Trade Law and Trade Flows

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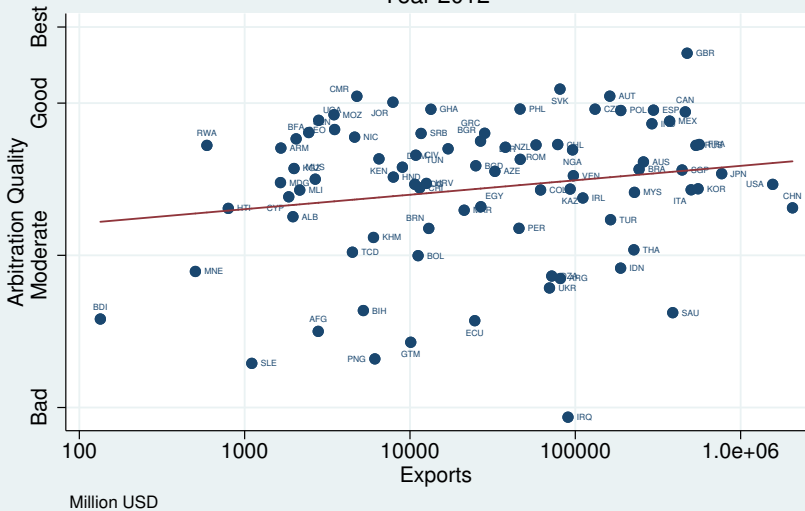
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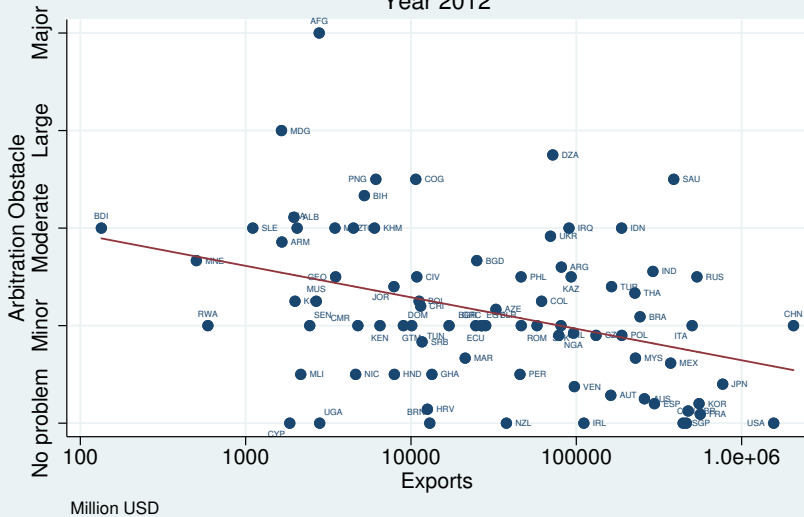
What is International Commercial Arbitration?

Arbitration Quality vs. Trade
Year 2012

Arbitration Perception vs. Trade
Year 2012

Outline

What do we do

- We revist the effect of trade law on trade flows
- We develop a theoretical model that includes degrees of inernational dispute resolution mechanism: from litigation to arbitration
  - Better but costly international dispute mechanism mechanisms promotes trade
    - Less on host countries with better institutions
    - Less on dissimilar countries
- We estimate the predictions of the model on over 200 country codes during 1948-2013

Background

Trade

- Casella, A. (1996, EER). "On market integration and the development of institutions: the case of international commercial arbitration"
- Berkowitz et al (2006, RES). "Trade, law, and product complexity"
- Moenius & Berkowitz (2011, JDE) "Law, trade, and development"

FDI

- Myburgh & Paniagua (2016, JLE) "Does international commercial arbitration promote foreign direct investment?"
- Myburgh & Paniagua (2016, UNCITRAL) "The impact of UNCITRAL on Foreign Direct Investment"

Benefits of arbitration
Myburgh & Paniagua (JLE, 2016)

- The majority of contracts (80%) that cross borders implement mechanisms to settle disputes through international commercial arbitration.
    - In this system, disputes are adjudicated before private tribunals and the resulting awards are enforced in domestic courts.
- Benefits of arbitration:
    - Independence of where the dispute may arise.
    - more flexibility than domestic courts
    - Specialized lawyers
    - facilitates parties' choice over the law under which the contract is heard
    - the cost of engaging in nuisance suits is substantial

Costs of arbitration
Myburgh & Paniagua (JLE, 2016)
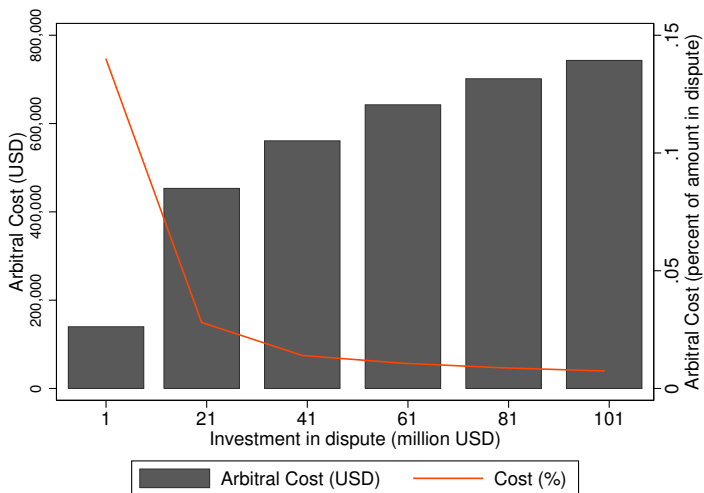
Source: ICC arbitral cost calculator

The size of the bubble represents GDP size. Countries in red ratified NY Convention
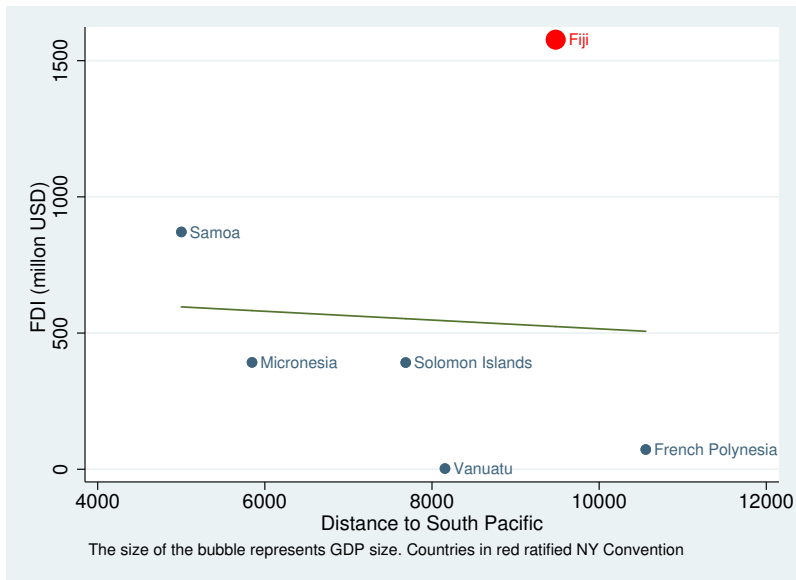
NY Convention & Model laws

- The *Convention on Recognition and Enforcement of Foreign Arbitral Awards* of 1958 "NY Convention".
    - The NY Convention is the legal cornerstone of arbitration.

- The Model Law on International Commercial Arbitration of 1985 "the Model Law on Arbitration".
    - According to UNCITRAL the Model Law on Arbitration is designed to help states to strengthen their arbitration laws.

- The Model Law on International Commercial Conciliation (2002)
    - provides uniform rules with respect to the conciliation process with the aim of ensuring greater predictability and certainty in its use.

A menu of trade law options

1. **Firms can only use domestic courts** to enforce contracts: absent arbitration firms would need to rely on the domestic courts.

2. **Firms can use arbitration but without the benefit of UNCITRAL's initiatives**.

    1. absent the protections provided by the NY Convention, the Model Law on Arbitraiton and similiar domestic laws, arbitration would be seldomly used.

3. **Firms can use arbitration with the protections provided for by UNICTRAL's initiatives and similar domestic laws**. UNCITRAL's initiatives have two effects.

    1. The first is to make arbitration a more effective form of contract enforcement than using the domestic courts.
    2. The second effect is to lower the expected cost of using arbitration through the Model Law on Concilliation.

The setup

- We start with an exporter that produces a set of products within an industry. The revenue in a particular country j is increasing and concave function of the quantities sold and a demand shifter across products:

$$R_j = R(x_j, \theta, \varphi)$$

- The exporter cannot access foreign consumers directly, it must contract an importer for every product.
- Trade costs $\tau_{ij} > 1$ and fixed costs f_{ij}
- Products are shipped in $t = 0$ and consumed in $t = 1$.

Contractual frictions happen

- We assume that the contract between exporter and importer is subject to contractual frictions:
    - expropriation risks (Thomas and Worrall, 1994),
    - institutional hazards (Acemoglu and Johnson, 2005; Van Assche and Schwartz, 2013)
    - financial constraints (Antràs and Foley, 2013).
- When the contract is not enforced, one of parties does not stand by the initial terms of the contract with exporter.
- The contract is enforced with probability $\gamma_j, \gamma_j \in (0, 1)$.

- The importer can choose some degree of resolution from litigation to arbitration from a trade law discrete menu, but the exporter has limited information (Wickelgren, 2016, JLE)
  - With a probability $(1-\gamma_j)$ the importer breaches and litigates on domestic courts and the exporter anticipates this by shaving the value of shipment by a share $1-\underline{\delta}$, and $\underline{\delta} \in (0,1)$.
    - It is costly for an exporter to litigate against an importer who is located further away due to procedural costs and information asymmetries.
    - We assume that it is more costly in distant countries: ice-berg type cost $\tau_{ij}^{-\mu}, \mu \geq 0$. μ controls the intensity of informational frictions regarding dispute resolution.
    - γ_j is fixed with the level of trade law quality at the host (NYC, model laws, conciliation). States with full support of arbitration $\gamma_j = 1$.
  - The constraint of the importer is:

$$P^{LIT} = (\gamma_j + (1-\gamma_j)\underline{\delta})\tau_{ij}^{-\mu}R(x_j, \theta). \tag{1}$$

- The exporter adjusts exports to solve:

$$\pi_{ij}^{LIT} = \max_{x_j}\left[(\gamma_j + (1-\gamma_j)\underline{\delta})\tau_{ij}^{-\mu}R(x_j, \theta) - \tau_{ij}x_j - f_{ij}\right]. \tag{2}$$

- If the parties agree ex-ante on arbitration, the importer might breach the contract, but the exporter does not anticipate any reduction in the volume of the shipment.
  - The high costs of arbitration and the commitment signal of arbitration reduce the incentives to reduce the value of the shipment. In particular we assume that μ is close to zero.
- The exporter might breach the contract with a probability $(1 - \gamma_i)$, reducing the value with a share $1 - \overline{\delta}$, and $\overline{\delta} \in (0,1)$, $(\overline{\delta} > \underline{\delta})$.
- The constraint of the exporter is:

$$P^{ARB} = (\gamma_i + (1 - \gamma_i)\overline{\delta})R(x_j, \theta). \tag{3}$$

- The expected returns are:

$$\pi_{ij}^{ARB} = \max_{x_j} \left[(\gamma_i + (1 - \gamma_i)\overline{\delta})R(x_j, \theta) - \tau_{ij}x_j - f_{ij} \right] \tag{4}$$

- Applying the envelope theorem to (1) and (2), for given transaction costs and institutional quality parameters, the exporter prefers litigation over arbitration if and only if $(\gamma_j + (1-\gamma_j)\delta)\tau_{ij}^{-\mu} > (\gamma_i + (1-\gamma_i)\delta)$:

$$\underbrace{\frac{(\gamma_j + (1-\gamma_j)\underline{\delta})}{(\gamma_i + (1-\gamma_i)\overline{\delta})}}_{\text{Contratual distance}} > \underbrace{\tau_{ij}^{\mu}}_{\text{Contractial noise}}. \tag{5}$$

  - when the contractual strength of the importer relative to the exporter is higher than the uncertainty on their relative contractual strengths, the parties settle on litigation, otherwise they would prefer arbitration.
    - When the contractual signal is higher than the contractual noise, parties litigate.

  1. The higher the perceived trade law quality (in terms of γ_j and γ_i), the higher the effect of on the volume of exports flows.
  2. exogenous shock on any of the countries contractual quality increases exports
     - An exogenous increase might not be able to reduce the contractual distance to noise ratio. This means that the expected effects of strengthening trade law on trade flows are lower on dissimilar countries.

Estimation

We use the the Pseudo-Poisson Maximum likelihood (PPML) estimator proposed by Silva and Tenreyro (2006) using Larch's et al. (2017) procedure:

$$X_{ijt} = \exp\left(\beta_1 RTA_{ijt} + \beta_2 CU_{ijt} + \beta_3 TL_{ijt} + \chi_{it} + \lambda_{jt} + \eta_{ij}\right) + \varepsilon_{ijt}. \quad (6)$$

Data

We use Glick and Rose (2016) dataset extended to include a continuum of international trade law dummy variables.

- The sample covers bilateral trade between over 200 IMF country codes over the period 1948-2013 (with gaps). The dependent variable (bilateral exports flows in US dollars) come from DoT.

- The trade law data come from the United Nations Commission on International Trade Law (UNCITRAL).

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
lnGDPi	1.180 (0.006)***	1.180 (0.006)***	1.175 (0.006)***	1.172 (0.006)***				
lnGDPj	0.892 (0.006)***	0.891 (0.006)***	0.887 (0.006)***	0.882 (0.006)***				
LnDist	-1.128 (0.017)***	-1.128 (0.017)***	-1.116 (0.017)***	-1.122 (0.017)***				
Contiguity	0.503 (0.081)***	0.502 (0.081)***	0.526 (0.081)***	0.516 (0.081)***				
Colony	1.283 (0.097)***	1.284 (0.097)***	1.248 (0.097)***	1.281 (0.097)***				
Language	0.597 (0.033)***	0.597 (0.033)***	0.615 (0.033)***	0.602 (0.033)***				
Island	0.463 (0.028)***	0.462 (0.028)***	0.423 (0.028)***	0.448 (0.028)***				
Landlocked	-0.418 (0.025)***	-0.419 (0.025)***	-0.432 (0.025)***	-0.431 (0.025)***				
ComCurr	1.060 (0.088)***	1.061 (0.088)***	1.035 (0.088)***	1.060 (0.087)***	0.315 (0.026)***	0.315 (0.026)***	0.311 (0.026)***	0.315 (0.026)***
RTAs	1.109 (0.035)***	1.108 (0.035)***	1.048 (0.035)***	1.095 (0.035)***	0.387 (0.010)***	0.387 (0.010)***	0.382 (0.010)***	0.387 (0.010)***
AML	-0.037 (0.038)				0.035 (0.015)**			
CML		0.755 (0.159)***				0.045 (0.074)		
HC			0.347 (0.029)***				0.081 (0.013)***	
NYC				0.176 (0.023) ***				0.001 (0.012)
Year FE	Yes	Yes	Yes	Yes	No	No	No	No
Country*year FE	No	No	No	No	Yes	Yes	Yes	Yes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ComCurr	0.111 (0.041)***	0.068 (0.039)*	0.112 (0.041)***	0.071 (0.039)*	0.112 (0.041)***	0.072 (0.039)*	0.114 (0.041)***	0.072 (0.039)*
RTAs	0.199 (0.038) ***	0.188 (0.037)***	0.197 (0.038)***	0.185 (0.037)***	0.199 (0.037)***	0.189 (0.037)***	0.198 (0.038)***	0.189 (0.037)***
AML	-0.013 (0.032)	0.069 (0.037)*						
AML*difGDPpc		-0.093 (0.026)***						
CML			0.063 (0.050)	0.105 (0.057)*				
CML*difGDPpc				-0.148 (0.074)**				
HC					-0.011 (0.028)	0.044 (0.032)		
HC*difGDPpc						-0.115 (0.029)**		
NYC							0.055 (0.043)	0.172 (0.056)***
NYC*difGDPpc								-0.124 (0.026)***
Observations	731,826	635,128	731,826	635,128	731,826	635,128	731,826	635,128

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

	(1) AML	(2) CML	(3) HC	(4) NYC
Low_Low	1.999 (0.435)***			0.571 (0.302)***
LMidd_LMidd	0.342 (0.214)	0.408 (0.396)	-0.253 (0.151)*	0.904 (0.169)***
UMidd_UMidd	0.033 (0.086)	-0.164 (0.102)	-0.108 (0.141)	0.186 (0.143)
High_High	0.041 (0.037)	0.085 (0.052)*	0.039 (0.031)	0.088 (0.046)*
Low_LMidd	0.202 (0.272)		0.200 (0.407)	0.115 (0.176)
Low_UMidd	0.225 (0.262)		-0.219 (0.409)	-0.099 (0.231)
Low_High	-0.313 (0.127)**		-0.379 (0.305)	-0.430 (0.134)***
LMidd_UMidd	0.111 (0.091)	0.014 (0.529)	-0.499 (0.168)***	0.334 (0.127)***
LMidd_High	-0.113 (0.069)*	0.115 (0.141)	-0.351 (0.086)***	0.024 (0.073)
UMidd_High	-0.104 (0.051)***	-0.225 (0.082)***	-0.071 (0.069)	-0.006 (0.080)
Observations	731,826	731,826	731,826	731,826

Take-away

1. We develop a and estimate a model that explains the effects trade law (model laws, arbitration and conciliation) on trade flows
2. Countries with better trade law and dispute mechanisms trade more
3. The positive effects of trade law reform are more intense on trade between similar countries