

Free-Riding on Enforcement in the WTO

Online Appendix – Empirics

May 12, 2017

Testing the Proportional Hazards Assumption

Figure A.1: Scaled Residuals for NUMBER OF COUNTRIES AFFECTED Across Time

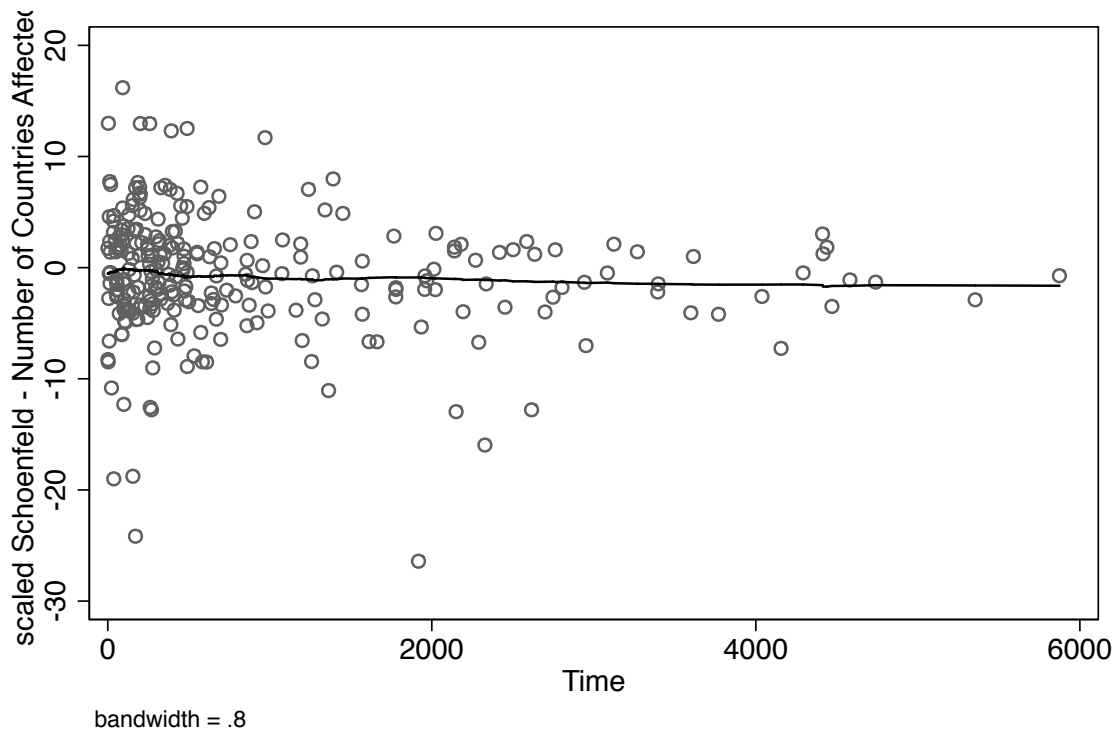


Figure A.2: Scaled Residuals for DISPUTED TRADE FLOWS HHI Across Time

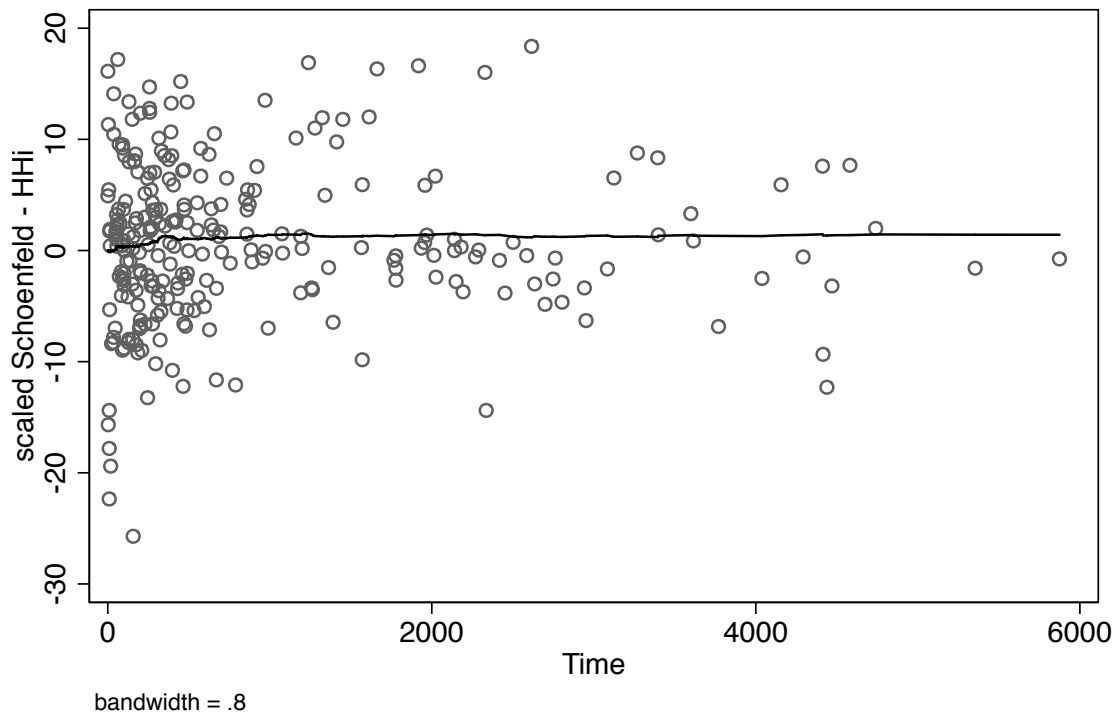
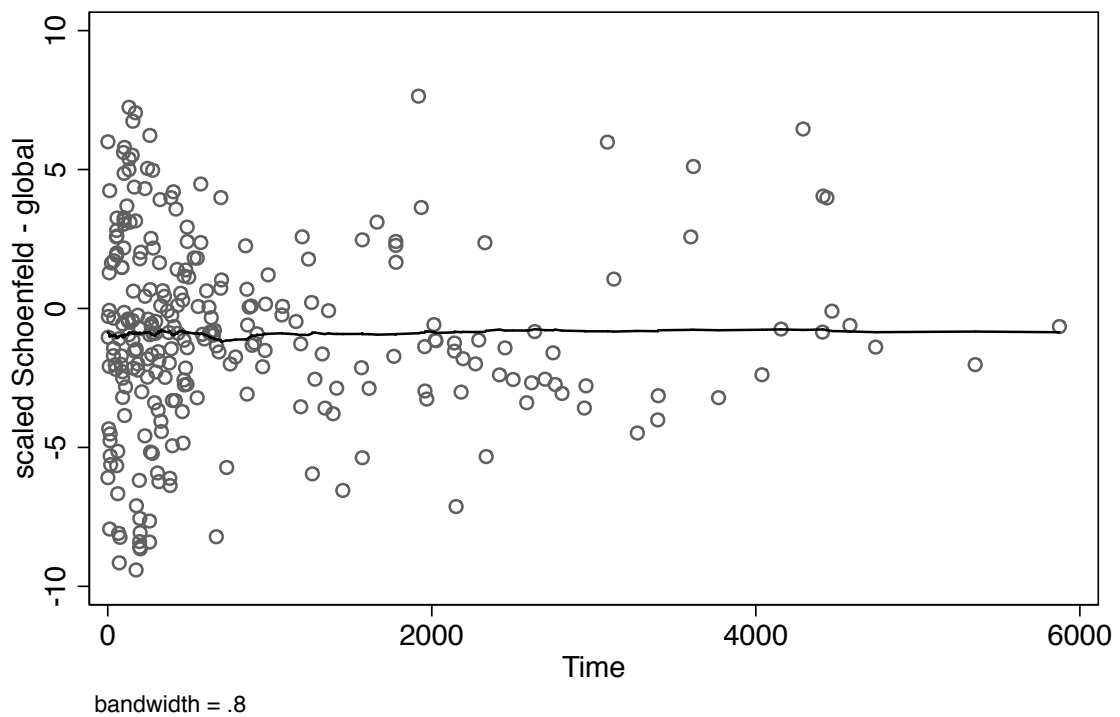


Figure A.3: Scaled Residuals for GLOBAL POLICY Across Time



Robustness of the Duration Results

Table A.1: Duration: Including Only Past Complainants, and Shared Frailty on Legal Issue

	(1)	(2)	(3)	(4)	(5)
Global Policy	-1.02*** (0.20)	-0.78*** (0.19)	-0.93*** (0.18)	-0.95*** (0.19)	-0.72*** (0.18)
Disputed Trade Flows HHi	1.14*** (0.31)			0.98*** (0.31)	
Number of Countries Affected (log)		-1.14*** (0.16)			-1.16*** (0.14)
Own Trade Stake (log)	0.34*** (0.04)	0.41*** (0.04)	0.36*** (0.02)	0.34*** (0.02)	0.42*** (0.03)
ROW Trade Stake (log)	-0.19*** (0.04)	-0.05 (0.05)	-0.22*** (0.02)	-0.20*** (0.02)	-0.05 (0.03)
Country GDP/cap (log)	-0.24*** (0.07)	-0.25*** (0.07)	-0.26*** (0.07)	-0.26*** (0.07)	-0.28*** (0.07)
Country GDP (log)	-0.11 (0.08)	-0.15** (0.07)	-0.04 (0.07)	-0.03 (0.07)	-0.09 (0.07)
Country Trade Dependence	-0.00*** (0.00)	-0.00** (0.00)	-0.00* (0.00)	-0.00* (0.00)	-0.00* (0.00)
Defendant GDP/cap (log)	-0.11 (0.11)	-0.14 (0.10)	-0.08 (0.08)	-0.10 (0.08)	-0.12 (0.09)
Defendant GDP (log)	-0.12* (0.07)	-0.03 (0.06)	-0.18*** (0.06)	-0.15** (0.06)	-0.06 (0.06)
Defendant Trade Dependence	0.01 (0.00)	0.00 (0.00)	0.00* (0.00)	0.00 (0.00)	-0.00 (0.00)
Country Legal Experience	0.45*** (0.10)	0.46*** (0.10)	0.53*** (0.10)	0.51*** (0.10)	0.53*** (0.10)
Initiation Year	-0.14*** (0.02)	-0.15*** (0.02)	-0.15*** (0.02)	-0.14*** (0.02)	-0.15*** (0.02)
Legal Issue Fixed Effects	YES	YES			
N	7863	7863	16145	16145	16145

Cox Proportional Hazards estimates, errors clustered on common dispute. Sample restricted to countries that have filed a WTO challenge in Columns 1 and 2, with clustered errors on common dispute. Shared frailty parameter on legal issue in Columns 3, 4, and 5. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table A.2: Duration: Excluding Multiple Complainant Disputes

	(1)	(2)	(3)
Global Policy	-1.00*** (0.21)	-1.04*** (0.20)	-0.80*** (0.18)
Disputed Trade Flows HHi		1.10*** (0.32)	
Number of Countries Affected (log)			-1.23*** (0.16)
Own Trade Stake (log)	0.37*** (0.04)	0.34*** (0.04)	0.42*** (0.04)
ROW Trade Stake (log)	-0.22*** (0.04)	-0.19*** (0.04)	-0.03 (0.05)
Country GDP/cap (log)	-0.23*** (0.07)	-0.24*** (0.07)	-0.25*** (0.07)
Country GDP (log)	-0.06 (0.08)	-0.05 (0.08)	-0.11 (0.08)
Country Trade Dependence	-0.00** (0.00)	-0.00** (0.00)	-0.00** (0.00)
Defendant GDP/cap (log)	-0.09 (0.10)	-0.13 (0.11)	-0.17* (0.09)
Defendant GDP (log)	-0.18*** (0.06)	-0.15** (0.07)	-0.05 (0.07)
Defendant Trade Dependence	0.01* (0.00)	0.00 (0.00)	0.00 (0.00)
Country Legal Experience	0.54*** (0.10)	0.52*** (0.10)	0.53*** (0.10)
Initiation Year	-0.14*** (0.02)	-0.14*** (0.02)	-0.15*** (0.02)
Legal Measure Fixed Effects	YES	YES	YES
N	16078	16078	16078

Cox Proportional Hazards estimates, errors clustered on common dispute. Sample restricted to single-complainant cases. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table A.3: Duration: Varying the Value Threshold for NUMBER OF COUNTRIES AFFECTED

	(1)	(2)	(3)	(4)
Global Policy	-0.88*** (0.20)	-0.85*** (0.19)	-0.76*** (0.19)	-0.71*** (0.19)
Number of Countries Affected (log) (> USD 0)	-0.81*** (0.19)			
Number of Countries Affected (log) (> USD100,000)		-1.15*** (0.17)		
Number of Countries Affected (log) (> USD500,000)			-1.20*** (0.16)	
Number of Countries Affected (log) (> USD1M)				-1.03*** (0.15)
Own Trade Stake (log)	0.38*** (0.04)	0.40*** (0.03)	0.42*** (0.04)	0.42*** (0.04)
ROW Trade Stake (log)	-0.09 (0.06)	-0.04 (0.05)	-0.04 (0.05)	-0.07 (0.04)
Country GDP/cap (log)	-0.27*** (0.07)	-0.27*** (0.07)	-0.28*** (0.08)	-0.26*** (0.08)
Country GDP (log)	-0.07 (0.08)	-0.09 (0.07)	-0.10 (0.07)	-0.10 (0.07)
Country Trade Dependence	-0.00* (0.00)	-0.00* (0.00)	-0.00* (0.00)	-0.00** (0.00)
Defendant GDP/cap (log)	-0.11 (0.11)	-0.12 (0.10)	-0.12 (0.10)	-0.14 (0.11)
Defendant GDP (log)	-0.11* (0.06)	-0.06 (0.07)	-0.06 (0.07)	-0.03 (0.07)
Defendant Trade Dependence	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Country Legal Experience	0.55*** (0.10)	0.53*** (0.10)	0.54*** (0.10)	0.52*** (0.10)
Initiation Year	-0.15*** (0.03)	-0.15*** (0.03)	-0.15*** (0.02)	-0.16*** (0.03)
Legal Measure Fixed Effects	YES	YES	YES	YES
N	16145	16145	16145	16145

Cox Proportional Hazards estimates, errors clustered on common dispute. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table A.4: Duration: Dispute-Level Analysis

	(1)	(2)	(3)	(4)	(5)
Global Policy	-0.59*** (0.18)			-0.57*** (0.18)	-0.60*** (0.18)
Disputed Trade Flows HHi			0.73*** (0.26)		0.73*** (0.27)
Number of Countries Affected (log)		-0.38*** (0.14)		-0.35** (0.15)	
Own Trade Stake (log)	0.14*** (0.03)	0.15*** (0.03)	0.12*** (0.03)	0.15*** (0.03)	0.13*** (0.03)
ROW Trade Stake (log)	-0.09*** (0.03)	-0.03 (0.03)	-0.08*** (0.03)	-0.03 (0.04)	-0.07*** (0.03)
Country GDP/cap (log)	0.23*** (0.07)	0.21*** (0.08)	0.21*** (0.08)	0.22*** (0.08)	0.21*** (0.07)
Country GDP (log)	-0.08 (0.08)	-0.06 (0.09)	-0.06 (0.09)	-0.07 (0.09)	-0.06 (0.08)
Country Trade Dependence	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Defendant GDP/cap (log)	-0.06 (0.09)	-0.10 (0.09)	-0.08 (0.09)	-0.10 (0.09)	-0.10 (0.10)
Defendant GDP (log)	-0.03 (0.06)	0.03 (0.06)	0.02 (0.06)	0.02 (0.06)	0.01 (0.06)
Defendant Trade Dependence	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)
Country Legal Experience	-0.29** (0.12)	-0.32** (0.13)	-0.32*** (0.12)	-0.31** (0.12)	-0.31*** (0.12)
Initiation Year	-0.09*** (0.02)	-0.09*** (0.02)	-0.08*** (0.02)	-0.09*** (0.02)	-0.09*** (0.02)
Legal Measure Fixed Effects	YES	YES	YES	YES	YES
N	266	266	266	266	266

Cox Proportional Hazards estimates. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Robustness of the Legal Success Results

Table A.5: Legal Success: Single-Stage Estimation

	(1)	(2)	(3)
Global Policy	1.22***	1.28***	1.31***
	(0.47)	(0.48)	(0.48)
Disputed Trade Flows HHi		-1.02*	
		(0.53)	
Number of Countries Affected (log)			0.28*
			(0.17)
Own Trade Stake (log)	-0.10**	-0.12***	-0.15***
	(0.04)	(0.05)	(0.05)
Complainant GDP (log)	-0.07	-0.04	-0.07
	(0.10)	(0.09)	(0.09)
Defendant GDP (log)	0.09	0.06	0.04
	(0.08)	(0.08)	(0.08)
Complainant Legal Experience	0.08	0.10	0.12
	(0.17)	(0.16)	(0.16)
Initiation Year	-0.00	-0.02	-0.01
	(0.03)	(0.03)	(0.03)
Constant	9.41	32.63	19.17
	(60.90)	(60.79)	(59.90)
Legal Measure Fixed Effects	YES	YES	YES
N	140	140	140

Maximum-likelihood probit estimates. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table A.6: Legal Success: Accounting for Multiple Complainants

	(1)	(2)	(3)	(4)
RULING WON NET OF APPEAL (2nd stage eq.)				
Global Policy	1.07** (0.49)	1.02** (0.48)	1.13* (0.61)	1.19** (0.59)
Disputed Trade Flows HHi	-1.08** (0.52)		-1.34* (0.73)	
Number of Countries Affected (log)		0.38** (0.17)		0.67*** (0.22)
Own Trade Stake (log)	-0.09* (0.05)	-0.12** (0.05)	-0.08 (0.06)	-0.16*** (0.06)
Complainant GDP (log)	-0.01 (0.10)	-0.06 (0.10)	-0.14 (0.13)	-0.24* (0.13)
Defendant GDP (log)	0.07 (0.09)	0.05 (0.08)	0.02 (0.14)	-0.04 (0.15)
Complainant Legal Experience	0.12 (0.16)	0.16 (0.16)	0.53** (0.24)	0.67*** (0.26)
Initiation Year	-0.02 (0.03)	-0.01 (0.03)	0.04 (0.04)	0.06 (0.04)
Number of Complainants	-0.04 (0.08)	-0.07 (0.08)		
Constant	31.00 (61.98)	22.57 (59.36)	-77.14 (81.16)	-105.34 (79.92)
DISPUTE GOES TO RULING (1st stage eq.)				
Number of Third Parties	0.25*** (0.04)	0.25*** (0.04)	0.25*** (0.05)	0.24*** (0.05)
Own Trade Stake (log)	0.05** (0.02)	0.05** (0.02)	0.03 (0.02)	0.03 (0.02)
Complainant GDP (log)	-0.01 (0.06)	-0.01 (0.06)	-0.09 (0.08)	-0.10 (0.08)
Defendant GDP (log)	0.07 (0.04)	0.07 (0.04)	0.20*** (0.05)	0.20*** (0.05)
Complainant Legal Experience	0.11 (0.10)	0.11 (0.10)	0.16 (0.13)	0.16 (0.13)
Constant	-3.60** (1.75)	-3.61** (1.74)	-4.69** (2.22)	-4.67** (2.21)
Legal Measure Fixed Effects	YES	YES	YES	YES
N	310	310	209	209

Heckman probit selection model with maximum likelihood (ML) estimates. First stage estimates likelihood of a ruling. Second stage estimates likelihood of a pro-complainant ruling. Robust standard errors clustered on the common dispute. Sample restricted to single complainant disputes in Columns 3 and 4. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$