

The Economics and Political Economy of Going beyond the GATS

A Quantitative Approach

Erik van der Marel
LSE

Sébastien Miroudot
OECD

September 22, 2013

Outline

Motivation

- Previous Literature
- Our empirical framework

Methododology

- Commitments by country
- Commitments between countries

Data description

Results

Conclusion

Motivation

Multilateral trade liberalization gives greater gains

- Non-discrimination and reciprocity of GATS

Commitments in services RTAs go beyond GATS

- GATS is not as succesful as its goods equivalent (GATT)

Goes against economic trade theory of welfare gains

- Host of economic as well as political economy factors

Why do countries create a so-called commitments gap?

- Unclear in the empirical services trade literature

Previous Literature

Larger body of papers focuses on GATS only

- Roy (2011); Egger and Lanz (2008)
- High-skilled labour

Political economy factors at sector level

- Harms *et al.* (2003) for financial services
- Domestic political economy factors
- International bargaining considerations

Determinants of why countries commit services RTA?

- VanGrasstek (2011); Guillin and Cole (2012)
- Role of OECD; economic factors
- Baier and Bergstrand (2004)

Political Economy Framework

Political economy framework for services commitments

- Takes into account economic geography literature
- Combined with political economy literature on services

Factors within our framework

- Geography (gravity literature)
- Sysemic forces (US)
- Economic (skilled labour)
- Institutional (regulators)

Empirical Methodology: By countries

Model specification using “gravity”:

$$\ln(C_{odt}^s) = \nu_1' \text{GEO}_{odt}^s + \nu_2' \text{SYS}_{odt}^s + \nu_3' \text{ECO}_{ot}^s + \nu_4' \text{INS}_{ot}^s \\ + \delta_o + \gamma_d + \varsigma_t + \varepsilon_{odt}^s$$

where vectors ν are

ν_1 : $\ln(\text{W. Dist})$, Contiguity and Language

ν_2 : 1 if EU & US as partner, $\text{GDP US}_t / \text{GDP WLD}_t$

ν_3 : GDP, skilled labour, and capital

ν_4 : Democracy, regulatory quality, and rule of law

Data Description

Dependent variable: Commitments gap

- Unique dataset of detailed commitments by sub-sector
- Index equals 0-100 in preferential treatment w.r.t. GATS

$$RTA_{odt}^s = 100 - X_{odt}^s$$

- X_{odt}^s : minus scores assigned to an RTA
- According to type of restrictions (see Table A-3)
- MA higher weight than NT (i.e. quantitative restrictions)
- Weighted by modes, based on share value of trade

Data Description (cont.)

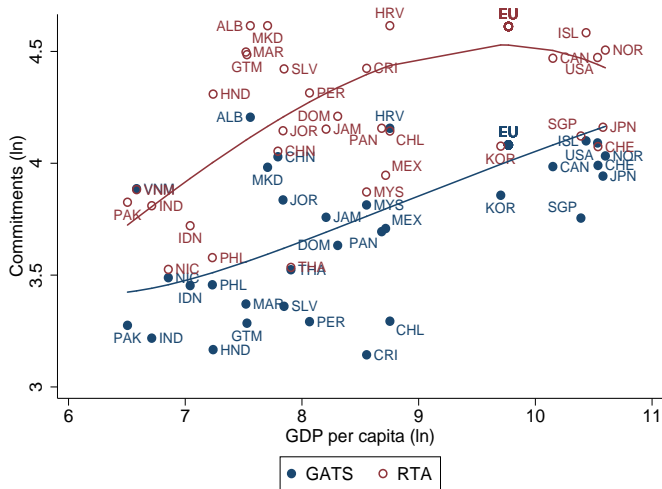
$$C_{odt}^s = RTA_{odt}^s - GATS_{o \geq '95}^s$$

- Negative values (“below” GATS) ineffective = 0
- Index increases in value the more preferential an RTA

Independent variables: four vectors (ν_{1-4})

- Geographical variables: CEPII
- GDP: WB Development Indicators
- Labour: Barro and Lee (2011), capital: PWT
- Democracy: PolityIV (Marshall *et al.*, 2011)
- Reg. quality, rule of law: Kaufmann *et al.* (2009)

RTA vs. GATS



Results: ν_1

| | (1) | (2) | (3) | (4) | (5) | (6) |
|------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | $\ln(C_{odt})$ | $\ln(C_{odt})$ | $\ln(C_{odt})$ | $\ln(C_{odt})$ | $\ln(C_{odt})$ | $\ln(C_{odt})$ |
| | OLS | OLS | OLS | OLS | OLS | OLS |
| | TOTSRV | CNSTR | DISTR | TRNSP | FINAN | BUSNS |
| <u>Geography:</u> | | | | | | |
| $\ln(W. \text{ Dist})$ | -0.263*** (0.0761) | -0.260*** (0.0774) | -0.291*** (0.0785) | -0.268*** (0.0797) | -0.257*** (0.0593) | -0.248*** (0.0717) |
| Contiguity | -0.225** (0.0965) | -0.225** (0.0979) | -0.259*** (0.0976) | -0.224** (0.100) | -0.224*** (0.0733) | -0.211** (0.0926) |
| Language | 0.0198 (0.163) | -0.0657 (0.169) | 0.0277 (0.158) | 0.0318 (0.172) | -0.240* (0.138) | 0.0340 (0.159) |
| FE δ_o | Yes | Yes | Yes | Yes | Yes | Yes |
| FE γ_d | Yes | Yes | Yes | Yes | Yes | Yes |
| FE ς_t | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 7,892 | 7,892 | 7,892 | 7,892 | 7,892 | 7,892 |
| R^2 | 0.851 | 0.818 | 0.863 | 0.856 | 0.925 | 0.829 |
| RMSE | 0.302 | 0.407 | 0.342 | 0.333 | 0.292 | 0.294 |

Robust standard errors clustered by country-pair in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Results: ν_2

| | (1) | (2) | (3) | (4) | (5) | (6) |
|-------------------|----------------------|----------------------|----------------------|----------------------|--------------------|----------------------|
| | $\ln(C_{odt})$ | $\ln(C_{odt})$ | $\ln(C_{odt})$ | $\ln(C_{odt})$ | $\ln(C_{odt})$ | $\ln(C_{odt})$ |
| | OLS | OLS | OLS | OLS | OLS | OLS |
| | TOTSRV | CNSTR | DISTR | TRNSP | FINAN | BUSNS |
| Systemic: | | | | | | |
| Asymmetry | -0.972*** (0.344) | -1.094*** (0.328) | -1.051*** (0.358) | -1.000*** (0.359) | -0.329 (0.216) | -0.896*** (0.321) |
| Hegemon | 0.137*** (0.0473) | 0.0408 (0.0631) | 0.0963* (0.0501) | 0.161*** (0.0512) | 0.0649 (0.0516) | 0.119*** (0.0452) |
| $\ln(GATS)_{odt}$ | 0.498 (0.705) | -1.463*** (0.548) | -0.0563 (0.519) | 0.834 (0.697) | 0.327 (1.007) | 0.371 (0.786) |
| FE δ_o | Yes | Yes | Yes | Yes | Yes | Yes |
| FE γ_d | Yes | Yes | Yes | Yes | Yes | Yes |
| FE ζ_t | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 7,892 | 7,892 | 7,892 | 7,892 | 7,892 | 7,892 |
| R^2 | 0.851 | 0.818 | 0.863 | 0.856 | 0.925 | 0.829 |
| RMSE | 0.302 | 0.407 | 0.342 | 0.333 | 0.292 | 0.294 |

Robust standard errors clustered by country-pair in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Results: ν_3

| | (1) | (2) | (3) | (4) | (5) | (6) |
|------------------|----------------------|----------------------|----------------------|----------------------|------------------------|----------------------|
| | $\ln(C_{odt})$ | $\ln(C_{odt})$ | $\ln(C_{odt})$ | $\ln(C_{odt})$ | $\ln(C_{odt})$ | $\ln(C_{odt})$ |
| | OLS | OLS | OLS | OLS | OLS | OLS |
| | TOTSRV | CNSTR | DISTR | TRNSP | FINAN | BUSNS |
| <u>Economic:</u> | | | | | | |
| $\ln(GDP)_{ot}$ | 0.0578 (0.0666) | 0.141* (0.0841) | 0.0796 (0.0696) | 0.0367 (0.0733) | 0.305*** (0.0762) | 0.0684 (0.0646) |
| $\ln(H/L)_{ot}$ | -0.0290 (0.0432) | -0.119** (0.0562) | -0.0519 (0.0462) | 0.000503 (0.0465) | -0.0824 (0.0506) | -0.0355 (0.0414) |
| $\ln(M/L)_{ot}$ | -0.407*** (0.116) | -0.480*** (0.137) | -0.419*** (0.128) | -0.407*** (0.122) | -0.121 (0.133) | -0.401*** (0.116) |
| $\ln(K/L)_{ot}$ | -0.00675 (0.0225) | -0.0197 (0.0245) | 0.00585 (0.0237) | -0.0147 (0.0249) | -0.0630*** (0.0211) | -0.00871 (0.0217) |
| FE δ_o | Yes | Yes | Yes | Yes | Yes | Yes |
| FE γ_d | Yes | Yes | Yes | Yes | Yes | Yes |
| FE ς_t | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 7,892 | 7,892 | 7,892 | 7,892 | 7,892 | 7,892 |
| R^2 | 0.851 | 0.818 | 0.863 | 0.856 | 0.925 | 0.829 |
| RMSE | 0.302 | 0.407 | 0.342 | 0.333 | 0.292 | 0.294 |

Robust standard errors clustered by country-pair in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Results: ν_4

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---------------------------|------------------------|------------------------|------------------------|-----------------------|-----------------------|------------------------|
| | $\ln(C_{odt})$ | $\ln(C_{odt})$ | $\ln(C_{odt})$ | $\ln(C_{odt})$ | $\ln(C_{odt})$ | $\ln(C_{odt})$ |
| | OLS | OLS | OLS | OLS | OLS | OLS |
| | TOTSRV | CNSTR | DISTR | TRNSP | FINAN | BUSNS |
| <u>Institutions:</u> | | | | | | |
| Democracy _{ot} | -0.0326*** (0.0112) | -0.0426*** (0.0153) | -0.0388*** (0.0119) | -0.0306** (0.0125) | -0.0201* (0.0115) | -0.0350*** (0.0110) |
| Reg quality _{ot} | 0.0341 (0.0284) | 0.0386 (0.0304) | 0.0334 (0.0301) | 0.0480 (0.0325) | 0.0436 (0.0270) | 0.0323 (0.0274) |
| Rule of Law _{ot} | -0.0329 (0.0330) | -0.0985** (0.0406) | -0.0461 (0.0366) | -0.0284 (0.0367) | -0.157*** (0.0405) | -0.0388 (0.0321) |
| FE δ_o | Yes | Yes | Yes | Yes | Yes | Yes |
| FE γ_d | Yes | Yes | Yes | Yes | Yes | Yes |
| FE ς_t | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 7,892 | 7,892 | 7,892 | 7,892 | 7,892 | 7,892 |
| R^2 | 0.851 | 0.818 | 0.863 | 0.856 | 0.925 | 0.829 |
| RMSE | 0.302 | 0.407 | 0.342 | 0.333 | 0.292 | 0.294 |

Robust standard errors clustered by country-pair in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Empirical Methodology: Between countries

“Average” Negotiations:

$$\ln G(C_{odt}^s) = \nu_1' \text{GEO}_{odt}^s + \nu_2' \text{SYS}_{odt}^s + \phi_3' \text{DECO}_{ot}^s \\ + \phi_4' \text{DINS}_{ot}^s + \delta_o + \gamma_d + \varsigma_t + \varepsilon_{odt}^s$$

where vector ϕ_3 includes

| | | | | |
|----------------------------------|---------------------------------|-----|-------------------------------|-----|
| $S.\ln(\text{GDP})_{odt}$ | $= \ln(\text{GDP}_{ot})$ | $+$ | $\ln(\text{GDP}_{dt})$ | IIT |
| $D.\ln(\text{GDP})_{odt}$ | $= \ln(\text{GDP}_{ot})$ | $-$ | $\ln(\text{GDP}_{dt})$ | |
| $D.\ln(\text{H}/\text{L})_{odt}$ | $= \ln(\text{H}/\text{L}_{ot})$ | $-$ | $\ln(\text{H}/\text{L}_{dt})$ | HO |
| $D.\ln(\text{M}/\text{L})_{odt}$ | $= \ln(\text{M}/\text{L}_{ot})$ | $-$ | $\ln(\text{M}/\text{L}_{dt})$ | |
| $D.\ln(\text{K}/\text{L})_{odt}$ | $= \ln(\text{K}/\text{L}_{ot})$ | $-$ | $\ln(\text{K}/\text{L}_{dt})$ | |

Results: ν_1

| | (1) | (2) | (3) | (4) | (5) | (6) |
|------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | $\ln G(C_{odt})$ | $\ln G(C_{odt})$ | $\ln G(C_{odt})$ | $\ln G(C_{odt})$ | $\ln G(C_{odt})$ | $\ln G(C_{odt})$ |
| | OLS | OLS | OLS | OLS | OLS | OLS |
| | TOTSRV | CNSTR | DISTR | TRNSP | FINAN | BUSNS |
| <u>Geography:</u> | | | | | | |
| $\ln(W. \text{ Dist})$ | -0.273*** (0.0784) | -0.293*** (0.0897) | -0.278*** (0.0795) | -0.271*** (0.0817) | -0.256*** (0.0609) | -0.253*** (0.0763) |
| Contiguity | -0.236** (0.0997) | -0.308*** (0.111) | -0.287*** (0.0970) | -0.229** (0.104) | -0.240*** (0.0772) | -0.222** (0.0985) |
| Language | 0.0305 (0.169) | -0.0422 (0.176) | 0.100 (0.158) | 0.0574 (0.176) | -0.163 (0.138) | 0.0566 (0.167) |
| FE δ_o | Yes | Yes | Yes | Yes | Yes | Yes |
| FE γ_d | Yes | Yes | Yes | Yes | Yes | Yes |
| FE ς_t | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 7,891 | 7,891 | 7,891 | 7,891 | 7,891 | 7,891 |
| R^2 | 0.852 | 0.868 | 0.877 | 0.865 | 0.951 | 0.826 |
| RMSE | 0.304 | 0.376 | 0.338 | 0.323 | 0.275 | 0.283 |

Robust standard errors clustered by country-pair in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Results: ν_2

| | (1) lnG(C_{odt}) OLS TOTSRV | (2) lnG(C_{odt}) OLS CNSTR | (3) lnG(C_{odt}) OLS DISTR | (4) lnG(C_{odt}) OLS TRNSP | (5) lnG(C_{odt}) OLS FINAN | (6) lnG(C_{odt}) OLS BUSNS |
|--------------------------|--|---|---|---|---|---|
| Systemic: | | | | | | |
| Asymmetry | -1.052** (0.429) | -1.428*** (0.457) | -1.103*** (0.406) | -1.121*** (0.413) | -0.375 (0.296) | -0.964** (0.382) |
| Hegemon | 0.263*** (0.0850) | 0.242*** (0.0905) | 0.299*** (0.0958) | 0.284*** (0.0907) | 0.356*** (0.127) | 0.236*** (0.0789) |
| lnG(GATS) _{odt} | -101.3 (322.9) | 17.40 (215.2) | 29.46 (147.3) | -470.0 (521.3) | 1,121*** (268.0) | -124.4 (121.3) |
| FE δ_o | Yes | Yes | Yes | Yes | Yes | Yes |
| FE γ_d | Yes | Yes | Yes | Yes | Yes | Yes |
| FE ς_t | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 7,891 | 7,891 | 7,891 | 7,891 | 7,891 | 7,891 |
| R^2 | 0.852 | 0.868 | 0.877 | 0.865 | 0.951 | 0.826 |
| RMSE | 0.304 | 0.376 | 0.338 | 0.323 | 0.275 | 0.283 |

Robust standard errors clustered by country-pair in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Results: ϕ_3

| | (1) lnG(C_{odt}) OLS TOTSRV | (2) lnG(C_{odt}) OLS CNSTR | (3) lnG(C_{odt}) OLS DISTR | (4) lnG(C_{odt}) OLS TRNSP | (5) lnG(C_{odt}) OLS FINAN | (6) lnG(C_{odt}) OLS BUSNS |
|--------------------------|--|---|---|---|---|---|
| <u>Economic:</u> | | | | | | |
| S.ln(GDP) _{odt} | 0.0941 (0.0844) | 0.128 (0.100) | 0.173* (0.0936) | 0.113 (0.0954) | 0.386*** (0.111) | 0.0733 (0.0757) |
| D.ln(GDP) _{odt} | -0.132** (0.0651) | -0.102 (0.0689) | -0.181** (0.0738) | -0.150** (0.0706) | -0.274*** (0.0966) | -0.112* (0.0591) |
| D.ln(H/L) _{odt} | -0.0374* (0.0194) | -0.0450** (0.0210) | -0.0237 (0.0199) | -0.0366* (0.0203) | 0.00544 (0.0143) | -0.0365** (0.0183) |
| D.ln(M/L) _{odt} | -0.0141 (0.0171) | -0.0134 (0.0187) | -0.0243 (0.0181) | -0.0164 (0.0180) | -0.0368** (0.0152) | -0.0125 (0.0159) |
| D.ln(K/L) _{odt} | 0.00685 (0.00872) | 0.00255 (0.00972) | 0.00115 (0.00891) | 0.00754 (0.00914) | -0.0126 (0.00827) | 0.00659 (0.00804) |
| FE δ_o | Yes | Yes | Yes | Yes | Yes | Yes |
| FE γ_d | Yes | Yes | Yes | Yes | Yes | Yes |
| FE ς_t | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 7,891 | 7,891 | 7,891 | 7,891 | 7,891 | 7,891 |
| R^2 | 0.852 | 0.868 | 0.877 | 0.865 | 0.951 | 0.826 |
| RMSE | 0.304 | 0.376 | 0.338 | 0.323 | 0.275 | 0.283 |

Robust standard errors clustered by country-pair in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Results: ϕ_4

| | (1) lnG(C_{odt}) OLS TOTSRV | (2) lnG(C_{odt}) OLS CNSTR | (3) lnG(C_{odt}) OLS DISTR | (4) lnG(C_{odt}) OLS TRNSP | (5) lnG(C_{odt}) OLS FINAN | (6) lnG(C_{odt}) OLS BUSNS |
|------------------------------|--|---|---|---|---|---|
| <u>Institutions:</u> | | | | | | |
| D.Democracy _{odt} | 0.000854 (0.00206) | 0.00111 (0.00225) | -0.000508 (0.00210) | 0.000742 (0.00213) | -0.00356* (0.00212) | 0.000796 (0.00192) |
| D.Reg quality _{odt} | -0.0123* (0.00697) | -0.00703 (0.00764) | -0.0108 (0.00689) | -0.0123* (0.00716) | -0.00482 (0.00625) | -0.0113* (0.00644) |
| D.Rule of Law _{odt} | 0.0211** (0.00955) | 0.0138 (0.0105) | 0.0179* (0.00998) | 0.0218** (0.00968) | 0.000768 (0.00953) | 0.0201** (0.00901) |
| FE δ_o | Yes | Yes | Yes | Yes | Yes | Yes |
| FE γ_d | Yes | Yes | Yes | Yes | Yes | Yes |
| FE ς_t | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 7,891 | 7,891 | 7,891 | 7,891 | 7,891 | 7,891 |
| R^2 | 0.852 | 0.868 | 0.877 | 0.865 | 0.951 | 0.826 |
| RMSE | 0.304 | 0.376 | 0.338 | 0.323 | 0.275 | 0.283 |

Robust standard errors clustered by country-pair in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Robustness checks

Institutional variables remain very robust

- Despite high correlation between them
- Separate entries give similar results

Regressions by modes separately

- Most important results by mode all consistent

Additional robustness checks

- Interactions (effects through institutions)
- Remoteness variable from Martin *et al.* (2008)
- North-South / North-North agreements
- PPML estimator gives similar results

Conclusion

Geography and systemic forces shape $\ln(C_{odt})$ and $\ln G(C_{odt})$

- Role of bigger players remains important (US)

Mid-skilled labour robust indicator for lowering $\ln(C_{odt})$

- High-skilled labour also adverse effect, but less strong
- Construction services, finance (mode 3)

Democracy negative impact on $\ln(C_{odt})$

- Likely to act as (direct) channel for factor-owners-as-consumers

Role of regulators positive effect on $\ln G(C_{odt})$

- Ability to develop templates for post-liberalization
- Capacity to deal with principle of universal service supply