

Supplementary Appendix

Exports, Jobs, Growth!

Congressional Hearings on US Trade Agreements

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Appendix A: Data Sources

The hearings

We provide in Table A1 the complete list of hearings that we have analyzed in this paper. We only consider hearings that were primarily focused on the economic implications of agreements. We did not examine hearings focused on diplomatic relations among the states which occurred occasionally before the House Foreign Affairs Committee. Some examples include the House Foreign Affairs Committee hearing on the Colombia, Panama, and South Korea free trade agreements (Serial No. 112-69), the Subcommittee on Terrorism, Nonproliferation hearing on the South Korea agreement (Serial No. 110-89), and the Subcommittee on the Western Hemisphere hearing on the Colombia and Panama trade agreements (Serial No. 112-17). We also did not examine in this paper a special issue debating the use of capital controls and financial liberalization in Singapore (hearing before the House Domestic and International Monetary Policy, Trade and Technology Subcommittee; Serial No. 108-16).

Agreement	Dates	Serial	Chamber	Committee or Subcommittee
Jordan	03/20/01	107-162	Senate	Finance comm.
Chile	05/08/03	108-19	House	Commerce, Trade, and Consumer Protection subcomm.
Chile	06/10/03	108-24	House	Trade subcomm.
Chile	06/12/03	108-19	House	Tax, Finance and Exports subcomm.
Chile	06/17/03	108-333	Senate	Finance comm.
Singapore	05/08/03	108-19	House	Commerce, Trade, and Consumer Protection subcomm.
Singapore	06/10/03	108-24	House	Trade subcomm.
Singapore	06/17/03	108-333	Senate	Finance comm.
Australia	06/15/04	108-599	Senate	Finance comm.
Australia	06/16/04	108-42	House	Ways and Means comm.
Morocco	06/15/04	108-599	Senate	Finance comm.
Morocco	07/07/04	108-47	House	Ways and Means comm.
CAFTA-DR	04/13/05	109-306	Senate	Finance comm.
CAFTA-DR	04/21/05	109-10	House	Ways and Means comm.
CAFTA-DR	04/28/05	109-18	House	Commerce, Trade, and Consumer Protection subcomm.
CAFTA-DR	06/07/05	109-454	Senate	Agriculture comm.
Bahrain	09/29/05	109-31	House	Ways and Means comm.
Bahrain	10/06/05	109-258	Senate	International Trade subcomm.
Oman	03/06/06	109-624	Senate	International Trade subcomm.
Oman	04/05/06	109-59	House	Ways and Means comm.
Peru	06/29/06	109-995	Senate	Finance comm.
Peru	07/12/06	109-86	House	Ways and Means comm.
Peru	09/11/07	110-850	Senate	Finance comm.
Peru	11/01/07	110-57	House	Small Business comm.
Korea	03/20/07	110-26	House	Trade subcomm.
Korea	11/01/07	110-57	House	Small Business comm.

Korea	09/24/08	110-1193	Senate	Interstate Commerce, Trade, and Tourism subcomm.
Korea	01/25/11	112-02	House	Ways and Means comm.
Korea	02/09/11	112-04	House	Ways and Means comm.
Korea	04/06/11	112-008	House	Small Business comm.
Korea	04/07/11	112-TR3	House	Trade subcomm.
Korea	05/12/11	112-16	House	Agriculture comm.
Korea	05/26/11	112-727	Senate	Finance comm.
Colombia	11/01/07	110-57	House	Small Business comm.
Colombia	01/25/11	112-02	House	Ways and Means comm.
Colombia	02/09/11	112-04	House	Ways and Means comm.
Colombia	03/17/11	112-TR03	House	Trade subcomm.
Colombia	04/06/11	112-008	House	Small Business comm.
Colombia	05/11/11	112-186	Senate	Finance comm.
Colombia	05/12/11	112-16	House	Agriculture comm.
Panama	11/01/07	110-57	House	Small Business comm.
Panama	05/21/09	111-918	Senate	Finance comm.
Panama	01/25/11	112-02	House	Ways and Means comm.
Panama	02/09/11	112-04	House	Ways and Means comm.
Panama	03/30/11	112-TR2	House	Trade subcomm.
Panama	04/06/11	112-008	House	Small Business comm.
Panama	05/12/11	112-16	House	Agriculture comm.
Panama	05/25/11	112-726	Senate	Finance comm.

Table A1: Complete list of all hearings examined.

Trade covariates

Basic trade data: All 6-digit NAICS industry trade data are taken from the US Census Bureau's NAICS Related Party Database available at <https://relatedparty.ftd.census.gov/>. These data are measured over 2005-2009 and then averaged. The Exports measure comprises all exports, whether from related or unrelated parties. The Imports measure includes all Imports not arising from related parties. The Related-party Imports measure includes all only imports arising from related-parties.

Intermediate inputs: The measure of intermediate inputs was constructed using data on 6-digit imports (of all varieties) combined with 6-digit Input-Output tables furnished by the Bureau of Economic Analysis. For a complete description of the process of constructing the variables, please see **[Blinded]**.

Campaign contributions to chairs: The Chair's contributions variable is measured as the total of all campaign contributions by firms and associations in that 6-digit industry. Contributions data are provided by the Center for Responsive Politics and span the years 1994-2016 (Center for Responsive Politics, 2017). Concoordinating from CRP industries to 6-digit NAICS industries was done by the authors. Contributions from CRP codes which map to multiple 6-digit industries are allocated to those industries in proportion to industry sales.

Establishments in chair's state: The Chair's establishments variable measures the total number of establishments (factories or farms) for a given 6-digit industry for the committee chair's state. This is measured for the year 2013. For the mining and manufacturing industries, these data are available from Country Business Patterns but were downloaded from:

<https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>.

For the agriculture industries, these data were constructed from tables at:

https://data.bls.gov/cew/apps/data_views/data_views.htm#tab=Tables.

Topical coding

All paragraph topics were assigned by hand by the authors. Hearings were initially digitized. A few older submitted letters could not be digitized properly, and so were read in the original form with codings added to the digitized hearing document omitting the text. All hearings were assigned metadata on: the chamber of Congress; the partner or partners in the agreement; the committee; the subcommittee (as needed); the title of the hearing; the party in control of the Congress at time of the hearing; the (sub)committee chair and her state and ideal point from our measure of trade attitudes.

Each testimony was assigned metadata as well on: the organization of the person testifying (as needed); the type of organization; the name of the person testifying; that person's role in their organization; the party, state, committee role and ideal point for members of Congress; the broad sector and industry for producers; and the position (for, against, indifferent, no position, insufficiently liberal, and favor because own industry avoided liberalization). 'Insufficiently liberal' refers to witnesses who said that they would have supported the agreement but for continuing trade protection ratified by the agreement. Other industries (e.g., sugar) provided supportive testimony on agreements where they had evaded substantive liberalization. Our standard for coding positions is 'clear evidence of a clear position'. Industry codings are at the 6-digit NAICS level for firms, farmers, and trade associations and are the authors' own work.

We count all oral, prepared, and supplementary materials by a witness as part of the main testimony. We count both oral and prepared remarks, whether they are nearly identical or quite different. Often, testimony consists of only oral and prepared remarks, and so repetition of the testimony has no effect on eventual calculation of the topic proportions. We do not count dialogues with members of Congress, or other periods for question and answer.

Each paragraph was given at least one of the topics described in the main text (though some paragraphs of irrelevant material were simply called the topic 'nonrel'). Our list of topics was generated from an initial reading of the documents; our own substantive knowledge from a previous project coding submissions to the USTR on the TPP agreement; and, from subsequent readings in the course of coding the paragraphs. We refined and added topics as needed in the course of the project, and then rechecked earlier usages to ensure conformability.

Paragraphs with multiple topics are counted as fractional paragraphs for purposes of summing up total numbers of topics per testimony. For example, a paragraphs with two topics would contribute 1/2 a paragraph to the count for each topic discussed in that testimony. Our 8 topics on 'Nonrelevant material' and 'Political commentary' are excluded from the denominator for calculating proportions because they are

Table A2: Topics used in coding hearing content

I: Nonrelevant material:	
Introduction	Outro
Non-relevant	
II: Political commentary:	
Position on agreement	Revisions to agreement
Agreement timetable	Political mobilization
Policymaking process	
III: Ordinary trade:	
Bilateral trade (expansion)	US exports
Foreign barriers reduced	Foreign barriers remain
Import competition	Domestic barriers reduced
Domestic barriers remain	US trade deficits
Foreign trade agreements	Currency manipulation
Upstream industries affected	Downstream industries affected
IV: Foreign sourcing and investment:	
Sourcing of intermediates	FDI
Capital controls	
V: Broader economic impacts:	
Jobs	Economic growth
Producer productivity	Consumers
SMEs	Economic development
Economic security	
VI: Expanded trade agenda:	
SPS measures	Government procurement
Technical barriers	IP rights
Reg. harmonization	Environment
Tax havens	Safeguards
Rules of origin	Subsidies
Customs facilitation	Other domestic policies
e-Commerce	TRIMs
Non-market economies	Dumping
Immigration	Enforcement
Labor rights	Human rights
Benchmark agreement	
VII: Broader strategic issues:	
Alliance/friendship	Democratization
Security issues	US trade leadership
Agreement broadening	

generally 'pro forma' in nature. We do not wish, for example, to count a firm which spends 3 paragraphs introducing its industry or commending the USTR for a speedy negotiation of the agreement as discussing exports less than a firm which omits these details, but otherwise has the same number of paragraphs on exporting.

Appendix B: Additional Results

Firm heterogeneity and firm-level models

In this section, we consider some firm-level implications of a model of Congressional hearings as pro-trade propaganda. The recent literature on trade politics has investigated firm heterogeneity in global engagement (whether exporting, importing, or foreign production) within industries [see (Kim and Osgood, 2019) for a review]. The fundamental premise of this work is that a small set of (usually very large and) highly productive firms dominate almost all of these activities. Under certain scope conditions (primarily product differentiation and the availability of opportunities to cultivate global supply networks) industries may be internally divided. The very large firms which engage with global markets will support trade liberalization, while smaller firms which do not have the ability to benefit from global markets will not support global integration.

This framework leads to two predictions which are relevant for our paper. First, if pro-trade Congressional chairs are interested in inviting pro-trade voices to testify, we expect that they would invite firms that export and import extensively. We do not have firm-level trade data, but we do have firm-level information on size, which has commonly been used in the literature as a proxy for productivity and ability to engage global markets. We therefore test to see if larger firms are more likely to be invited to testify. We also have information on which firms own foreign affiliates (including in trade agreement partners) so we also examine whether firms that own foreign affiliates are more likely to be invited to testify. Second, we follow the lead of the literature which has examined intra-industry divisions, by examining whether firms or associations testify at Congressional hearings. If firms are called to testify, that may be evidence that the firms in an industry were not on the same page on whether to support a given trade agreement. Overall, we expect that industries where import competition is a real threat, and industries where opportunities to import intermediates or to produce abroad are present, to be more likely to have firms testify rather than an industry association.

We first examine our firm-level implications about size and the ownership of foreign affiliates. To do so, we employ data gathered for Osgood (2018), which contains a complete explanation of the data collection and modeling procedure. Our firm-level data on size, ownership of foreign affiliates, and industry come from Orbis. We use Orbis to construct a representative sample of American firms (separately in goods and then services); we then add into this sample information on the firms that have testified before Congress. We thus construct a panel of US firms (f) across trade agreements (a), and record each firm as a 1 if it

testified before Congress on the trade agreement in question. We write this outcome variable as Testify_{fa} . We consider the following linear probability model:

$$\begin{aligned} \text{Testify}_{fa} = & \beta_1 \cdot \text{Subsidiary}_{fa} + \beta_2 \cdot \text{Foreign subsidiary}_f + \beta_{3-5} \cdot \text{Size}_f + \\ & \gamma_1 \cdot \ln \text{Exports}_{ia} + \gamma_2 \cdot \ln \text{Imports}_{ia} + \gamma_3 \cdot \ln \text{RP Imports}_{ia} + \\ & \gamma_4 \cdot \ln \text{Inputs}_{ia} + \mu_i + \mu_a + \epsilon_{fa}. \end{aligned}$$

Here the variables are Subsidiary_{fa} (does the firm have a subsidiary in the trade agreement partner?); $\text{Foreign subsidiary}_f$ (does the firm have any foreign subsidiary?); Size_f (Orbis's four part size classification of Small, Medium, Large or Very large where Small is the excluded category). Each of the trade variables is defined as in the main text, but is at the 4-digit NAICS level (represented by an i for industry). All of the models use weighted least squares. Note that the outcome variable is multiplied by 100, and so all coefficients should be interpreted as increasing the 'percentage chance' of testifying, rather than the probability.

Table B1: Firm-level model of being called to testify among goods-producing firms

Model	Testify:			
	1	2	3	4
Subsidiary	0.668** (0.221)	0.697** (0.231)	0.668*** (0.012)	0.696*** (0.013)
Any foreign sub.	0.037** (0.011)	0.039** (0.012)	0.037*** (0.002)	0.039*** (0.003)
Medium	0.001* (0.000)	0.001* (0.000)	0.001+ (0.000)	0.001+ (0.000)
Large	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)
Very large	0.027*** (0.006)	0.028*** (0.007)	0.027*** (0.002)	0.028*** (0.002)
ln Exports		0.000* (0.000)		-0.000 (0.000)
ln Imports		0.000 (0.000)		0.000 (0.001)
ln Rel. party imports		-0.000 (0.000)		-0.000 (0.001)
ln Inputs		0.000 (0.000)		-0.000 (0.001)
N	2400384	2112216	2387316	2109876
Agreement FE	No	Yes	No	Yes
4-digit NAICS FE	No	Yes	No	Yes

Table B2: Firm-level model of being called to testify among services firms

Model	Testify:	
	1	2
Subsidiary	0.284* (0.116)	0.253*** (0.006)
Any foreign sub.	0.013* (0.007)	0.009*** (0.001)
Medium	0.000 (0.000)	0.000 (0.000)
Large	0.000 (0.000)	0.000 (0.000)
Very large	0.002* (0.001)	0.002*** (0.000)
N	2394936	2361276
Agreement FE	No	Yes
4-digit NAICS FE	No	Yes

Table B1 shows the results among goods-producing industries. Firms that are larger are more likely to be called into testify, as evinced by the positive and significant coefficient on Very large. We also see that firms that have subsidiaries in the trade agreement partner (as of 2018 when we collected the data) are more likely to have been invited to testify. This may reflect the fact that the subsidiary pre-existed the agreement, or was opened after the agreement. Table B2 explores the same model (absent the trade) among services firms and has very similar findings.

Finally, we examine in Table B3 our contention that firms might be more likely to testify in industries facing import competition or that have significant opportunities to construct global supply networks. To do so, we employ the same data as from the main text's Table 2 however we subset the data to examine only industries where a firm or association testified. We then use as an outcome variable whether it was a firm (only) that testified. Overall, we find that firms are more likely to testify where import competition is fierce. In other words, where there is significant import competition that might make some firms opposed to liberalization, industries are likely to be represented by the (very large) firms we describe above, rather than their associations. We also see positive but somewhat inconsistent links between global supply chains (as represented by imported inputs and related-party imports) and firm testimony.

Table B3: Firm-level model of being called to testify among goods-producing firms

Model	Firm testifies	
	1	2
Mod. differentiated	0.073 (0.055)	
Differentiated	0.221*** (0.052)	
ln Exports	0.002 (0.008)	-0.022*** (0.007)
ln Imports	0.022* (0.011)	0.033*** (0.008)
ln Rel party imports	-0.018 (0.010)	-0.014* (0.007)
ln Imported inputs	0.034* (0.013)	-0.009 (0.011)
R ²	0.05	0.60
N	1058	1058

Additional fixed effects models

In Table B4, we replicate all of the main models from Table 2 using 6-digit industry fixed effects. We find that our main results are quite robust.

Table B4: LPM for inclusion of testimony in Congressional hearings

Model	1	2	3	4
In Exports	0.569* (0.230)	-0.243 (0.345)		
In Imports	0.131 (0.143)	0.911** (0.348)		
In Rel party imports	0.233* (0.116)	-0.195 (0.306)		
In Imported inputs	1.333*** (0.368)	-0.078 (0.749)		
Exports · CIP		1.062** (0.339)		
Imports · CIP		-1.003* (0.415)		
RP Imports · CIP		0.567 (0.374)		
Imported inputs · CIP		1.826* (0.849)		
Chair's contributions			1.187*** (0.166)	1.461*** (0.248)
Chair's establishments			1.309** (0.497)	0.677 (0.691)
R ²	0.21	0.21	0.24	0.23
N	16848	16848	31419	14070
Agreement FE	Yes	Yes	Yes	Yes
6-digit Industry FE	Yes	Yes	Yes	Yes

Notes: Linear probability models with OLS standard errors. The likelihood ratio test is relative to models without trade flow variables for 1-3; and to models without interaction terms for models 4-6.

Trade data from 2010-14

In this section, we replicate the models from the main text using trade data from a different time period. Recall that to smooth over year-over-year variation – but also to compare trade agreements flows during similar circumstances – we use trade data averaged over 2005 to 2009. In Tables B5 and B6 we replicate Tables 2 and 5 from the main text using trade data from 2010-2014. We find results that are extremely similar overall.

Table B5: LPM for inclusion of testimony in Congressional hearings

Model	1	2	3	4	5	6
Results without political influence variables:						
In Exports	0.540*** (0.093)	0.423*** (0.092)	0.357** (0.109)	-0.515+ (0.270)	-0.395 (0.267)	-0.598* (0.302)
In Imports	0.009 (0.104)	-0.000 (0.102)	-0.201+ (0.117)	0.587+ (0.308)	0.410 (0.303)	0.427 (0.341)
In Rel party imports	0.295** (0.099)	0.252** (0.097)	0.241* (0.108)	-0.270 (0.285)	-0.108 (0.281)	-0.178 (0.311)
In Imported inputs	0.467** (0.151)	0.903*** (0.209)	2.032*** (0.268)	0.445 (0.432)	-0.254 (0.620)	1.330+ (0.721)
Chair's ideal point				-0.484 (3.237)		
Exports · CIP				1.377*** (0.334)	1.073** (0.330)	1.253*** (0.372)
Imports · CIP				-0.690+ (0.380)	-0.529 (0.375)	-0.812+ (0.420)
RP Imports · CIP				0.728* (0.354)	0.482 (0.349)	0.555 (0.385)
Imported inputs · CIP				0.203 (0.537)	1.510* (0.767)	0.922 (0.877)
R ²	0.01	0.07	0.14	0.02	0.07	0.14
N	19392	19392	16848	19392	19392	16848
LRT statistic	165.7***	109.8***	94.3***	31.8***	24.6***	18.7**
Agreement FE	No	Yes	Yes	No	Yes	Yes
Industry FE	No	No	Yes	No	No	Yes

Notes: Linear probability models with OLS standard errors. The likelihood ratio test is relative to models without trade flow variables for 1-3; and to models without interaction terms for models 4-6.

Table B6: SUR model of topical content among goods producers (N=364)

Topic:	Exports	For. barriers	Import comp.	FDI
ln Exports	0.049*** (0.014)	0.095*** (0.024)	-0.061*** (0.010)	-0.015 (0.010)
ln Imports	-0.004 (0.022)	-0.060 (0.038)	0.075*** (0.017)	-0.026 (0.015)
ln Rel par imports	-0.025 (0.017)	-0.037 (0.030)	0.013 (0.013)	0.035** (0.012)
ln Sales	-0.033*** (0.009)	0.002 (0.016)	-0.028*** (0.007)	0.027*** (0.006)
R ²	0.14	0.11	0.11	0.07

Notes: Seemingly Unrelated Regression (SUR). Outcome variables are logged ratios of topic relative to baseline of all other topics. Import competition includes topics on import competition and US reductions of domestic barriers to trade.

Collocations with support and opposition

Table B7 contains that collocations with 'Support' and 'Oppose' which are contained in the main text.

Table B7: Collocations with the support and oppose

Support/Favor		Oppose/Do not support	
<u>Preceding adverb:</u>			
strongly	223	strongly	13
actively	9	adamantly	3
fully	8	publicly	2
significantly	8	-	
enthusiasticly	5	-	
overwhelmingly	3	-	
<u>Total uses of word:</u>			
	719		46

Responsiveness of testimony to sector

We look at inter-sectoral variation in the 13 most discussed topics in Figure B1. Overall, many patterns here look sensible, and suggest that sectors truthfully (at least in relative terms) describe the issues of interest to them. The primary sectors (mostly agriculture) emphasize exports; foreign trade barriers; competitive liberalization; import competition; and SPS measures. This corresponds with the notion that agricultural industries produce homogeneous goods that are liable to be displaced by foreign competitors; and that agriculture is uneven in competitiveness (Goldstein, 1989; Davis, 2004; Naoi and Kume, 2011). Manufacturing and services are more likely to discuss FDI and IPRs, which also makes sense (Manger, 2012; Manger and Shadlen, 2014).

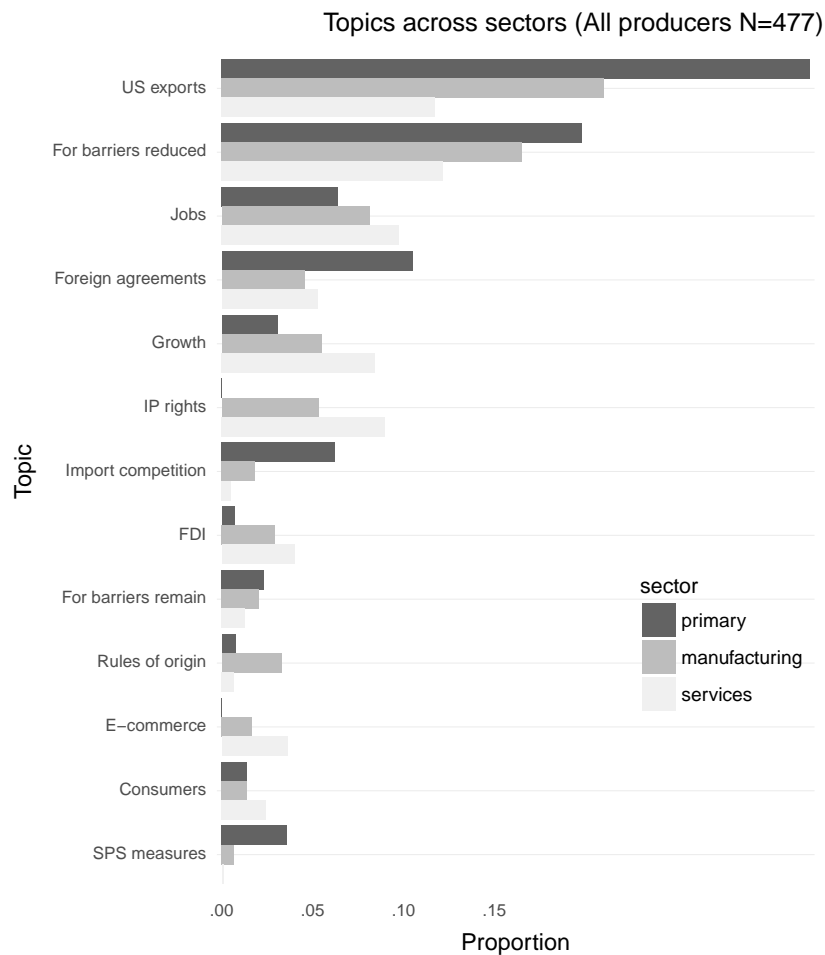


Figure B1: Inter-sectoral variation in topical discussion among producers (peak associations excluded).

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