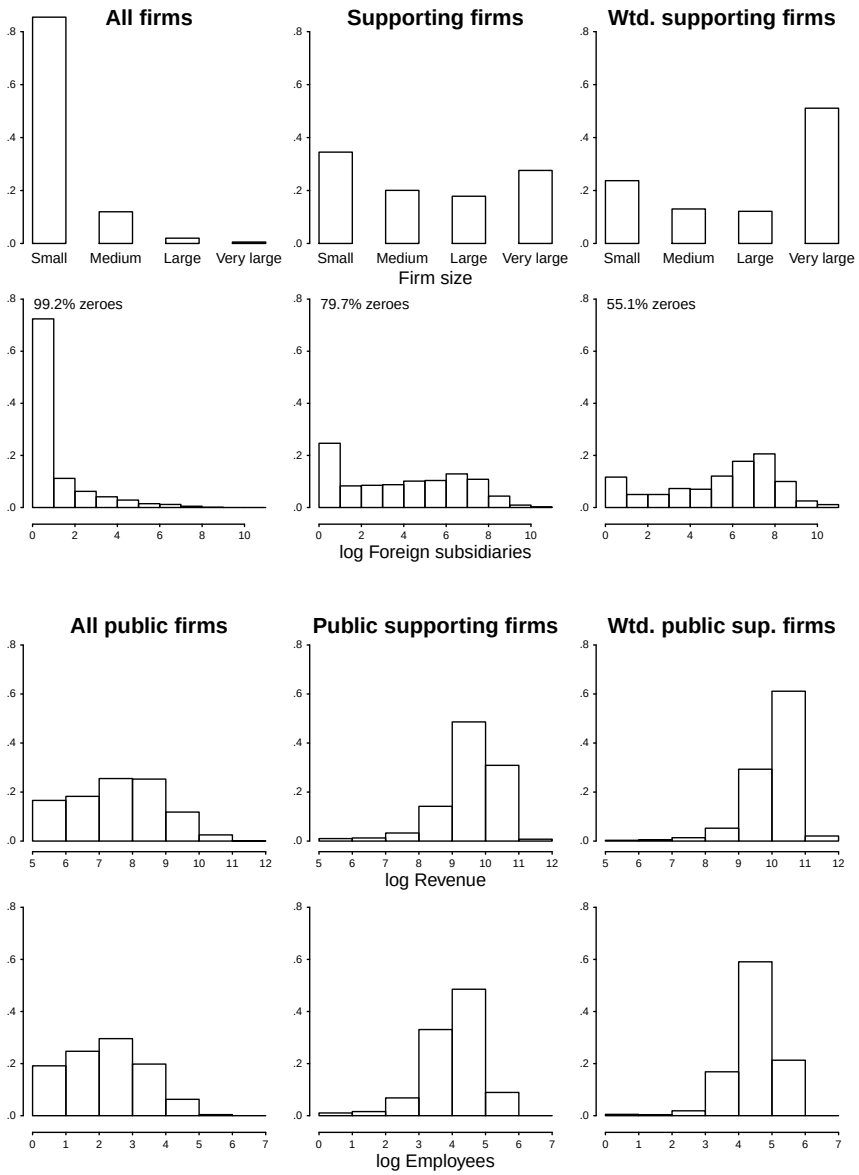

Figure B1: Size and multinationality among goods-producing firms that supported trade.

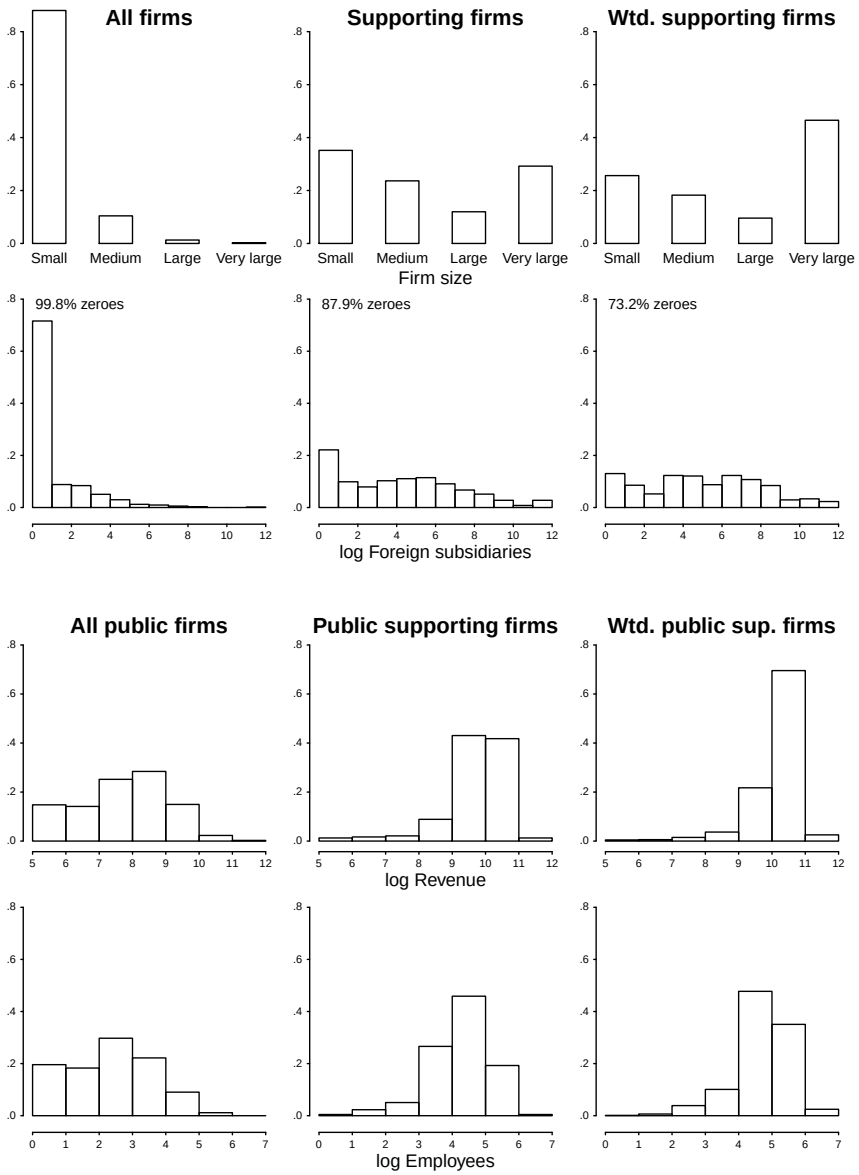

Figure B2: Size and multinationality among services-producing firms that opposed trade.

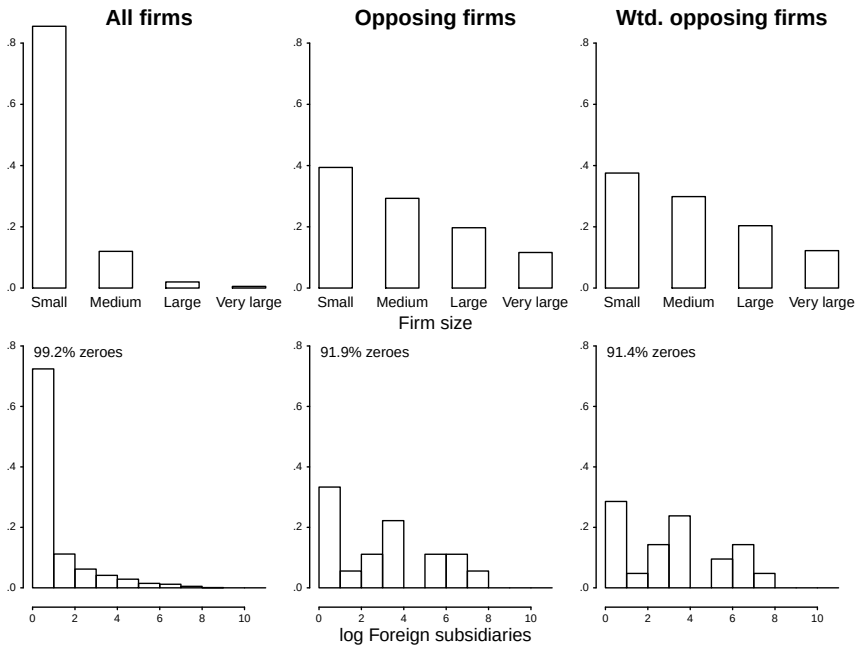

Figure B3: Size and multinationality among goods-producing firms that opposed trade issues.

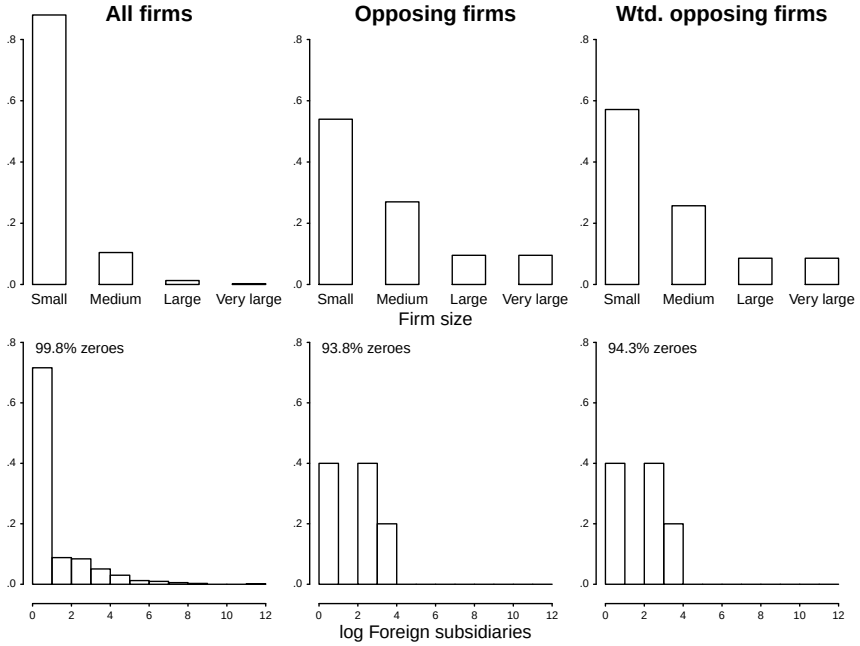

Figure B4: Size and multinationality among services firms that opposed trade issues.

Supporting Firms Across Issues and Industries

In this section, I drill down into variation in firms that have supported trade across both different issues and different issues. To economize on space, I examine only goods-producing industries although I expect that services industries might reveal similar patterns.

Figure B5 shows the size distributions of firms that supported the 25 trade issues contained in the data. The data reveal that overall the size distributions of firms supporting trade issues aren't grossly different across issues, with three exceptions. The NAFTA agreement saw a much broader coalition of firms of many sizes (mainly organized under the umbrella of the USA*NAFTA coalition); the Colombia and Panama trade agreements also saw more even distributions of firm sizes. Overall, there is a broad patterns wherein agreements with larger partners (NAFTA, CAFTA, South Korea, the TPP) garner more support from a broader distribution of sizes beyond just the Very large firms that dominate public support for trade.

Figure B6 plots the total number of foreign subsidiaries of firms that supported particular trade agreements. (Note that firms owning zero subsidiaries are excluded so that the remaining bars are visible). The figure clearly illustrates the prominent role played by MNCs with a large number of foreign subsidiaries in supporting trade agreements. Variation across the agreements is less visible, though we again see that larger issues (NAFTA, CAFTA, Korea) elicit more support from firms with relatively limited global profiles (e.g. owning just one or two foreign subsidiaries, and no the dozens owned by the largest multinationals).

Figure B7 compares the size distribution of firms that have publicly supported trade across 3-digit NAICS industries. There are some interesting differences across the distributions, primarily that in some industries support is highly concentrated among very large firms (e.g. 211: Oil and gas extraction, and 324: Petroleum and coal products) and in others the distribution is much more even (e.g. 325: Chemicals). One explanation for this is likely that some industries have different size distributions which are then reflected in support. It could also be that industries that are more competitive as a whole are more likely to have support for trade come from all manner of firms.

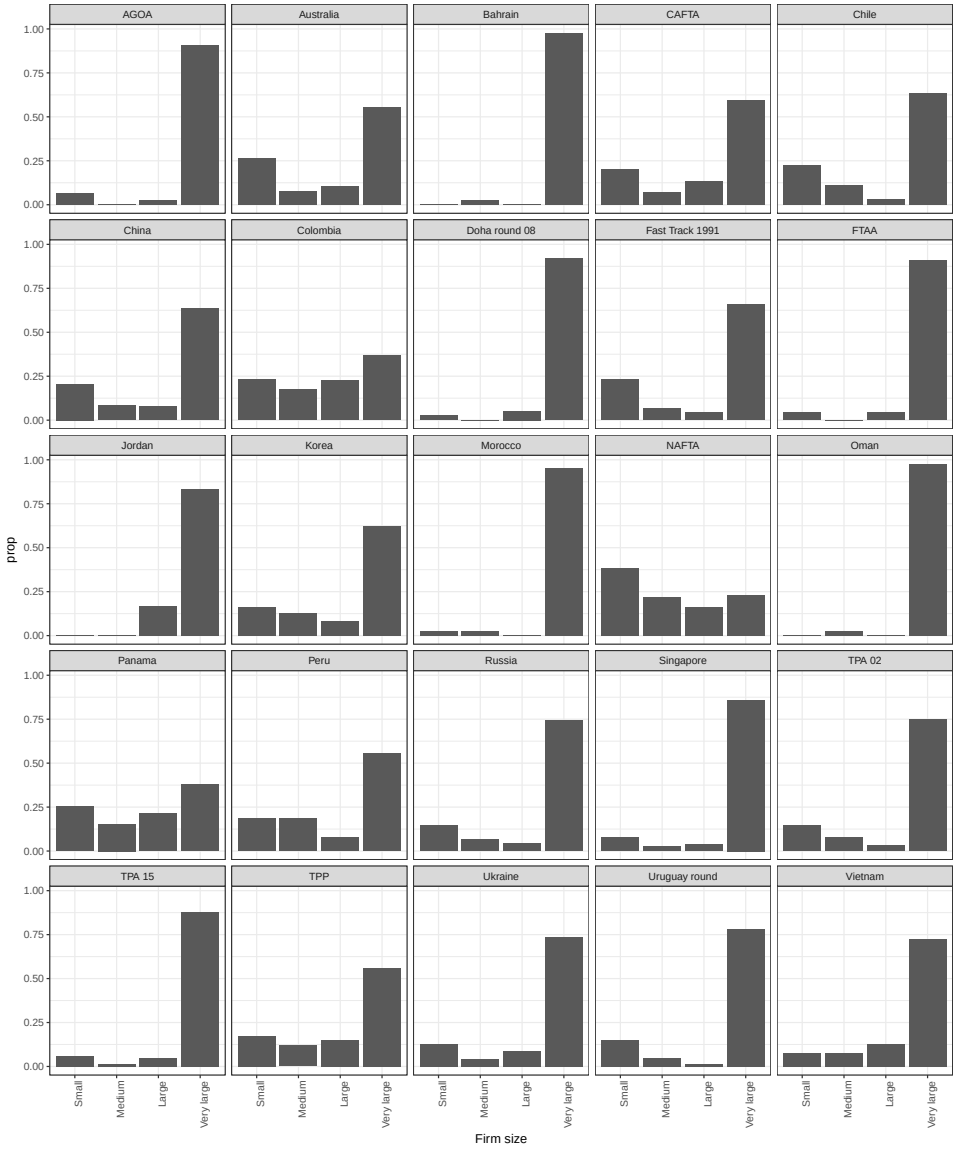

Figure B5: Size distribution across agreements among goods-producing industries.

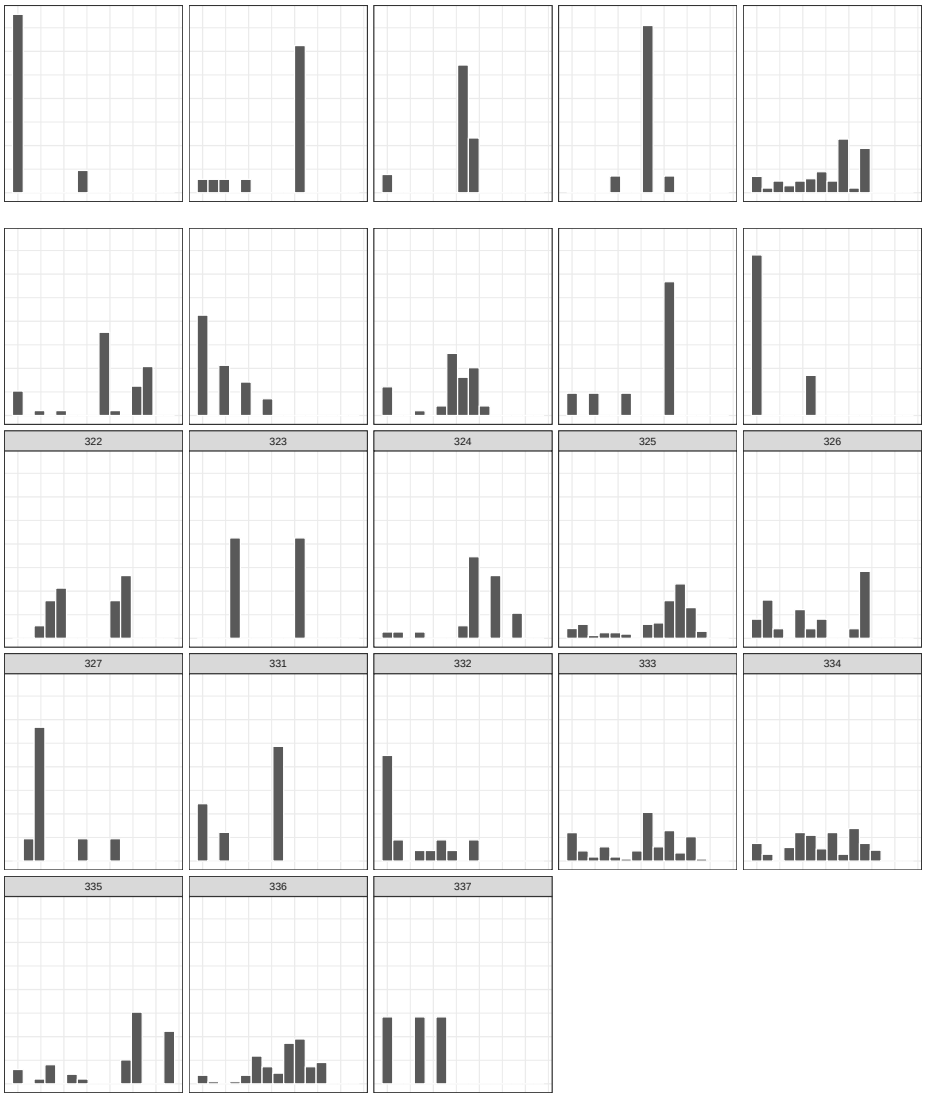

Figure B6: Size distribution across agreements among goods-producing industries.

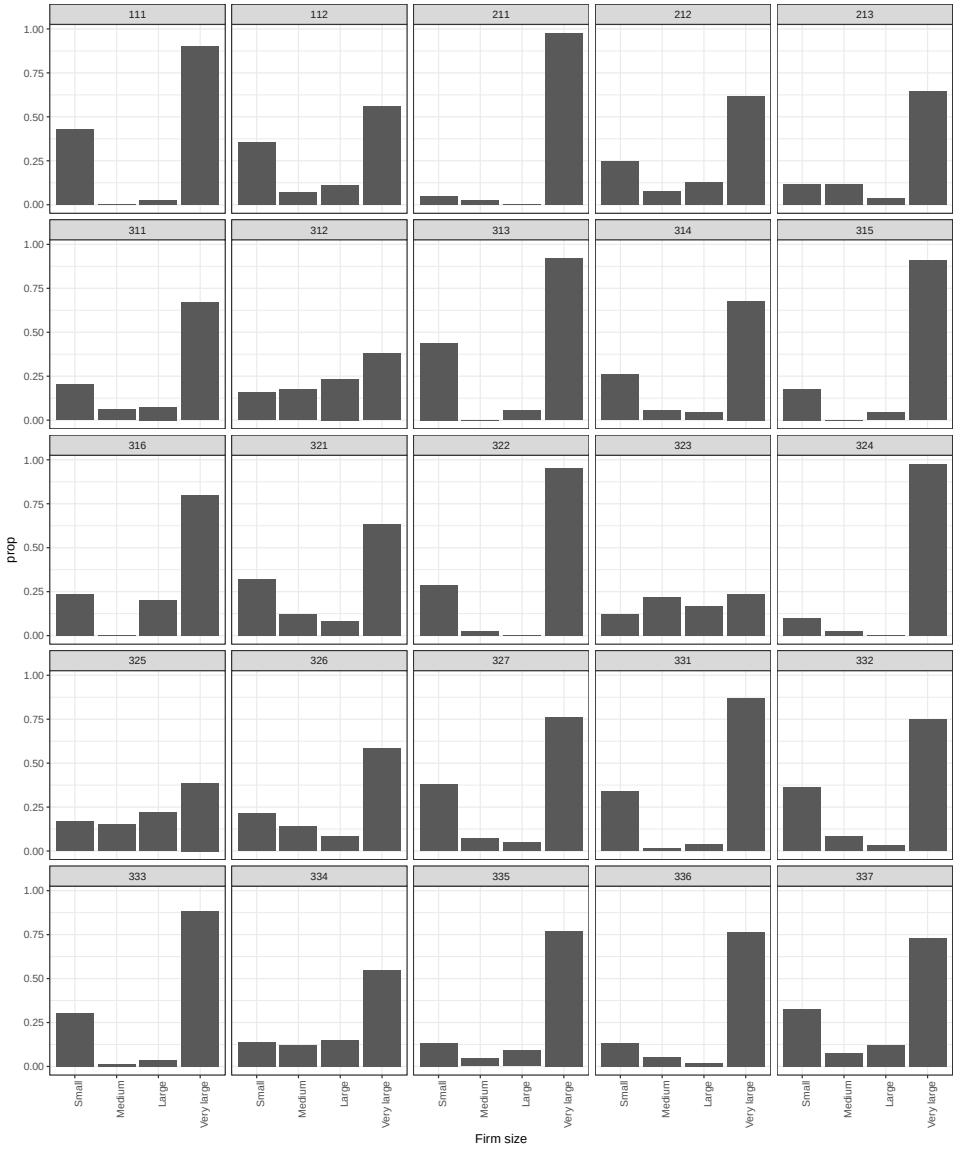

Figure B7: Size distribution across agreements among goods-producing industries.

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 then in subsequent periods, and so these are a somewhat more reliable source then 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.[3] 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 characterstic 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,

[3] 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 lease 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 **??** 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 **??** 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 then 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.

	Support							
	All firms				Public firms			
	1	2	3	4	5	6	7	8
Goods-producing firms:								
Subsidiary (Prior)	15.19***		8.23***		16.36***		7.53***	
	(0.69)		(1.32)		(1.43)		(1.51)	
Any foreign sub. (Prior)	6.10***				6.95**			
	(0.37)				(2.61)			
Subsidiary (Post)		8.20***		1.81		9.30***		2.39
		(0.99)		(1.78)		(1.86)		(1.79)
Any foreign sub. (Post)		10.09***				8.79***		
		(0.40)				(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.

	Support							
	All firms				Public firms			
	1	2	3	4	5	6	7	8
Goods-producing firms:								
Subsidiary (Prior)	11.76***		9.15***		12.53***		6.63***	
	(1.08)		(1.75)		(1.94)		(1.96)	
Any foreign sub. (Prior)	1.99***				−0.32			
	(0.50)				(1.94)			
Subsidiary (Post)		6.97***		5.47*		5.81*		4.45+
		(1.57)		(2.42)		(2.49)		(2.33)
Any foreign sub. (Post)		5.26***				2.69		
		(0.59)				(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^{***}	0.24^{***}		
	(0.05)	(0.06)		
20-firm concentration			0.31^{***}	0.37^{***}
			(0.04)	(0.05)
ln Sales	0.46^{***}	0.48^{***}	0.42^{***}	0.44^{***}
	(0.02)	(0.03)	(0.02)	(0.03)
ln # Firms	-0.08^{***}	-0.08^{***}	-0.03^{+}	-0.02
	(0.02)	(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 **??** 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
Exports with the trade partner:			
Any foreign sub.	0.759***	0.759***	0.760***
	(0.015)	(0.015)	(0.015)
Large	−0.041	−0.041	−0.045
	(0.064)	(0.064)	(0.064)
Exports	−0.001	−0.001	
	(0.001)	(0.001)	
Large · Exports	0.155***	0.155***	0.157***
	(0.016)	(0.016)	(0.016)
Related-party imports from the trade partner:			
Any foreign sub.	0.757***	0.757***	0.759***
	(0.015)	(0.015)	(0.015)
Large	0.124*	0.124*	0.124*
	(0.053)	(0.053)	(0.054)
RP Imports	−0.001	−0.001	
	(0.001)	(0.001)	
Large · RP Imports	0.115***	0.115***	0.116***
	(0.014)	(0.014)	(0.014)
Imported inputs from the trade partner:			
Any foreign sub.	0.759***	0.759***	0.761***
	(0.015)	(0.015)	(0.015)
Large	−0.726***	−0.726***	−0.722***
	(0.069)	(0.069)	(0.069)
Inputs	−0.001	−0.001	
	(0.002)	(0.002)	
Large · Inputs	0.379***	0.379***	0.379***
	(0.020)	(0.020)	(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
Exports with the trade partner:			
Any foreign sub.	1.300***	1.300***	1.278***
	(0.292)	(0.292)	(0.306)
Revenue	−0.141	−0.141	0.052
	(0.359)	(0.359)	(0.398)
Exports	−0.753+	−0.753+	
	(0.390)	(0.390)	
Large · Exports	0.261**	0.261**	0.232*
	(0.087)	(0.087)	(0.096)
Related-party imports from the trade partner:			
Any foreign sub.	1.297***	1.297***	1.271***
	(0.293)	(0.293)	(0.306)
Revenue	0.155	0.155	0.680+
	(0.280)	(0.280)	(0.350)
RP Imports	−0.584*	−0.584*	
	(0.293)	(0.293)	
Large · RP Imports	0.190**	0.190**	0.077
	(0.068)	(0.068)	(0.083)
Imported inputs from the trade partner:			
Any foreign sub.	1.271***	1.271***	1.256***
	(0.292)	(0.292)	(0.305)
Revenue	−0.960**	−0.960**	−0.734+
	(0.331)	(0.331)	(0.382)
Inputs	−1.669***	−1.669***	
	(0.413)	(0.413)	
Large · Inputs	0.544***	0.544***	0.499***
	(0.095)	(0.095)	(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 **??** 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 B8 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 **??**.

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 B8: 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.

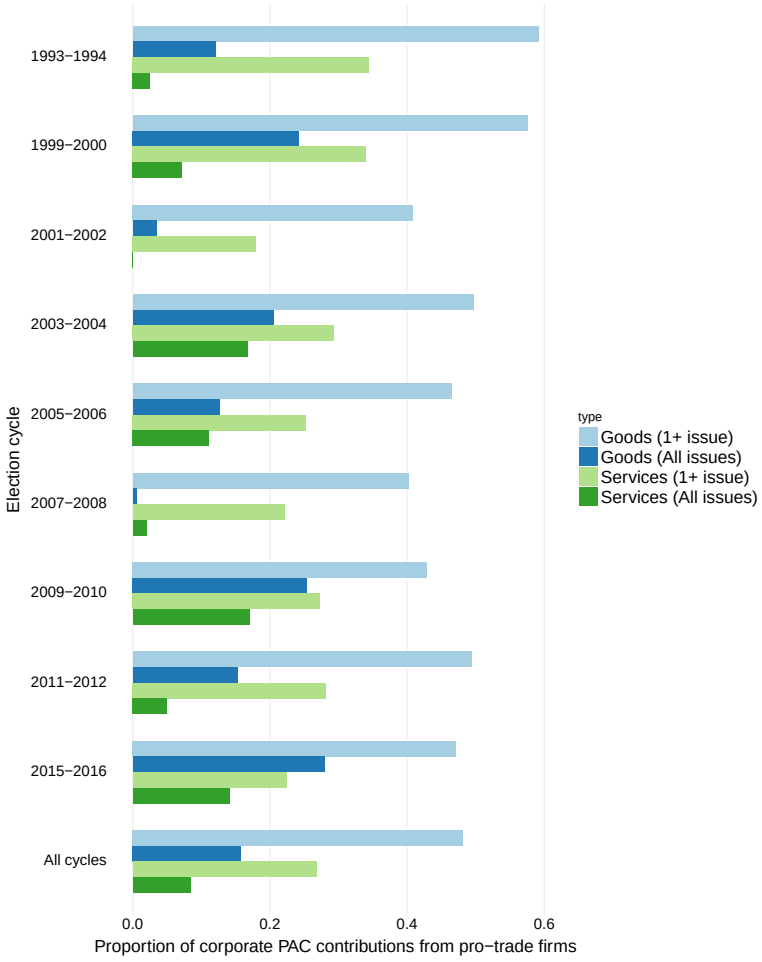

Table B7: Top 40 PAC contributors among pro-trade goods firms and firms supporting no trade agreements, 1994-2016.

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.[4] 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,

[4] 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 B9 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.

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Figure B9: 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.

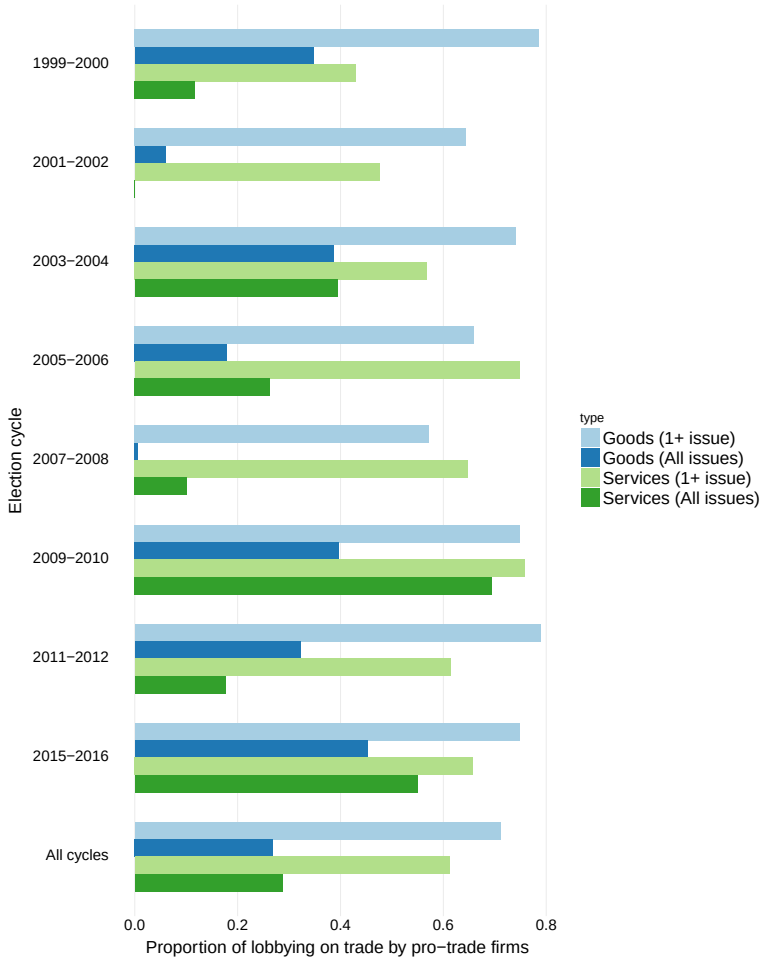

Table B9: Top 40 lobbying firms among pro-trade goods firms and firms supporting no trade agreements, 1998-2014.

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.