

**Giving the Treaty a Purpose:
Comparing the Durability of Treaties and
Executive Agreements**

Table 1: Summary Statistics

	Mean	SD	Min	Max	Median	IQR
In Force Year	1996	8.59	1982	2012	1995	15
Treaty	0.05	0.22	0	1	0	0
Event	0.20	0.40	0	1	0	0
Out of Force Year*	1998	7.63	1983	2012	2000	11
Durability	15.26	9.03	0	32	15	16
Durability*	7.30	5.68	0	30	6	8
LPPC	-0.10	9.49	-17	17	0	17
Share Senate	0.50	0.04	0	1	0.50	0
Divided Government	0.71	0.45	0	1	1	1
Multilateral	0.06	0.24	0	1	0	0
Intl Organization	0.01	0.12	0	1	0	0

Summary Statistics for the variables used in this data set. An asterisk indicates that the statistics only include treaties that have gone out of force in the period of observation.

Table 2: Agreement Use by Subject Area

Subject	# EAs	# Treaties	Mean Treaty
Agriculture	454	1	0.00
Education	64	0	0.00
Postal Matters	239	0	0.00
Defense	1433	9	0.01
Other	138	2	0.01
Labor	131	3	0.02
Finance	500	22	0.04
Trade and Commerce	748	35	0.04
US Boundaries	52	4	0.07
IP	23	2	0.08
Environment	196	20	0.09
Fisheries	83	9	0.10
Human and Fundamental Rights	15	3	0.17
Property	8	5	0.38
Taxation	103	75	0.42
Judicial Assistance	93	80	0.46
Extradition	5	75	0.94

The table depicts the prevalence of treaties and executive agreements for selected subject areas. Statistics for all subjects are included in the online appendix.

Table 3: Agreement Use by Partner Country

Country	# EAs	# Treaties	Mean Treaty
Mexico	247	6	0.02
Japan	250	2	0.01
Russia	219	4	0.02
United Kingdom	195	10	0.05
Canada	190	10	0.05
Egypt	188	2	0.01
South Korea	139	2	0.01
Germany	116	7	0.06
Philippines	116	2	0.02
France	106	10	0.09
Australia	102	4	0.04
China, Republic	104	1	0.01
Indonesia	100	2	0.02
Israel	97	3	0.03
Brazil	98	1	0.01
Ukraine	92	4	0.04
Pakistan	95	0	0.00
Peru	92	1	0.01
Italy	82	6	0.07
Jordan	85	2	0.02

The table depicts the prevalence of treaties and executive agreements for the 20 most frequent partner countries in the dataset. Statistics for all countries are included in the online appendix.

Table 4: Cox Proportional Hazard Model

	<i>Dependent Variable:</i>				
	Hazard Rate				
	(1)	(2)	(3)	(4)	(5)
Treaty	-1.324*** (0.237)	-1.313*** (0.254)	-1.164*** (0.262)	-1.176*** (0.262)	-1.180*** (0.262)
Divided				-0.099 (0.135)	-0.086 (0.129)
Senate Share				1.423 (0.949)	
LPPC					0.008 (0.004)
President FEs		✓	✓	✓	✓
Subject FEs		✓	✓	✓	✓
Country FEs			✓	✓	✓
Observations	129,518	129,518	129,518	129,518	129,518
Log Likelihood	-12,790	-12,143	-11,905	-11,901	-11,900
Wald Test	31***	23,684***	149,155***	146,607***	146,560***

Note: *p<0.05; **p<0.01; ***p<0.001

The results of a Cox proportional hazard regression of survival time on a treaty indicator and several covariates. Standard errors are clustered by agreement.

Table 5: Complementary Log-Log Model

	<i>Dependent Variable:</i>				
	Hazard Rate				
	(1)	(2)	(3)	(4)	(5)
Treaty	-1.324*** (0.238)	-1.314*** (0.270)	-1.164*** (0.283)	-1.176*** (0.283)	-1.180*** (0.283)
Divided				-0.099 (0.128)	-0.086 (0.123)
Senate Share				1.426 (0.939)	
LPPC					0.008 (0.004)
Constant	-20.473 (26.011)	-22.219 (18.997)	-37.915* (25.876)	-38.682 (19.619)	-37.993 (32.866)
President FEs		✓	✓	✓	✓
Subject FEs		✓	✓	✓	✓
Country FEs			✓	✓	✓
Interval FEs	✓	✓	✓	✓	✓
Observations	129,518	129,518	129,518	129,518	129,518
Log Likelihood	-7,708	-7,061	-6,822	-6,818	-6,818
Akaike Inf. Crit.	15,484	14,269	14,224	14,220	14,219

Note: *p<0.05; **p<0.01; ***p<0.001
The results of a generalized linear model with a complementary log-log link function regressing survival time on a treaty indicator and several covariates. Standard errors are clustered by agreement.

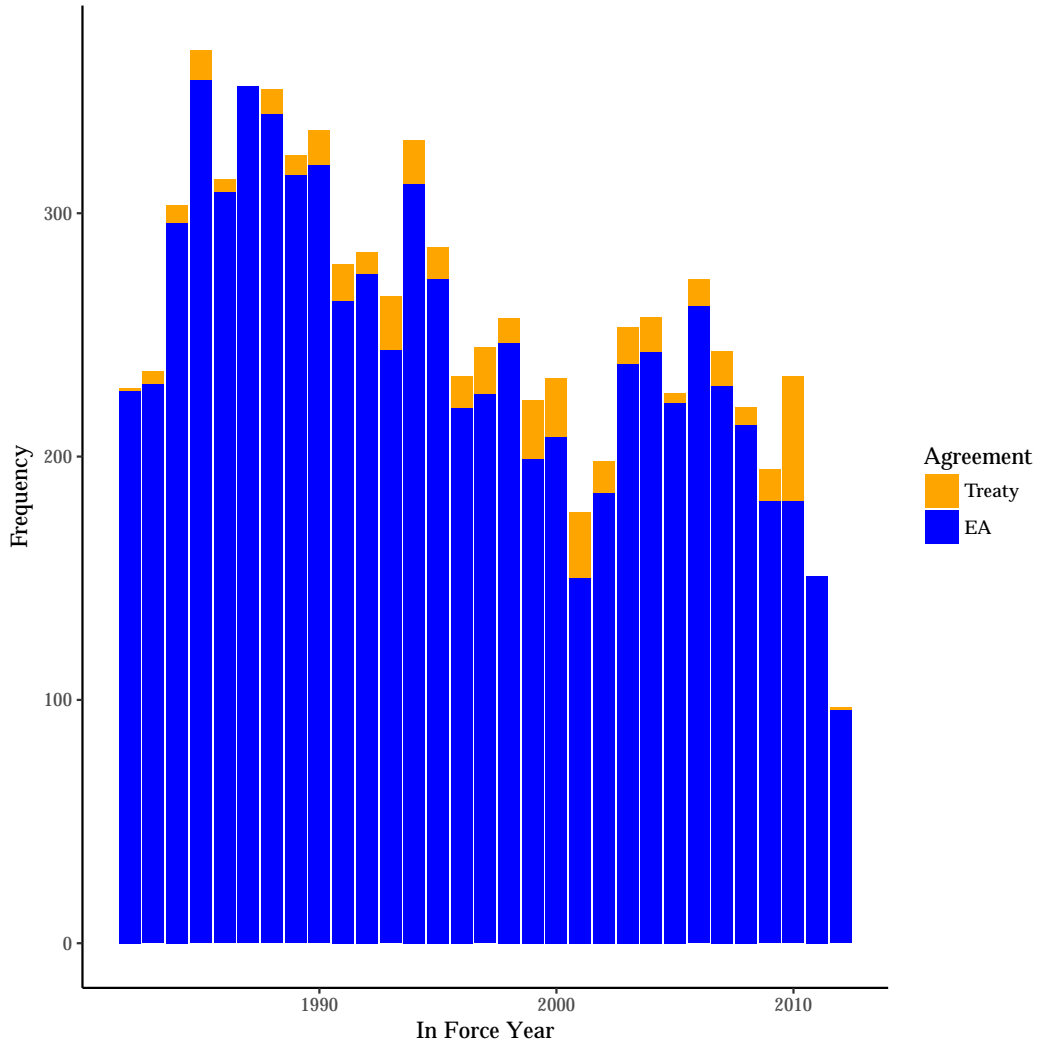
Table 6: Cox Model by Agreement Type

	<i>Executive Agreements</i>	
	Ex Post	Others
Model (1)	-0.716 (0.693)	-1.184*** (0.355)
Model (2)	0.602 (0.779)	-1.192** (0.363)
Model (3)	-0.176 (1.320)	-1.019** (0.371)
Model (4)	-0.302 (1.358)	-1.051** (0.371)
Model (5)	-0.229 (1.338)	-1.052** (0.371)

Note: *p<0.05; **p<0.01; ***p<0.001

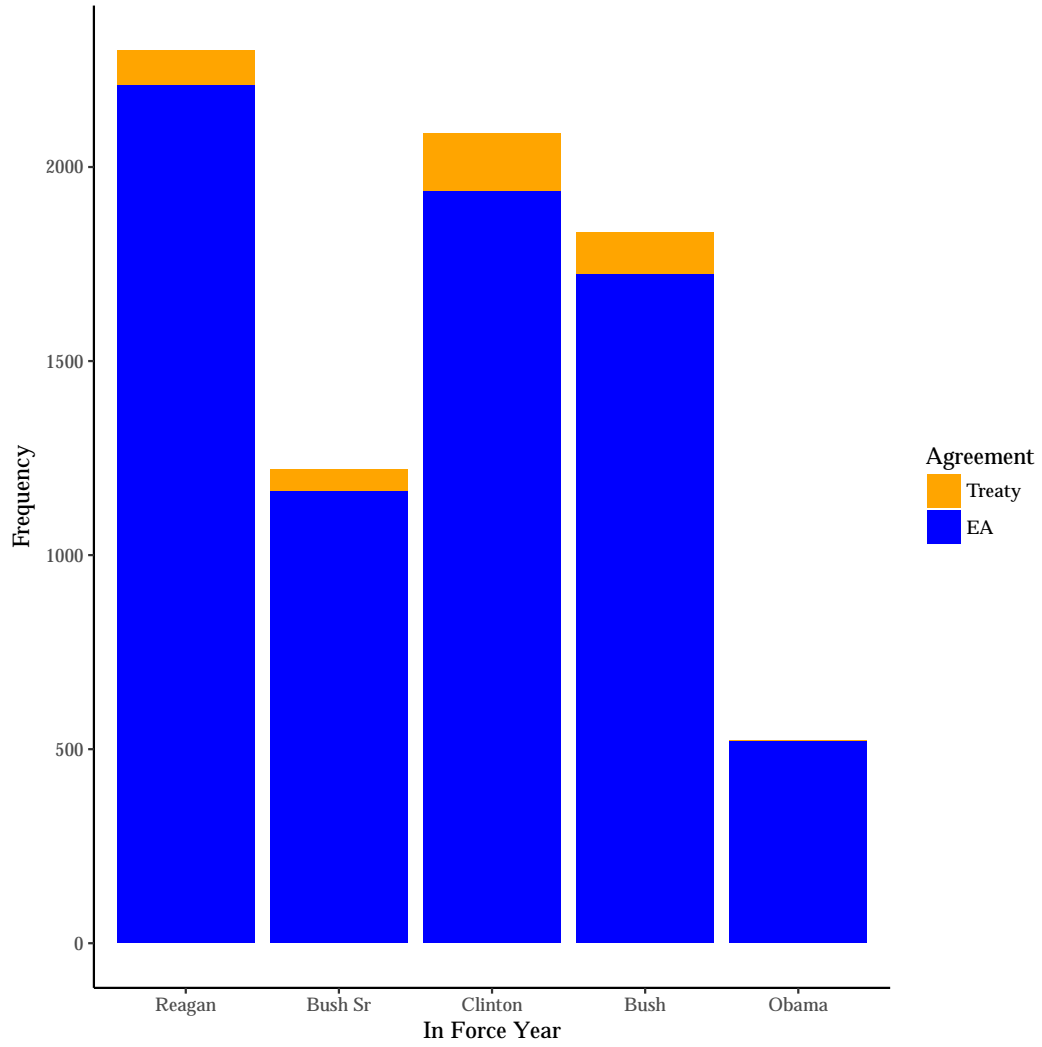
The table depicts the coefficient on the Treaty indicator for different model specifications. "Ex Post" compares treaties to ex post congressional-executive agreements. "Other" compares treaties to the remaining executive agreements.

Figure 1: Agreement Types over Time



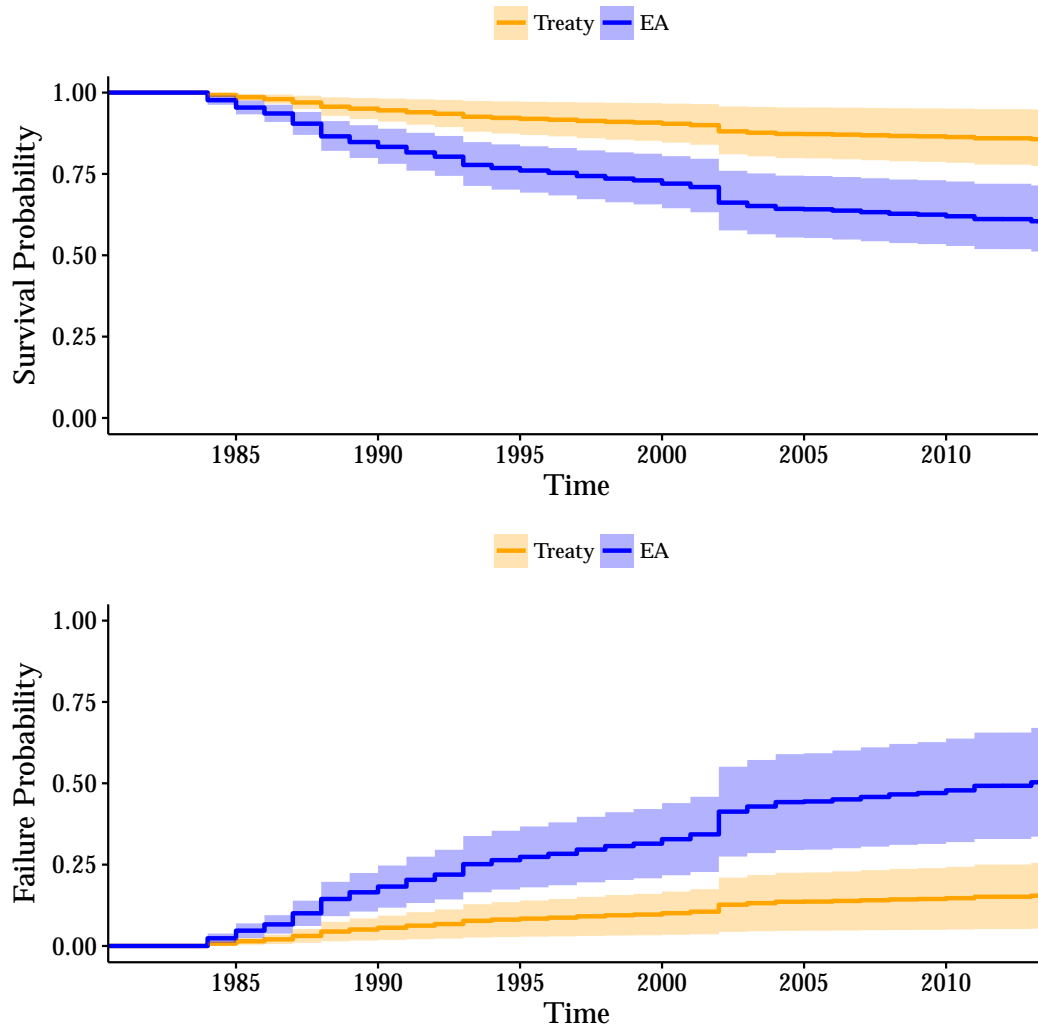
This figure depicts the use of executive agreements and treaties over time.

Figure 2: Agreement Types by President



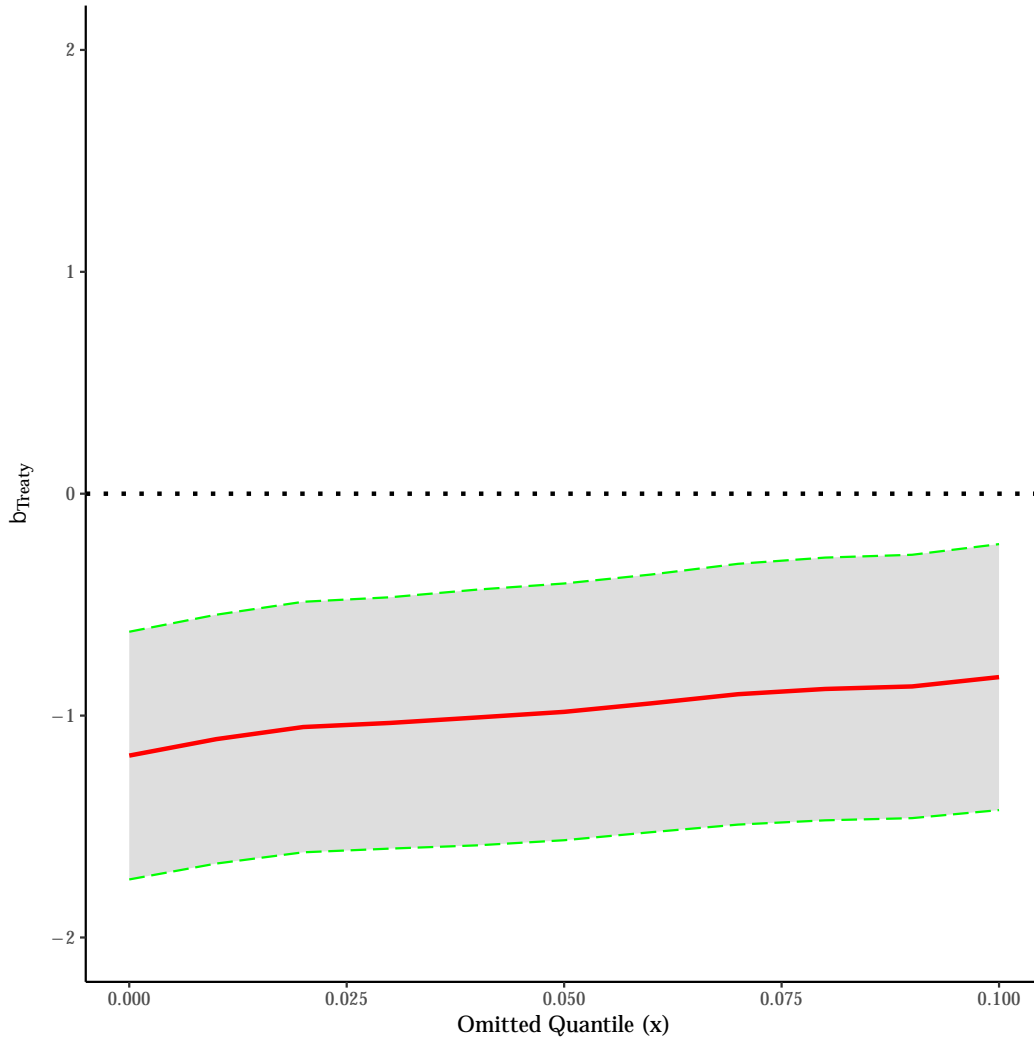
This figure depicts the use of executive agreements and treaties by the different presidents.

Figure 3: Survival and Hazard Curves by Agreement Type



This figure depicts estimated survival curves (top) and estimates hazard curves (bottom) for treaties and agreements over the period of observation. Shaded areas are 95% confidence intervals.

Figure 4: Omitting Sole Executive Agreements



This figure depicts the coefficient on the treaty indicator of Model (5) under the assumption that the x quantile of agreements are sole executive agreements and should thus be omitted from the analysis. The shaded area is the 95% confidence interval.

Online Appendix

Grouping of Subject Areas

Agriculture: Agriculture, Agricultural Commodities, Poplar Commission

Amity: Amity, Friendship, General Relations, Relations

Arms Limitations: Arms Limitations

Aviation: Aviation, Aerospace Disturbances

Claims: Claims, Arbitration, Occupation Costs

Crime: Crime, Computer Crime, Smuggling, Corruption, Bribery, War

Criminals, Prisoner Transfer, Trafficking in Women and Children,

Organized Crime

Culture: Culture, UNESCO, World Heritage, Cultural Heritage, Cultural and Educational Relations, Cultural Property, Cultural Relations, Cultural

Relations: Inter-American

Defense: Defense, Economic and Military Cooperation, Evacuation, Naval

Vessels, Open Skies, NATO, Missions Military

Diplomacy: Diplomacy, Diplomatic Properties, Diplomatic Relations,

Consuls, Properties: Diplomatic, Embassy Sites

Economic and Technical Cooperation: Economic and Technical Cooperation,

Sewage Disposal System, Lend-Lease, Economic and Technical Cooperation

and Development, Relief Supplies and Packages, Economic Assistance,

Economic and Technological Cooperation and Development

Education: Education

Energy: Energy, Petroleum, Pipelines, Solar Energy, Fuels and Energy

Environment: Environment, Forestry, Seals, Whaling, Pollution, Climate,

Conservation, Desertification, Chemical Safety, Environmental Cooperation,

Environmental Modification

Extradition: Extradition

Finance: Finance, Multilateral Funds, Financial Institutions, Finance: World

War II Related

Fisheries: Fisheries, Shellfish

Health: Health, Health and Sanitation

Human and Fundamental Rights: Human and Fundamental Rights, Human

Rights, Slavery, Torture, Women - Political Rights, Children, Prisoners of

War, Racial Discrimination, Red Cross Conventions, Refugees, Rules of

Warfare

IP: IP, Intellectual Property, Trademark, Copyrights, Phonograms

Judicial Assistance: Judicial Assistance, Judicial Assistance and Procedure

Labor: Labor, Employment

Maritime Matters: Maritime Matters, Maritime Interdiction, Seabeds,

International Maritime Organization

Nuclear Energy: Nuclear Energy, Nuclear Accidents, Atomic Energy
Other: Antarctica, Arctic, Assistance, Automotive Traffic, Cambodia, Canals, Cemeteries, Civil Emergency Planning, Commissary Facilities, Compact of Free Association, Drivers Licenses, Emergency Management, Emergency Preparedness, Fire Protection, Headquarters, Highways, Humanitarian Assistance, Immigration, Interests Sections, Judicial Assistance and Procedure, Judicial Procedure, Judicial Procedure, Hague Conventions, Maintenance, Medical Assistance, Migration, Nationality, Organization of American States, Passports, Privileges and Immunities, Publications, Regional Commission, Sanctions, Social Security, Termination, Tourism, Tracking Stations, Treaty Succession, UN

Peacekeeping: Peacekeeping, Peace Corps, Peace Treaties, Renunciation of War

Postal Matters: Postal Matters, Postal Arrangements

Property: Property. Industrial Property, Stolen Property, Property Transfer

Satellites: Satellites, Satellite Communications Systems, Remote Sensing

Scientific Cooperation: Scientific Cooperation, Navigation, Weather Modification, Weather Stations, World Meteorological Association, Mapping, Technical Assistance, Technical Cooperation, Technical Assistance and Cooperation, Technological Cooperation, Technology Transfer, Seismic Observations, Seismological Research, Scientific Assistance and Cooperation, Scientific and Technical Cooperation, Oceanography, Oceanographic Research, Missions: Technical, Meteorology, Meteorological Cooperation, Marine Science, Geodetic Survey, Hydrography
Space: Space, Astronauts, Space Cooperation, Space Research

Taxation: Taxation

Telecommunication: Telecommunication, Telecommunication - Inter-American Agreements, Telecommunication - International Telecommunication Union

Trade and Commerce: Trade and Commerce, Coffee, Commerce, Containers, Copper, Cotton, Customs, GATT, Grains, Industrial Cooperation, Investment Disputes, Investments, Jute, Law: Private International, Liquor, Rubber, Schedules, Shipping, Sugar, Timber, Trade, Trade and Commerce: GATT-Related Agreements Trade and Investment, Transportation, Transportation-Foodstuffs, Wheat, Wine

US Boundaries: US Boundaries, Boundaries, Boundary Waters

Visas: Visas

Weapons: Weapons, Chemical Weapons, Chemicals, Nuclear Risk Reduction, Nuclear Test Limitation, Nuclear War

*WW II Aftermath: WW II Aftermath, Germany, Holocaust Memorial,
International Tracing Service, Reparations*

Table 1: Agreement Use by Subject Area

Subject	# EAs	# Treaties	Mean Treaty
Agriculture	454	1	0.00
Claims	28	0	0.00
Education	64	0	0.00
Energy	72	0	0.00
Health	45	0	0.00
Peacekeeping	73	0	0.00
Postal Matters	239	0	0.00
Satellites	40	0	0.00
Scientific Cooperation	533	1	0.00
Space	140	0	0.00
Visas	11	0	0.00
Aviation	538	3	0.01
Defense	1433	9	0.01
Econ. and Techn. Cooperation	674	4	0.01
Nuclear Energy	355	4	0.01
Other	138	2	0.01
Culture	63	1	0.02
Labor	131	3	0.02
Weapons	169	4	0.02
Crime	260	12	0.04
Finance	500	22	0.04
Trade and Commerce	748	35	0.04
Maritime Matters	87	5	0.05
Telecommunication	111	7	0.06
US Boundaries	52	4	0.07
IP	23	2	0.08
Environment	196	20	0.09
WW II Aftermath	10	1	0.09
Fisheries	83	9	0.10
Diplomacy	32	4	0.11
Arms Limitations	34	5	0.13
Human and Fundamental Rights	15	3	0.17
Amity	7	3	0.30
Property	8	5	0.38
Taxation	103	75	0.42
Judicial Assistance	93	80	0.46
Extradition	5	75	0.94

The table depicts the prevalence of treaties and executive agreements for all subject areas.

Table 2: Agreement Use by Partner Country

Country	# EAs	# Treaties	Mean Treaty
Mexico	247	6	0.02
Japan	250	2	0.01
Russia	219	4	0.02
United Kingdom	195	10	0.05
Canada	190	10	0.05
Egypt	188	2	0.01
South Korea	139	2	0.01
Germany	116	7	0.06
Philippines	116	2	0.02
France	106	10	0.09
Australia	102	4	0.04
China, Republic	104	1	0.01
Indonesia	100	2	0.02
Israel	97	3	0.03
Brazil	98	1	0.01
Ukraine	92	4	0.04
Pakistan	95	0	0.00
Peru	92	1	0.01
Italy	82	6	0.07
Jordan	85	2	0.02
EU	84	2	0.02
Bolivia	83	2	0.02
Hungary	81	4	0.05
Soviet Union	80	4	0.05
Colombia	82	0	0.00
Poland	75	5	0.06
Jamaica	75	2	0.03
Honduras	73	2	0.03
Spain	65	6	0.08
Dominican Republic	70	0	0.00
Romania	63	5	0.07
Argentina	63	3	0.05
Afghanistan	65	0	0.00
India	62	3	0.05
Netherlands	58	6	0.09
Kazakhstan	60	3	0.05
Sri Lanka	57	4	0.07
Panama	56	4	0.07
Turkey	54	2	0.04
Greece	53	2	0.04
El Salvador	54	0	0.00
Ecuador	52	1	0.02
Sweden	46	7	0.13
Norway	50	0	0.00
Chile	49	0	0.00
Finland	44	5	0.10
Morocco	47	2	0.04
Thailand	44	4	0.08
Bangladesh	43	2	0.04
Costa Rica	44	1	0.02
Guatemala	44	1	0.02
Senegal	44	1	0.02
Mongolia	42	2	0.05
Venezuela	42	2	0.05
Singapore	43	0	0.00
Switzerland	41	2	0.05

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Country	# EAs	# Treaties	Mean Treaty
Bulgaria	37	4	0.10
Congo, Republic	40	1	0.02
South Africa	38	3	0.07
Denmark	31	6	0.16
Latvia	31	6	0.16
Liberia	37	0	0.00
Tanzania	35	0	0.00
Uruguay	33	2	0.06
Nicaragua	34	0	0.00
China, Peoples	30	3	0.09
Czech Republic	27	6	0.18
Georgia	32	1	0.03
Haiti	33	0	0.00
Kenya	33	0	0.00
Lithuania	26	7	0.21
Malaysia	31	2	0.06
Mozambique	32	1	0.03
Ghana	32	0	0.00
Portugal	28	3	0.10
Tunisia	27	4	0.13
Czechoslovakia	30	0	0.00
Sierra Leone	30	0	0.00
Belgium	23	6	0.21
Estonia	23	6	0.21
Guyana	29	0	0.00
Vietnam	29	0	0.00
Madagascar	28	0	0.00
Zambia	27	0	0.00
Austria	20	6	0.23
Marshall Islands	26	0	0.00
Ethiopia	25	0	0.00
Micronesia	25	0	0.00
Uganda	25	0	0.00
Bahamas	22	2	0.08
Nigeria	23	1	0.04
Ireland	17	6	0.26
Croatia	21	1	0.05
Iceland	20	2	0.09
Sudan	22	0	0.00
Trinidad and Tobago	19	3	0.14
Yugoslavia	22	0	0.00
Antigua and Barbuda	19	2	0.10
Armenia	20	1	0.05
Belarus	21	0	0.00
United Arab Emirates	21	0	0.00
Yemen	21	0	0.00
Albania	19	1	0.05
Belize	17	3	0.15
Grenada	17	3	0.15
Luxembourg	15	5	0.25
New Zealand	18	2	0.10
Slovenia	17	3	0.15
Uzbekistan	20	0	0.00
Congo	18	1	0.05
Guinea	19	0	0.00
Maldives	19	0	0.00
Mauritius	19	0	0.00
Azerbaijan	17	1	0.06

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Country	# EAs	# Treaties	Mean Treaty
Botswana	18	0	0.00
Cote d'Ivoire	18	0	0.00
Cyprus	13	5	0.28
Rwanda	17	1	0.06
Slovak Republic	16	2	0.11
Bahrain	16	1	0.06
Gabon	17	0	0.00
Macedonia	17	0	0.00
Niger	17	0	0.00
Oman	17	0	0.00
Saudi Arabia	17	0	0.00
Cameroon	15	1	0.06
Kyrgyzstan	15	1	0.06
Mali	16	0	0.00
Moldova	15	1	0.06
Nepal	16	0	0.00
Paraguay	15	1	0.06
Cuba	15	0	0.00
Barbados	9	5	0.36
Bosnia Herzegovina	14	0	0.00
Cape Verde	14	0	0.00
Central African Republic	14	0	0.00
Djibouti	14	0	0.00
Saint Kitts and Nevis	12	2	0.14
Cambodia	13	0	0.00
Chad	13	0	0.00
Fiji	13	0	0.00
Malta	10	3	0.23
Saint Vincent and the Grenadines	11	2	0.15
Benin	12	0	0.00
Dominica	10	2	0.17
Algeria	10	1	0.09
Iraq	11	0	0.00
Kuwait	11	0	0.00
Laos	11	0	0.00
Mauritania	11	0	0.00
Saint Lucia	9	2	0.18
Gambia	10	0	0.00
Namibia	10	0	0.00
Papua New Guinea	10	0	0.00
Somalia	10	0	0.00
Zimbabwe	9	1	0.10
Lebanon	9	0	0.00
Suriname	9	0	0.00
Tajikistan	9	0	0.00
Malawi	8	0	0.00
Palau	8	0	0.00
Turkmenistan	8	0	0.00
Burkina Faso	7	0	0.00
Burundi	7	0	0.00
Guinea Bissau	7	0	0.00
Kosovo	7	0	0.00
Montenegro	7	0	0.00
Qatar	7	0	0.00
Seychelles	7	0	0.00
Equatorial Guinea	6	0	0.00
Samoa	6	0	0.00
Sao Tome and Principe	6	0	0.00

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Country	# EAs	# Treaties	Mean Treaty
Timor Leste	6	0	0.00
Togo	6	0	0.00
Tonga	6	0	0.00
Angola	5	0	0.00
Brunei	5	0	0.00
Comoros	5	0	0.00
Eritrea	5	0	0.00
North Korea	5	0	0.00
Lesotho	5	0	0.00
Solomon Islands	5	0	0.00
Swaziland	5	0	0.00
Kiribati	4	0	0.00
Libya	4	0	0.00
Liechtenstein	3	1	0.25
Nauru	4	0	0.00
Serbia	4	0	0.00
Serbia and Montenegro	4	0	0.00
Slovakia	2	2	0.50
Bhutan	3	0	0.00
Cook Islands	3	0	0.00
Iran	3	0	0.00
Tuvalu	3	0	0.00
Turks and Caicos Islands	3	0	0.00
Vanuatu	3	0	0.00
Aruba	2	0	0.00
Burma	2	0	0.00
Monaco	2	0	0.00
United Kingdom Anguilla	2	0	0.00
African Union	1	0	0.00
Andorra	1	0	0.00
Hong Kong	1	0	0.00
East Timor	1	0	0.00
Gibraltar	1	0	0.00
New Caledonia	1	0	0.00
Niue	1	0	0.00
Bermuda	1	0	0.00
British Virgin Islands	1	0	0.00
Guernsey	1	0	0.00
Isle of Man	1	0	0.00
Jersey	1	0	0.00

The table depicts the prevalence of treaties and executive agreements for all partner countries in the dataset.

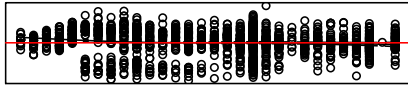
Table 3: Cox Proportional Hazard Model with Different President FEs

	<i>Dependent Variable:</i>				
	Hazard Rate				
	(1)	(2)	(3)	(4)	(5)
Treaty	-1.324*** (0.237)	-1.314*** (0.254)	-1.165*** (0.262)	-1.177*** (0.262)	-1.181*** (0.262)
Divided				-0.091 (0.135)	-0.074 (0.128)
Senate Share				1.386 (0.950)	
LPPC					0.008 (0.004)
President FEs		✓	✓	✓	✓
Subject FEs		✓	✓	✓	✓
Country FEs			✓	✓	✓
Observations	129,518	129,518	129,518	129,518	129,518
Log Likelihood	-12,790	-12,143	-11,904	-11,901	-11,900
Wald Test	31***	23,697***	149,230***	146,831***	146,770***

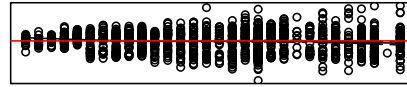
Note: *p<0.05; **p<0.01; ***p<0.001

The results of a cox proportional hazard regression of survival time on a treaty indicator and several covariates. In contrast to Table 5 of the main article, the president-fixed effects are those of the sitting president when the agreement went into force. Standard errors are clustered by agreement.

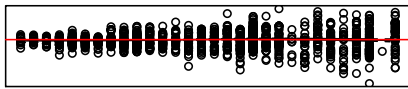
Figure 1: Schoenfeld Residual Plots



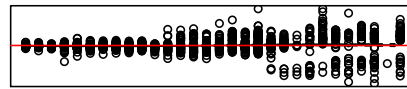
LPPC



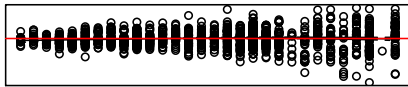
Divided



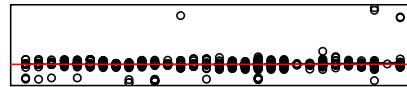
Bush Sen.



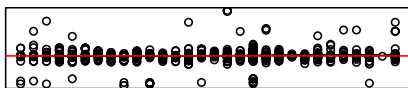
Clinton



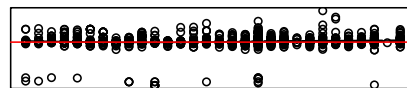
Reagan



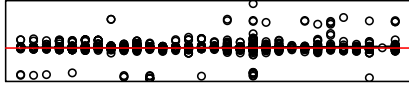
Arms Limitations



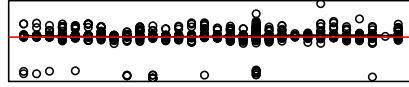
Crime



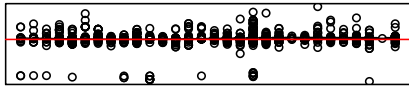
Defense



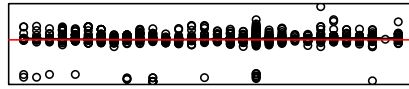
Education



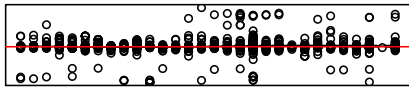
Energy



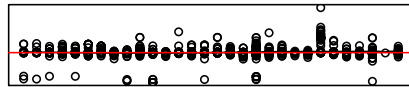
Health



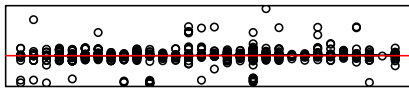
Nuclear Energy



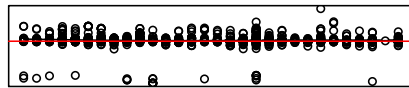
Other



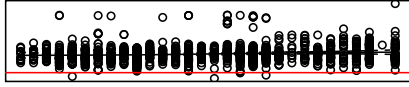
Postal Matters



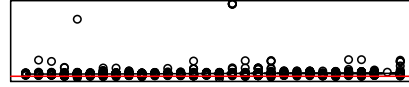
Telecommunication



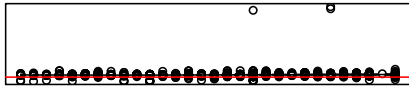
Trade and Commerce



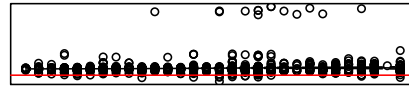
Burma



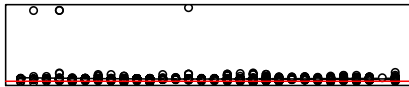
China



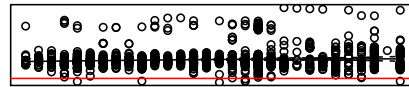
Congo



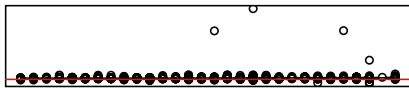
Ecuador



Haiti



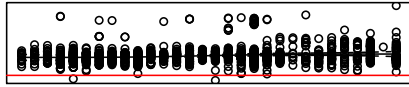
Hungary



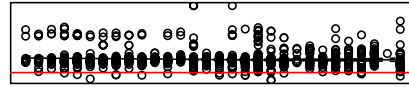
Jamaica



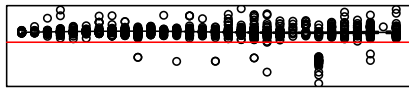
Maldives



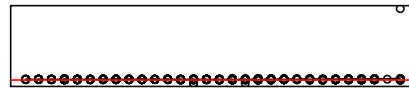
Mauritius



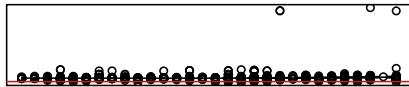
Mexico



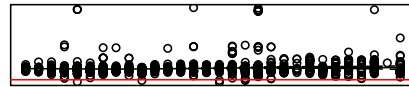
New Caledonia



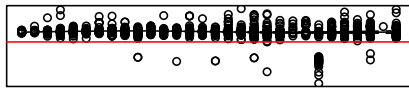
Tajikistan



UAE



Uruguay



Vanuatu

Schoenfeld residual plots for all covariates that yield significant p-values when testing for non-proportionality.