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Granting Preferential Market Access in Services Sequentially versus Jointly with Goods

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Abstract

While most trade agreements were about goods up until 2000, many countries have been and are now adopting services provisions. They do so by adding them to prior goods-only agreements or by concluding new agreements jointly for goods and services. This paper shows that high unilateral services trade costs deter the likelihood of joint preferential liberalization of goods and services.

JEL classification: F10, F13, F15

Key words: Services-trade agreements; Goods-trade agreements; Determinants of trade agreements

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1 Introduction

Of the 81 preferential trade agreements notified to the World Trade Organization (WTO) and in force prior to the year 2000, 73 (90%) featured provisions dealing exclusively with trade in goods. Since then and up until August 2015, another 194 PTAs have come into force of which 124 (64%) also include provisions on services trade. This development indicates the rising importance of services trade in general, the growing need felt by countries to place such trade on a firmer institutional and rule-making footing, and the attractiveness of doing so on an expedited basis via preferential negotiating platforms (see Sauvé and Shingal, 2011). Of the 132 services trade agreements (STAs) notified until August 2015, 114 were *notified* jointly with goods trade agreements (GTAs). At the time the 132 STAs *entered into force*, 116 did so jointly with GTAs.[1] Less than 15% of all STAs in force to date were notified to the WTO sequentially to GTAs, and the majority of these were notified after a GTA was already in effect between trading partners. Only with the ASEAN-South Korea agreement[2] and the European Union-FYROM agreement an STA came into effect prior to a GTA.

Services contribute a significant share to economic activity in most developing and transition countries which is larger than that of manufacturing. At the same time, cross-border services transactions are smaller than trade of manufactures. This stylized fact has triggered a rapidly-growing literature on the policy domain of services impediments (see Francois and Hoekman, 2010, for a survey; see Roy, 2011; Miroudot, Sauvage, and Shepherd, 2012; van der Marel and Shepherd, 2013; Borchert et al.,2014; van der Marel and Miroudot, 2014; for specific examples). This interest extends beyond unilateral barriers to cross-border services transactions, covering provisions on services trade in preferential trade agreements (see Egger and Wamser, 2013; Cole and Guillin, 2015). While the respective literature contributes to the understanding of whether and among which countries STAs are desirable and actually implemented, it does not address the issue of joint versus sequential STAs and GTAs. It is the present paper's goal to fill this gap by conducting an empirical analysis based on all STAs and GTAs notified to the WTO until the end of August 2015 and covered by its so-called RTA-IS database.

[1] E.g., the European Community Treaty was notified in 1957 for goods and 1995 for services but entered into effect for both in 1958; the North American Free Trade Agreement was notified in 1993 for goods and 1995 for services but entered into effect for both in 1994; the enlargement of the European Union to 27 member countries was notified in 2006 for goods and 2007 for services but entered into effect for both in 2007; and the European Union-Ukraine accord was notified for both goods and services in 2014 but had not entered into effect by August 2015. The enlargement of the European Union to 15 member countries and the Chile-El Salvador agreement may be thought of a joint STA-GTA agreements as in both cases an STA was notified within a week of the notification of the GTA.

[2] The ASEAN-Korea agreement remains un-notified to the WTO by the end of August 2015.

2 Empirical strategy

Let us use A_{ij} and S_{ij} to denote binary indicator variables which are unity if an STA of any kind – jointly or sequentially with a GTA – exists between countries i and j and if it was concluded jointly with a GTA, respectively, or not. Let us generally use stars to denote latent variables and refer to the latent gains from concluding any STA be A^*_{ij} so that $A_{ij} = 1(A^*_{ij} > 0)$. Moreover, consider that an STA may be concluded jointly with a GTA, $S_{ij} = 1$, only if an STA is concluded no matter what, $A_{ij} = 1$. Use S^*_{ij} to denote the latent gains from a joint STA conditional on $A_{ij} = 1$. So, in fact, what we observe is $S_{ij} = 1(S^*_{ij} > 0|A_{ij} = 1)$. This lends itself to a framework where there is self-selection of country-pairs into STAs and, conditional on that, into jointly- versus sequentially-concluded STAs to GTAs.

Using the suggested notation, this obtains the two equations for the selection into STA and for the choice of joint versus sequential STA to GTA for latent processes as:

$$A^*_{ij} = Z_{ij}\alpha + u^A_{ij}, \quad S^*_{ij}|A_{ij} = 1 = X_{ij}\beta + u^S_{ij}. \tag{1}$$

For identification of the parameters, one may follow Van de Ven and Van Pragg (1981) in assuming bivariate normality of (u^A_{ij}, u^S_{ij}) with

$$E\begin{pmatrix} u^A_{ij} \\ u^A_{ij} \end{pmatrix} = N\left(\begin{pmatrix} 0 \\ 0 \end{pmatrix}, \begin{pmatrix} 1 & \rho \\ \rho & 1 \end{pmatrix}\right). \tag{2}$$

Hence, the residuals are drawn from a bivariate truncated normal and an appropriate correction term (or control function) ensures that the parameters are estimated consistently, akin to selection models with a continuous rather than a binary outcome (see Heckman, 1976).

Finally, we use two variants of S_{ij}, S^n_{ij} and S^e_{ij}, for joint negotiation versus entry into force, respectively.

3 Specification of Z_{ij} and X_{ij} and descriptive statistics

For parameter identification we include instruments in Z_{ij} beyond all elements in X_{ij} as listed in Table 1. The table reports on the binary A_{ij}, S^n_{ij}, and S^e_{ij} from the World Trade Organization, and it groups their determinants in six blocks: (1) the services expenditure share in GDP as a demand characteristic; (2) income and per-capita-income variables; (3)

the unilateral services-trade-restrictiveness index as a measure of unilateral barriers to services trade; (4) geographical- and cultural-distance variables as other, bilateral barriers (or the opposite thereof) to services trade; (5) a number of variables capturing the political environment in countries that might be important to understand the ease at which negotiations could be done; (6) variables capturing the ease at which businesses can be set up in a country and related institutional characteristics to capture aspects of the potential benefit of preferential services-trade liberalization. All of the unilateral variables in the blocks except for (4) enter either as the sum (or average) and the squared difference for the values of two partner countries i and j or as the minimum and maximum values in a pair of countries i and j.[3] For all variables, Table 1 provides definitions, acronyms, averages, standard deviations, and, in the footnote, sources.

Using the data as summarized in Table 1, we find the following pattern among STAs that were notified and entered into effect jointly versus sequentially with GTAs (see Figures 1a and 1b corresponding to S_{ij}^n and S_{ij}^e, respectively). Country pairs that notified STAs and GTAs jointly (as opposed to sequentially) were, on average, more distant and less similarly sized, with larger per-capita-income differences both relative to each other and to the rest of the world. They had higher average and more different levels of services-trade restrictiveness. Country pairs that put STAs and GTAs jointly (as opposed to sequentially) into force were, on average, less distant, larger, and more similarly sized, but with bigger per-capita-income differences both relative to each other and to the rest of the world. They had higher average but more similar levels of services-trade restrictiveness. Overall, Figures 1a-1b suggest that, unconditional on other factors, there are some differences in the differential characteristics between STAs that were merely notified and ones that were actually put into effect.

4 Results

Table 2 summarizes the probit results for the two latent processes for A_{ij}^* and $S_{ij}^*|A_{ij}$. The table is organized in two blocks with four columns each. The two blocks refer to S_{ij}^n (jointly *notified* STAs, on the left) and S_{ij}^e (jointly entered-into-force STAs, on the right). We denote the respective columns without and with prime, respectively. Columns (1) and (1') report results on the estimation of the linear index underlying any STA membership, A_{ij}^*. Regarding the determinants as listed in vertical blocks (2) and (4) and introduced by Baier and Bergstrand (2004), we find that larger, more similarly sized, and less geographically

[3]The first option is taken for the measures in block (2) in order to facilitate the comparison with earlier work by Baier and Bergstrand (2004), while the second approach is taken for the variables in blocks (1)-(2) and (5)-(6). The variation spanned by the two approaches is the same.

distant countries conclude STAs at greater likelihood (similar to the conclusion of GTAs). Columns (2)-(4) and (2')-(4') present three versions of outcome-stage models regarding the linear index behind the latent variable for joint adoption of STAs with GTAs, S_{ij}^{*}. In those models we use either the *Minimum of Government Predictability in i and j for the most recent year in 2002-2009*, $MINGOVPRED_{ij}$, or the *Maximum of Government Predictability in i and j for the most recent year in 2002-2009*, $MAXGOVPRED_{ij}$, or both as identifying instruments.[4]

Countries with a higher average and more dissimilar unilateral services trade restrictiveness are less likely to conclude STAs. Many of the doing-business, institutional, and political variables matter as well. Given that two countries enter an STA, they are more likely do it jointly with a GTA the larger, more similarly sized, less distant, and less unilaterally services-trade-restricted they are, according to Columns (2)-(4) and (2')-(4'), respectively. The difference between Columns (2), (3), and (4) and (2'), (3'), and (4'), respectively, is the choice of identifying instruments in the first-stage probit: only $MAXGOVPRED_{ij}$ in Columns (3) and (3'), only $MINGOVPRED_{ij}$ in Columns (4) and (4'), and both of them in Columns (2) and (2'). Since the two instruments together are not jointly significant in the second-stage probit but $MAXGOVPRED_{ij}$ alone is, we consider Columns (4) and (4') the preferable specification. This view is also supported by the likelihood statistic.[5]

Let us focus on the effects of unilateral services-trade restrictiveness on the joint versus sequential entering of an STA with a GTA. We report effects of a ceteris-paribus increase of $MAXSTRI_{ij}$ by one standard deviation in Table 3 (taking the nonlinearity of the selection model and also the nonlinearity of the linear index in terms of covariates into account).[6] Increasing $MAXSTRI_{ij}$ by one standard deviation raises the average level and also raise the discrepancy in unilateral services-trade costs between two partner countries. According to Table 3, doing so will reduce both the probability of entering any STA and, in particular, of entering it jointly with a GTA. In the preferable Specifications (4) and (4'), the probability of entering a joint STA with a GTA declines by about 0.56% in response to raising the maximum STRI for a pair of countries by one standard deviation in Specification (4) for notification and by about 0.18% in Specification (4') for entering into force.

[4]This choice is inspired by the fact that an unconditional probit model for S_{ij} that includes both $MINGOVPRED_{ij}$ and $MAXGOVPRED_{ij}$ together yields statistically insignificant coefficients on both of them. Moreover, these variables reflect government stability which should be related to the inclination of a country's political regime towards negotiations.

[5]While most results reported in columns (4) and (4') are qualitatively similar, difference in economic size and being a part of the same country have no statistical significance in column (4) while the minimum of unilateral services regulation in the dyad has no impact on joint negotiation in column (4').

[6]$DGDPPC_{ij}$ enters the specification in quadratic form so that not only A_{ij} and S_{ij} are nonlinear in both variables and parameters but also $Z_{ij}\alpha$ and $X_{ij}\beta$ are nonlinear in some of the variables.

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Figure 1a: Characteristics of country pairs with jointly relative to sequentially notified STAs

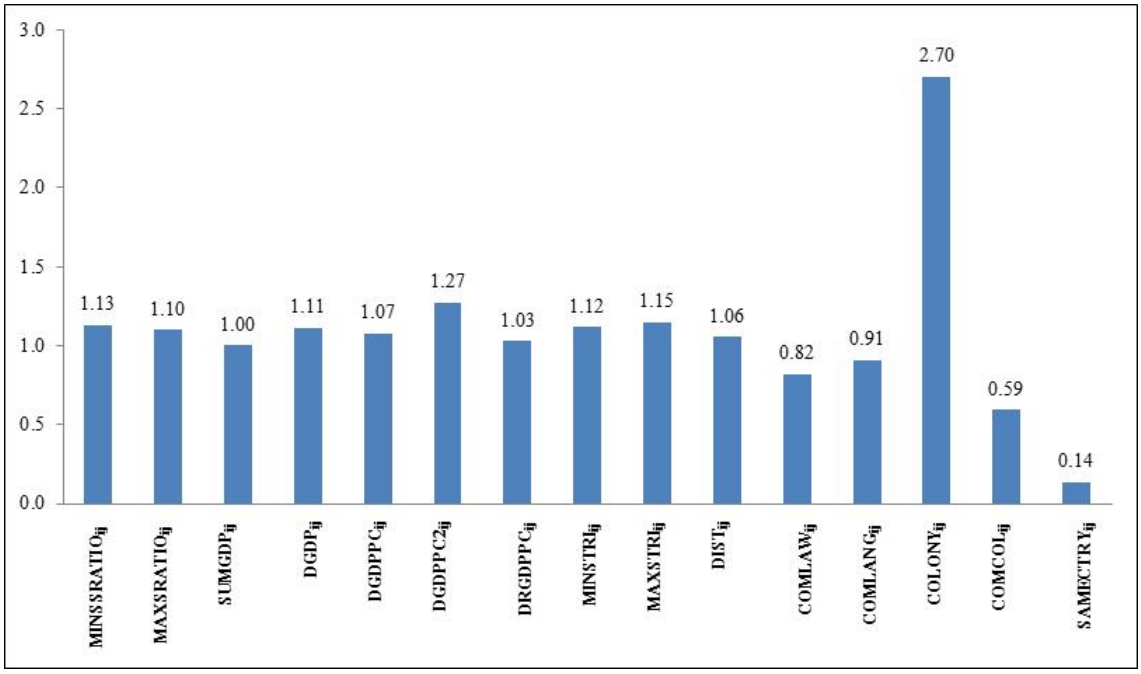

Figure 1b: Characteristics of country pairs with jointly relative to sequentially put-in-force STAs

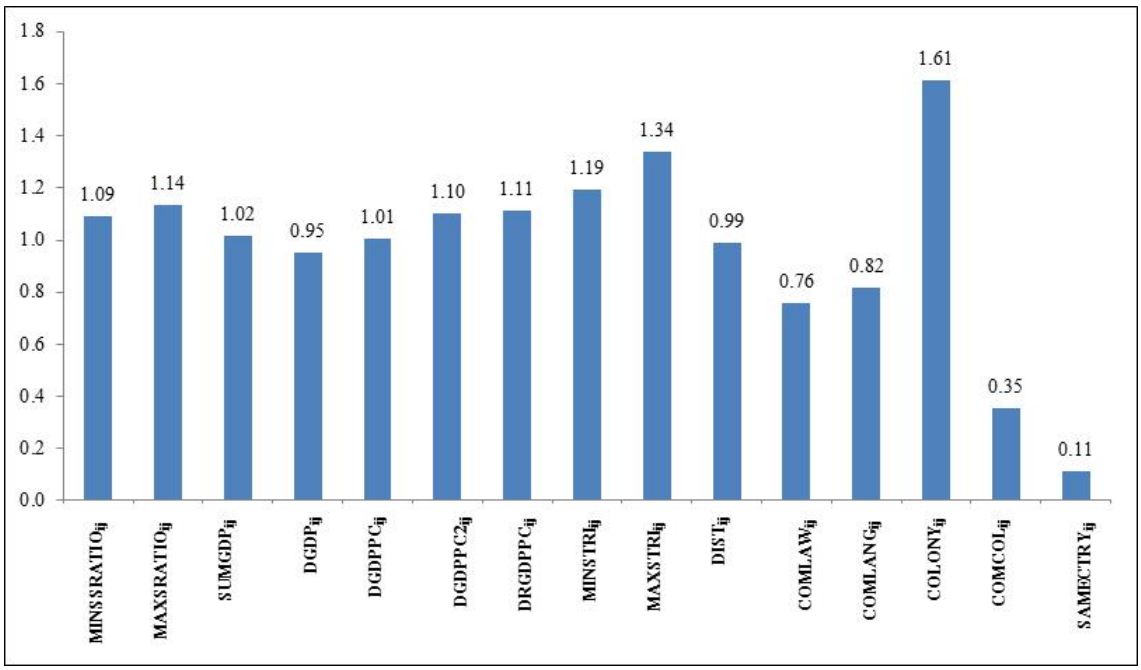

Table 1: Descriptive statistics

Variable	Acronym	Type	Mean	Std.Dev.	Minimum	Maximum
Services-Trade-Agreement Membership (0)						
Either GTA or STA Membership Status Between i and j in 2015 (end August)	A_{ii}	binary	0.1100	0.3130	0	1
Simultaneous Negotiation of STA and GTA Between i and j in 2015 (end August) by year of notification	S^{n}_{ii}	binary	0.7474	0.4349	0	1
Simultaneous Negotiation of STA and GTA Between i and j in 2015 (end August) by year of entry into force	S^{e}_{ii}	binary	0.8322	0.3740	0	1
Services Share in GDP (1)						
Minimum Share of Services in GDP between i and j	$MINSRATIO_{ii}$	bounded	44.8621	14.1553	10.44	71.55
Maximum Share of Services in GDP between i and j	$MAXSRATIO_{ii}$	bounded	42.6153	13.0086	10.44	71.55
Absolute and Relative Size and Endowment Variables (2)						
Log Sum of GDP of i and j	$SUMGDP_{ii}$	continuous	49.2461	2.5448	42.1580	57.7910
Absolute Difference in Log GDP of i and j	$DGDP_{ii}$	bounded	2.0804	1.5085	0	8.6787
Absolute Difference in Log GDP per Capita of i and j	$DGDPPC_{ii}$	bounded	1.4505	1.0330	0.0004	4.9922
Squared Absolute Difference in Log GDP per Capita of i and j	$DGDPPC2_{ii}$	bounded	3.1709	3.8722	0.0000	24.9222
Absolute Difference in Log GDP per Capita of i plus j with Rest-of-World	$DRGDPPC_{ii}$	bounded	1.0736	0.4934	0.0023	2.6897
Unilateral Services Trade Restrictiveness (3)						
Minimum Log Services-trade Restrictiveness Index in i and j	$MINSTRI_{ii}$	bounded	-1.4413	0.5116	-2.7166	0.6500
Maximum Log Services-trade Restrictiveness Index in i and j	$MAXSTRI_{ii}$	bounded	-0.6052	0.7248	-2.1010	2.0115
Geographical and Cultural Distance (4)						
Log Bilateral Distance Between i and j	$DIST_{ii}$	continuous	8.7138	0.7694	4.9345	9.8940
Common Legal System Between i and j	$COMLAW_{ii}$	binary	0.3301	0.4703	0	1
Common Language Between i and j	$COMLANG_{ii}$	binary	0.1361	0.3429	0	1
Colonial Relationship Between i and j	$COLONY_{ii}$	binary	0.0177	0.1319	0	1
Common Colonizer Between i and j	$COMCOL_{ii}$	binary	0.0567	0.2313	0	1
Units i and j Belonged to the Same Country	$SAMECTRY_{ii}$	binary	0.0080	0.0891	0	1
Politics (5)						
Minimum of Polity IV Index in i and j in 1980	$MINPOLITY80_{ii}$	bounded	-11.5427	23.1444	-88	10
Maximum of Polity IV Index in i and j in 1980	$MAXPOLITY80_{ii}$	bounded	1.1031	12.0755	-88	10
Minimum of Regime Durability Index in i and j in 1980	$MINREGDUR80_{ii}$	bounded	12.0904	16.9013	0	171
Maximum of Regime Durability Index in i and j in 1980	$MAXREGDUR80_{ii}$	bounded	32.1513	31.7422	0	171
Minimum of State Fragility Index in i and j in 1995	$MINSFI95_{ii}$	bounded	5.9022	5.3334	0	22
Maximum of State Fragility Index in i and j in 1995	$MAXSFI95_{ii}$	bounded	13.6513	5.5411	0	23
Doing Business and Institutional Variables (6)						
Minimum of Institutional Quality in i and j for most recent year between 2002-2009	$MININSTQUAL_{ii}$	bounded	-0.1263	0.3770	-0.884148	0.8048378
Maximum of Institutional Quality in i and j for most recent year between 2002-2009	$MAXINSTQUAL_{ii}$	bounded	-0.1263	0.3770	-0.884148	0.8048378
Minimum of Government Predictability in i and j for most recent year between 2002-2009	$MINGOVPRED_{ii}$	bounded	0.4332	0.1272	0.170588	0.7864373
Maximum of Government Predictability in i and j for most recent year between 2002-2009	$MAXGOVPRED_{ii}$	bounded	0.4928	0.1317	0.170588	0.7864373
Minimum Log Number of Steps to Register a Business in i and j in 1999	$MINSTEPS99_{ii}$	continuous	2.0186	0.5609	0.693147	2.995732
Maximum Log Number of Steps to Register a Business in i and j in 1999	$MAXSTEPS99_{ii}$	continuous	2.3397	0.4627	0.693147	2.995732
Minimum Log Number of Procedures to Register a Business in i and j in 1999	$MINPROC99_{ii}$	continuous	2.1317	0.5387	0.693147	3.044523
Maximum Log Number of Procedures to Register a Business in i and j in 1999	$MAXPROC99_{ii}$	continuous	2.4300	0.4317	0.693147	3.044523
Minimum Log Number of Time Taken to Register a Business in i and j in 1999	$MINTIME99_{ii}$	continuous	3.3661	0.9949	0.6931	5.0239
Maximum Log Number of Time Taken to Register a Business in i and j in 1999	$MAXTIME99_{ii}$	continuous	3.8779	0.7613	0.6931	5.0239
Minimum Log Cost to Register a Business in i and j in 1999	$MINCOST99_{ii}$	continuous	5.8304	1.2989	2.450143	8.865785
Maximum Log Cost to Register a Business in i and j in 1999	$MAXCOST99_{ii}$	continuous	6.6696	1.3042	2.450143	8.865785
Minimum Cost to Register a Business as % of PCGDP in i and j in 1999	$MINCOSTPCT99_{ii}$	bounded	0.3145	0.5761	0	4.63
Maximum Cost to Register a Business as % of PCGDP in i and j in 1999	$MAXCOSTPCT99_{ii}$	bounded	0.6369	0.9127	0	4.63

Notes: The sources for the variables in the table are the following by block: (0) World Trade Organization; (1) (2) and (3) World Bank; (4) Centre d'Études Prospectives et d'Informations Internationales; (5) Polity IV Project and Center for Systemic Peace; (6) Djankov et al. (2002) and Gennaioli et al. (2013).

Table 2: Probit results for A_{ij} and $S_{ij}|A_{ij}=1$

Dependent variables: A_{ij} = Any STA membership; S^a_{ij} = Simultaneous negotiation of STA and GTA by year of notification; S^e_{ij} = Simultaneous negotiation of STA and GTA by year of entry into force									
		(1)	(2)	(3)	(4)	(1')	(2')	(3')	(4')
Regressor	**Acronym**	A_{ij}	S^a_{ij}	S^a_{ij}	S^a_{ij}	A_{ij}	S^e_{ij}	S^e_{ij}	S^e_{ij}
Services Share in GDP (1)									
Minimum Share of Services in GDP between i and j	$MINSRATIO_{ij}$	0.0036	0.0504***	0.0485***	0.0524***	0.0036	0.0515***	0.0462***	0.0512***
		(0.0036)	(0.0132)	(0.0132)	(0.0126)	(0.0036)	(0.0139)	(0.0138)	(0.0147)
Maximum Share of Services in GDP between i and j	$MAXSRATIO_{ij}$	0.0209***	0.1016***	0.0934***	0.1063***	0.0209***	0.1265***	0.1104***	0.1432***
		(0.0038)	(0.0171)	(0.0186)	(0.0169)	(0.0038)	(0.0228)	(0.0230)	(0.0252)
Absolute and Relative Size and Endowment Variables (2)									
Log Sum of GDP of i and j	$SUMGDP_{ij}$	0.1076***	0.3223***	0.3233***	0.4292***	0.1076***	0.6164***	0.6147***	0.8930***
		(0.0293)	(0.0895)	(0.0893)	(0.0959)	(0.0293)	(0.1286)	(0.1276)	(0.1583)
Absolute Difference in Log GDP of i and j	$DGDP_{ij}$	-0.1112***	-0.1479	-0.1051	-0.1465	-0.1112***	-0.3398**	-0.2660*	-0.4265**
		(0.0308)	(0.1042)	(0.1032)	(0.1092)	(0.0308)	(0.1312)	(0.1307)	(0.1431)
Absolute Difference in Log GDP per Capita of i and j	$DGDPPC_{ij}$	0.1867	-1.0450*	-1.1676*	-0.8466#	0.1867	-0.7352	-0.9630#	-0.3707
		(0.2017)	(0.4927)	(0.4986)	(0.4907)	(0.2017)	(0.5426)	(0.5365)	(0.5671)
Squared Absolute Difference in Log GDP per Capita of i and j	$DGDPPC2_{ij}$	-0.1757*	0.2023	0.2513	-0.0737	-0.1757*	-0.0590	0.0285	-0.5859#
		(0.0775)	(0.2422)	(0.2441)	(0.2446)	(0.0775)	(0.3020)	(0.2993)	(0.3438)
Absolute Difference in Log GDP per Capita of i plus j with Rest-of-World	$DRGDPPC_{ij}$	0.1213	-0.7685*	-0.8589*	-0.8556*	0.1213	-0.8254*	-0.9412*	-0.9508*
		(0.1826)	(0.3633)	(0.3515)	(0.3427)	(0.1826)	(0.4130)	(0.4030)	(0.3924)
Unilateral Services Trade Restrictiveness (3)									
Minimum Log Services-trade Restrictiveness Index in i and j	$MINSTRI_{ij}$	0.3643**	-0.6539	-0.9534#	-0.9438*	0.3643**	-0.3001	-0.7936	-0.8128
		(0.1171)	(0.4127)	(0.4904)	(0.4314)	(0.1171)	(0.5007)	(0.5698)	(0.5428)
Maximum Log Services-trade Restrictiveness Index in i and j	$MAXSTRI_{ij}$	-1.0865***	-3.4145***	-2.9804***	-3.6332***	-1.0865***	-4.9496***	-4.1974***	-5.9952***
		(0.1050)	(0.7290)	(0.8096)	(0.7579)	(0.1050)	(0.9695)	(0.9625)	(1.1459)
Geographical and Cultural Distance (4)									
Log Bilateral Distance Between i and j	$DIST_{ij}$	-0.5022***	-0.9441***	-0.8478**	-1.2617***	-0.5022***	-1.5232***	-1.3352***	-2.3177***
		(0.0514)	(0.2580)	(0.2730)	(0.2780)	(0.0514)	(0.3337)	(0.3246)	(0.4422)
Common Legal System Between i and j	$COMLAW_{ij}$	-0.1951*	-0.4748#	-0.4595#	-0.6046*	-0.1951*	-0.6444*	-0.5651#	-0.9295**
		(0.0988)	(0.2707)	(0.2725)	(0.2760)	(0.0988)	(0.3271)	(0.3260)	(0.3543)
Common Language Between i and j	$COMLANG_{ij}$	0.2538#	1.4062**	1.2334**	1.3866**	0.2538#	2.4321***	2.1535***	2.7013***
		(0.1529)	(0.4457)	(0.4475)	(0.4421)	(0.1529)	(0.6269)	(0.5996)	(0.6537)
Colonial Relationship Between i and j	$COLONY_{ij}$	-0.2960	-0.9755	-0.8864	-1.3065*	-0.2960	-1.8345**	-1.7140*	-2.7074***
		(0.3062)	(0.5970)	(0.6098)	(0.6273)	(0.3062)	(0.7046)	(0.6825)	(0.7405)
Common Colonizer Between i and j	$COMCOL_{ij}$	0.0724	2.2677*	2.2316*	1.9383*	0.0724	4.0121***	3.9460***	3.8924***
		(0.3224)	(0.9184)	(0.9038)	(0.8908)	(0.3224)	(1.1225)	(1.0406)	(0.9884)
Units i and j Belonged to the Same Country	$SAMECTRY_{ij}$	-0.0900	-0.1711	-0.1588	-0.2915	-0.0900	-1.4724*	-1.4895*	-2.0964**
		(0.4079)	(0.6320)	(0.6559)	(0.7178)	(0.4079)	(0.6417)	(0.6149)	(0.6547)
Politics (5)									
Minimum of Polity IV Index in i and j in 1980	$MINPOLITY80_{ij}$	-0.0114***	-0.0276***	-0.0257***	-0.0367***	-0.0114***	-0.0535***	-0.0503***	-0.0773***
		(0.0021)	(0.0072)	(0.0074)	(0.0079)	(0.0021)	(0.0108)	(0.0107)	(0.0133)
Maximum of Polity IV Index in i and j in 1980	$MAXPOLITY80_{ij}$	0.0092	0.0300**	0.0285**	0.0354***	0.0092	0.0266*	0.0243*	0.0444***
		(0.0056)	(0.0103)	(0.0103)	(0.0104)	(0.0056)	(0.0105)	(0.0105)	(0.0112)
Minimum of Regime Durability Index in i and j in 1980	$MINREGDUR80_{ij}$	-0.0037	-0.0058	-0.0054	-0.0072	-0.0037	0.0349**	0.0344*	0.0271#
		(0.0026)	(0.0082)	(0.0083)	(0.0087)	(0.0026)	(0.0132)	(0.0134)	(0.0142)
Maximum of Regime Durability Index in i and j in 1980	$MAXREGDUR80_{ij}$	0.0012	0.0060	0.0054	0.0056	0.0012	0.0378***	0.0372***	0.0405***
		(0.0021)	(0.0051)	(0.0052)	(0.0051)	(0.0021)	(0.0084)	(0.0083)	(0.0085)
Minimum of State Fragility Index in i and j in 1995	$MINSFI95_{ij}$	-0.0741***	-0.1693*	-0.1514*	-0.2434***	-0.0741***	-0.2873**	-0.2609*	-0.4710***
		(0.0147)	(0.0658)	(0.0675)	(0.0669)	(0.0147)	(0.1072)	(0.1074)	(0.1229)
Maximum of State Fragility Index in i and j in 1995	$MAXSFI95_{ij}$	-0.0167	-0.0304	-0.0171	-0.0104	-0.0167	0.0640*	0.0896**	0.1034**
		(0.0111)	(0.0250)	(0.0264)	(0.0260)	(0.0111)	(0.0296)	(0.0338)	(0.0318)
Doing Business and Institutional Variables (6)									
Minimum of Institutional Quality in i and j for most recent year between 2002-2009	$MININSTQUAL_{ij}$	1.1547***	3.3250***	2.7809**	3.8837***	1.1547***	4.6011***	3.7360***	6.0276***
		(0.2052)	(0.8054)	(0.9213)	(0.8428)	(0.2052)	(0.8815)	(0.9263)	(1.0550)
Maximum of Institutional Quality in i and j for most recent year between 2002-2009	$MAXINSTQUAL_{ij}$	-0.5296**	-2.1848***	-2.2113***	-3.4824***	-0.5296**	-2.5397***	-2.5811***	-4.9459***
		(0.1916)	(0.5035)	(0.5088)	(0.6515)	(0.1916)	(0.5964)	(0.5985)	(0.9201)
Minimum of Government Predictability in i and j for most recent year between 2002-2009	$MINGOVPRED_{ij}$	-1.8766**		1.7671		-1.8766**		2.6467	
		(0.6398)		(1.4080)		(0.6398)		(1.7437)	
Maximum of Government Predictability in i and j for most recent year between 2002-2009	$MAXGOVPRED_{ij}$	1.6358**			3.8406***	1.6358**			6.6617***
		(0.5435)			(1.0705)	(0.5435)			(1.4973)
Minimum Log Number of Steps to Register a Business in i and j in 1999	$MINSTEPS99_{ij}$	-0.2154	0.9542	1.1662	1.0908	-0.2154	1.4943#	1.7934*	1.8631*
		(0.2421)	(0.6766)	(0.7122)	(0.6898)	(0.2421)	(0.7673)	(0.8095)	(0.8357)
Maximum Log Number of Steps to Register a Business in i and j in 1999	$MAXSTEPS99_{ij}$	-1.3592***	-5.5868***	-4.9676***	-5.6367***	-1.3592***	-5.9427***	-5.0066**	-7.2373***
		(0.3171)	(1.0499)	(1.1584)	(1.0695)	(0.3171)	(1.5036)	(1.5821)	(1.5473)
Minimum Log Number of Procedures to Register a Business in i and j in 1999	$MINPROC99_{ij}$	0.1887	-2.2609*	-2.4802*	-2.4935**	0.1887	-2.2741#	-2.5896*	-2.7084*
		(0.3294)	(0.9318)	(0.9633)	(0.9376)	(0.3294)	(1.1608)	(1.1711)	(1.2048)
Maximum Log Number of Procedures to Register a Business in i and j in 1999	$MAXPROC99_{ij}$	0.7842#	3.0465**	2.3891*	2.4195*	0.7842#	2.4968#	1.6594	2.7237#
		(0.4090)	(0.9566)	(1.0698)	(0.9862)	(0.4090)	(1.3676)	(1.4613)	(1.3979)
Minimum Log Number of Time Taken to Register a Business in i and j in 1999	$MINTIME99_{ij}$	0.2371#	1.5481***	1.4913***	1.6662***	0.2371#	1.7014***	1.5871***	2.0368***
		(0.1226)	(0.2972)	(0.3003)	(0.3065)	(0.1226)	(0.3919)	(0.3915)	(0.4053)
Maximum Log Number of Time Taken to Register a Business in i and j in 1999	$MAXTIME99_{ij}$	0.2570#	0.6702*	0.6459*	0.8837**	0.2570#	1.2473***	1.1581**	1.5850***
		(0.1333)	(0.2803)	(0.2821)	(0.2948)	(0.1333)	(0.3650)	(0.3651)	(0.3970)
Minimum Log Cost to Register a Business in i and j in 1999	$MINCOST99_{ij}$	0.1465***	0.2350	0.1977	0.3229*	0.1465***	-0.4063*	-0.4678*	-0.1721
		(0.0406)	(0.1490)	(0.1508)	(0.1555)	(0.0406)	(0.1942)	(0.1953)	(0.2160)
Maximum Log Cost to Register a Business in i and j in 1999	$MAXCOST99_{ij}$	-0.0985#	-0.5356**	-0.5197**	-0.5819***	-0.0985#	-0.2473	-0.2220	-0.4708*
		(0.0544)	(0.1694)	(0.1691)	(0.1646)	(0.0544)	(0.2059)	(0.2069)	(0.2255)
Minimum Cost to Register a Business as % of PCGDP in i and j in 1999	$MINCOSTPCT99_{ij}$	-0.3094*	-0.4391	-0.5255	-0.9465	-0.3094*	0.4717	0.3016	-0.7226
		(0.1553)	(0.9620)	(0.9583)	(0.9437)	(0.1553)	(0.9036)	(0.8520)	(0.8281)
Maximum Cost to Register a Business as % of PCGDP in i and j in 1999	$MAXCOSTPCT99_{ij}$	0.0720	1.4122**	1.4696**	1.3996*	0.0720	0.9597***	0.9883***	1.1839***
		(0.0520)	(0.5455)	(0.5380)	(0.5485)	(0.0520)	(0.2105)	(0.2052)	(0.1907)
Selection bias term	IMR_{ij}		3.3335***	2.8205**	3.9724***		3.4670***	2.6086*	5.1596***
			(0.8087)	(0.9017)	(0.8324)		(0.9951)	(1.0281)	(1.2024)
Constant	CONSTANT	-3.6885*	-18.9114***	-18.8863***	-24.3328***	-3.6885*	-32.6884***	-32.4803***	-46.4740***
		(1.5581)	(4.4603)	(4.4252)	(4.8942)	(1.5581)	(6.0526)	(5.9378)	(7.4969)
Model characteristics									
Observations (country pairs)		3311	377	377	377	3311	377	377	377
Explanatory power		0.5259	0.4809	0.4848	0.5230	0.5259	0.5280	0.5380	0.5507
Likelihood ratio test				1.52	10.93			1.52	10.93
p-value				0.2181	0.0009			0.2181	0.0009

Notes: ***, **, *, and # indicate statistical significance at 0.1, 1, 5, and 10%, respectively, based on two-sided test statistics.

Table 3: Effects of a one-standard-deviation increase in $MINSTRI_{ij}$ and, alternatively, $MAXSTRI_{ij}$ on $P(STA^{n}_{ij}=1)$ and $P(STA^{e}_{ij}=1)$

Dependent variables: A_{ij} = Any STA membership; S^{n}_{ij} = Simultaneous negotiation of STA and GTA by year of notification; S^{e}_{ij} = Simultaneous negotiation of STA and GTA by year of entry into force									
		(1)	**(2)**	**(3)**	**(4)**	**(1')**	**(2')**	**(3')**	**(4')**
Regressor	**Acronym**	**A_{ij}**	**S^{n}_{ij}**	**S^{n}_{ij}**	**S^{n}_{ij}**	**A_{ij}**	**S^{e}_{ij}**	**S^{e}_{ij}**	**S^{e}_{ij}**
Minimum Log Services-trade Restrictiveness Index in i and j	$MINSTRI_{ij}$	0.0021***	-0.0547	-0.0940#	-0.0824*	0.0021***	-0.0069	-0.0210	-0.01156
		(0.0006)	(0.0364)	(0.0530)	(0.0416)	(0.0006)	(0.0122)	(0.0176)	(0.0103)
Maximum Log Services-trade Restrictiveness Index in i and j	$MAXSTRI_{ij}$	-0.0055***	-0.5044***	-0.4849***	-0.5569***	-0.0055***	-0.2208**	-0.1871**	-0.1800*
		(0.0008)	(0.1245)	(0.1375)	(0.1331)	(0.0008)	(0.0766)	(0.0686)	(0.0802)

Notes: ***, **, *, and # indicate statistical significance at 0.1, 1, 5, and 10%, respectively, based on two-sided test statistics.