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Services Trade Policies and Services Trade Costs: New Evidence for African Economies

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Background

- Information on trade in services needed for national policy reform, regional integration negotiations and cooperation, identifying good regulatory practice, transparency,...
- Priority initiatives at WTO Secretariat and World Bank
 - 2012: first WB Database
 - 2020: WB-WTO Services Trade Restrictions Database
 - I-TIP Services: comprehensive portal
- 2020-22: Covering African Union economies, as part of AfCFTA support
 - First-ever comprehensive coverage of services trade policies in Africa, supported by the German Development Agency GIZ, EU Commission, International Trade Centre; in addition to World Bank and WTO



Agenda

- 1) African Union Data Update
- 2) Services Trade Policy Database
 - ▶ Coverage
 - ▶ Quantification of restrictiveness: STRI
- 3) Patterns of Service Trade Policy
- 4) Services Policy Changes and Trade Costs
 - ▶ Cross-modal policy impact on services trade
 - ▶ Trade cost effects (AVE) of past policy changes



Regulatory Policy Data

- 54 African economies covered in the 2020-21 exercise (i.e. all African economies except Eritrea) + 6 Pacific Islands and Timor Leste
- New (sub)sectors covered: Construction, Tourism, Health, Audio-visual, Postal and Courier, Architecture, Engineering
- In this paper:
 - 27 African countries
 - 5 sectors as in 2016 (professional, telecom, distribution, financial, transportation services)
 - More sectors and remaining economies to follow during Summer 2022



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Coverage: sectors and modes

Services Trade Policy Database

Sectors	Subsectors	Mode 1	Mode 3	Mode 4
Financial	Commercial banking (deposit-taking, lending)	X	X	X
	Non-life insurance (incl. MAT)	X	X	X
	Life Insurance	X	X	X
	Reinsurance	X	X	X
Telecom	Telecom fixed (international and local)		X	X
	Telecom mobile		X	X
	Internet		X	X
Distribution	Retailing services	X	X	X
	Wholesale trade services	X	X	X
Transportation	Air passenger domestic and international		X	X
	Air freight domestic and international		X	X
	Maritime shipping international	X	X	X
	Maritime auxiliary (intermed., other services)	X	X	X
	Road freight domestic and international	X	X	X
	Rail freight domestic and international	X	X	X
Professional	Accounting	X	X	X
	Auditing	X	X	X
	Legal advice domestic law		X	X
	Legal representation on domestic law		X	X
	Legal advice foreign law	X	X	X

Quantifying Policy Restrictiveness

- ▶ Principal steps: **Scoring** and **Aggregation**
 1. Selection of key policy measures
(comparability with OECD and WB 2008)
 2. Assignment of basic scores reflecting level of restrictiveness
(mindful of relationship across certain measures)
 3. Aggregation of subsector-mode scores through multiple nests

$$\text{STRI}^k = \left(\sum_{i=1}^N (m_i^{(k)})^{\rho_k} \right)^{1/\rho_k}$$

4. Two-part bounding function to ensure (0, 1) interval
5. Aggregation to subsector level using value-added weights

Aggregation (1/3)

Important properties of CES-type aggregation:

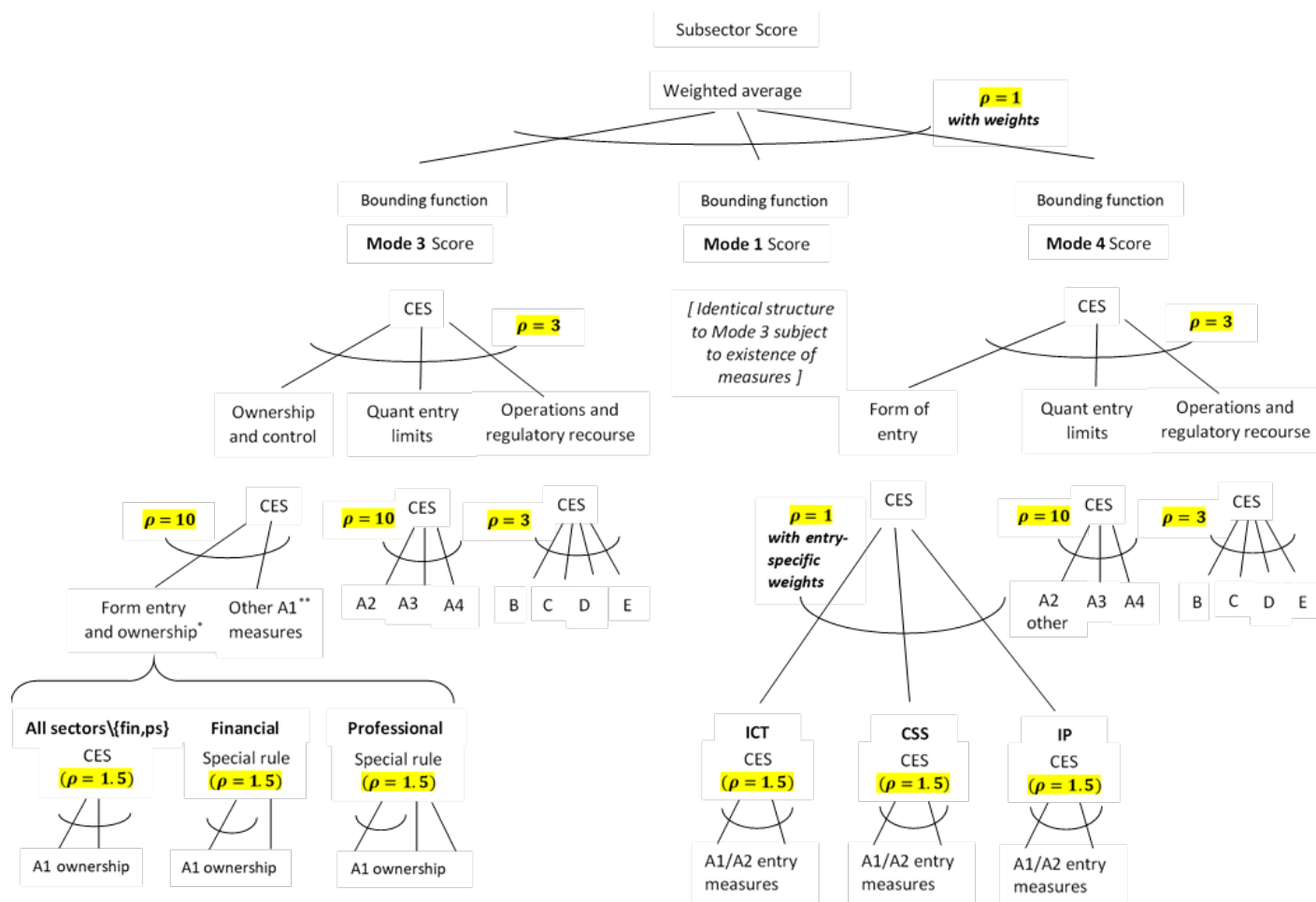
- Numerical examples with $\rho = 3$

$$\text{STRI}^k = \left(\sum_{i=1}^N (m_i^{(k)})^{\rho_k} \right)^{1/\rho_k}$$

Set of scores (m_i)	Increm. change	Aggreg. index	Comment
0.00 + 0.00 + 0.50	0.50	0.50	Aggregate STRI independent from number of measures <i>not applied</i> .
0.50 + 0.50	0.13	0.63	Increasing restrictiveness at decreasing rate.
0.50 + 0.50 + 0.50	0.09	0.72	Marginal contribution of measures is falling; Three such restrictions roughly equivalent to one very restrictive measure.
0.25 + 0.25 + 0.50	0.22	0.54	Marginal contribution to restrictiveness depends on set of applied measures.

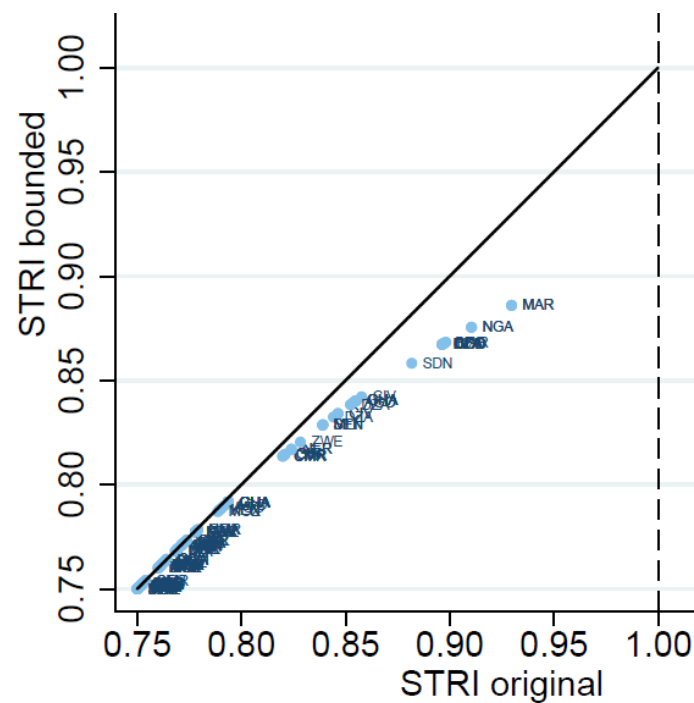
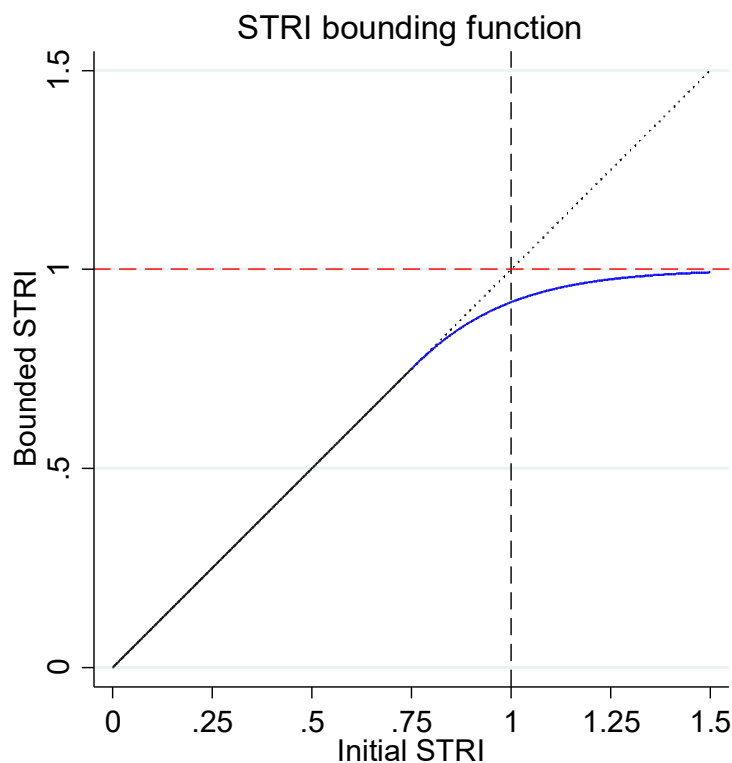
Aggregation (2/3)

Details on Step 3: multi-layered aggregation



Aggregation (3/3)

Details on Step 4: two-part bounding function



Note: only adjusted scores (≥ 0.75) shown.
Share of adjusted scores excl closed ones: 11

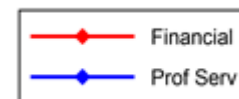
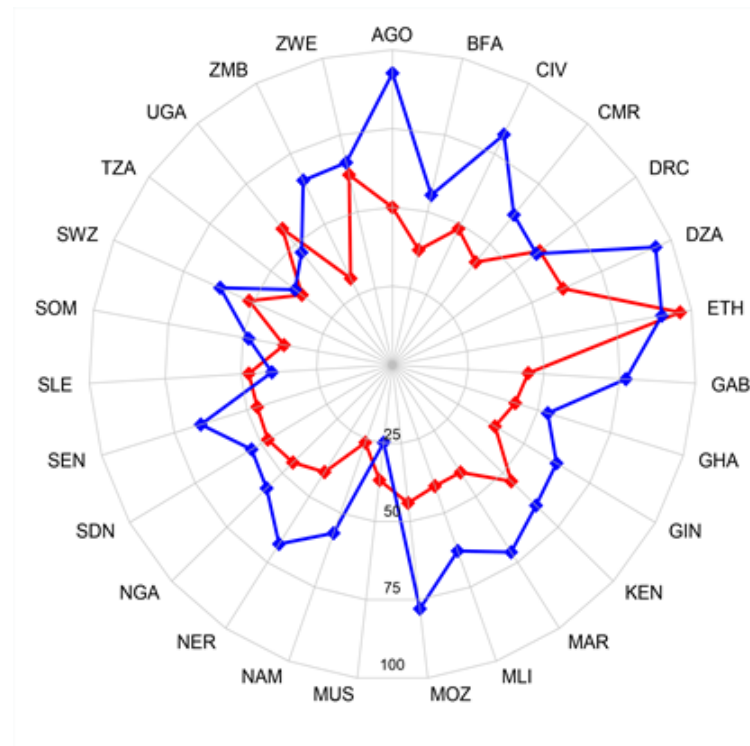
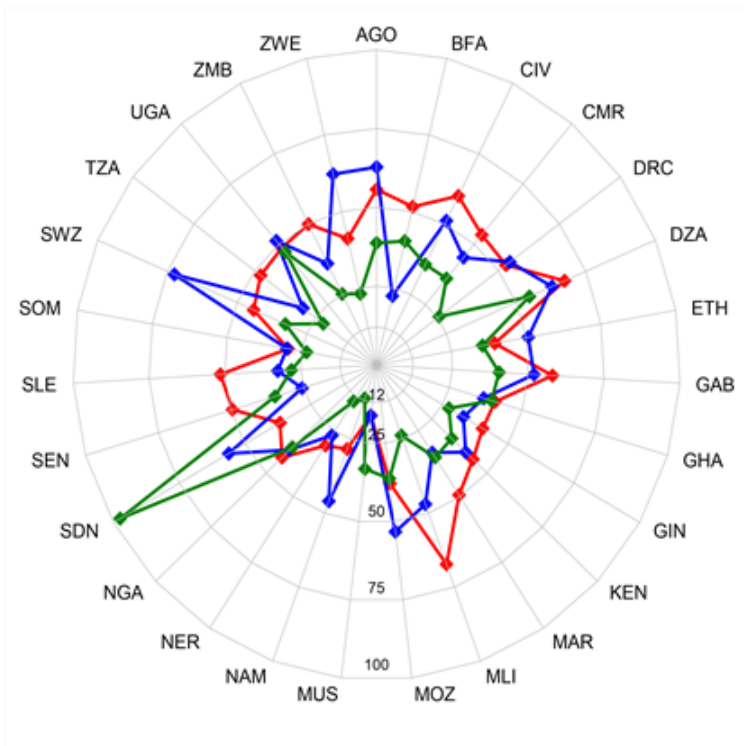


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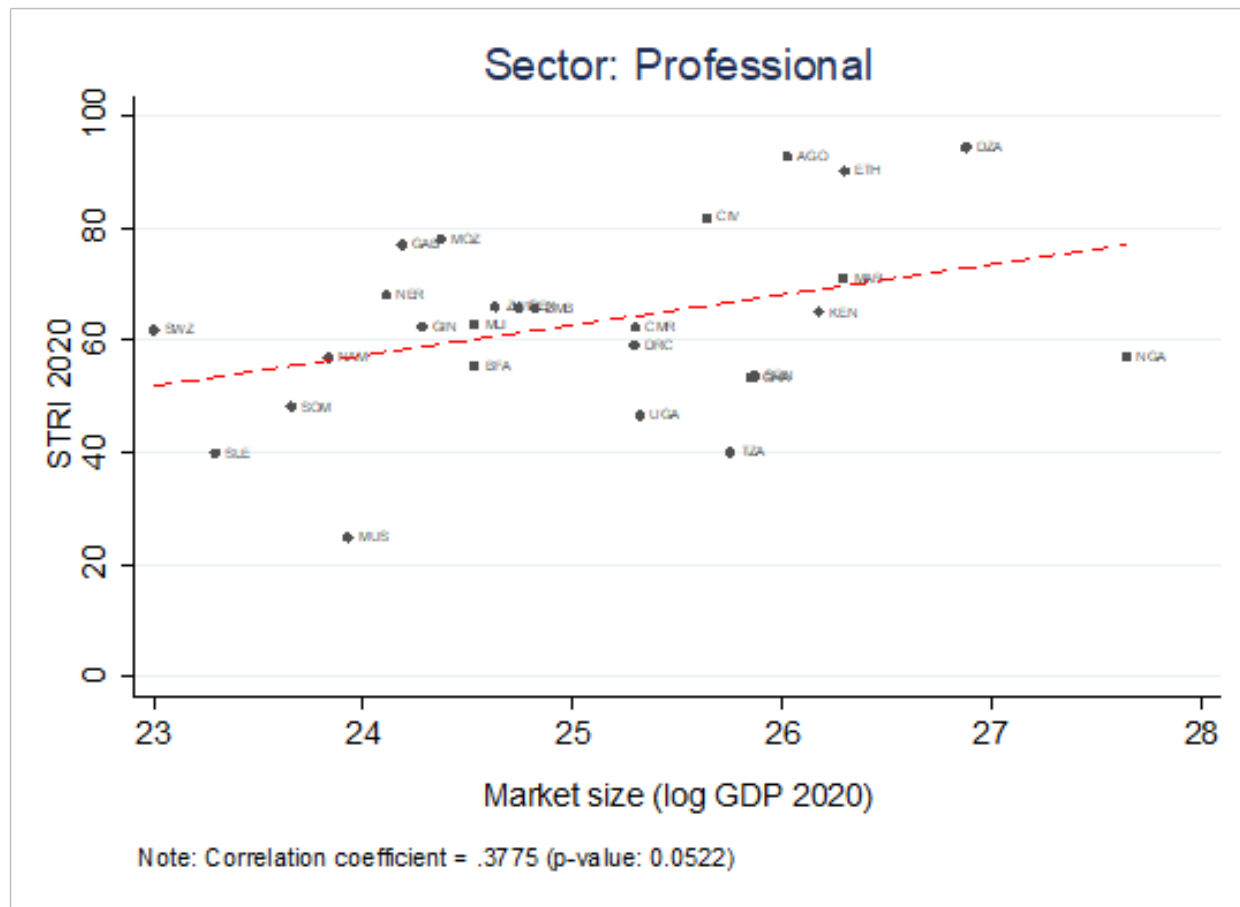
Services trade policy in 2020

Restrictiveness by country and sector



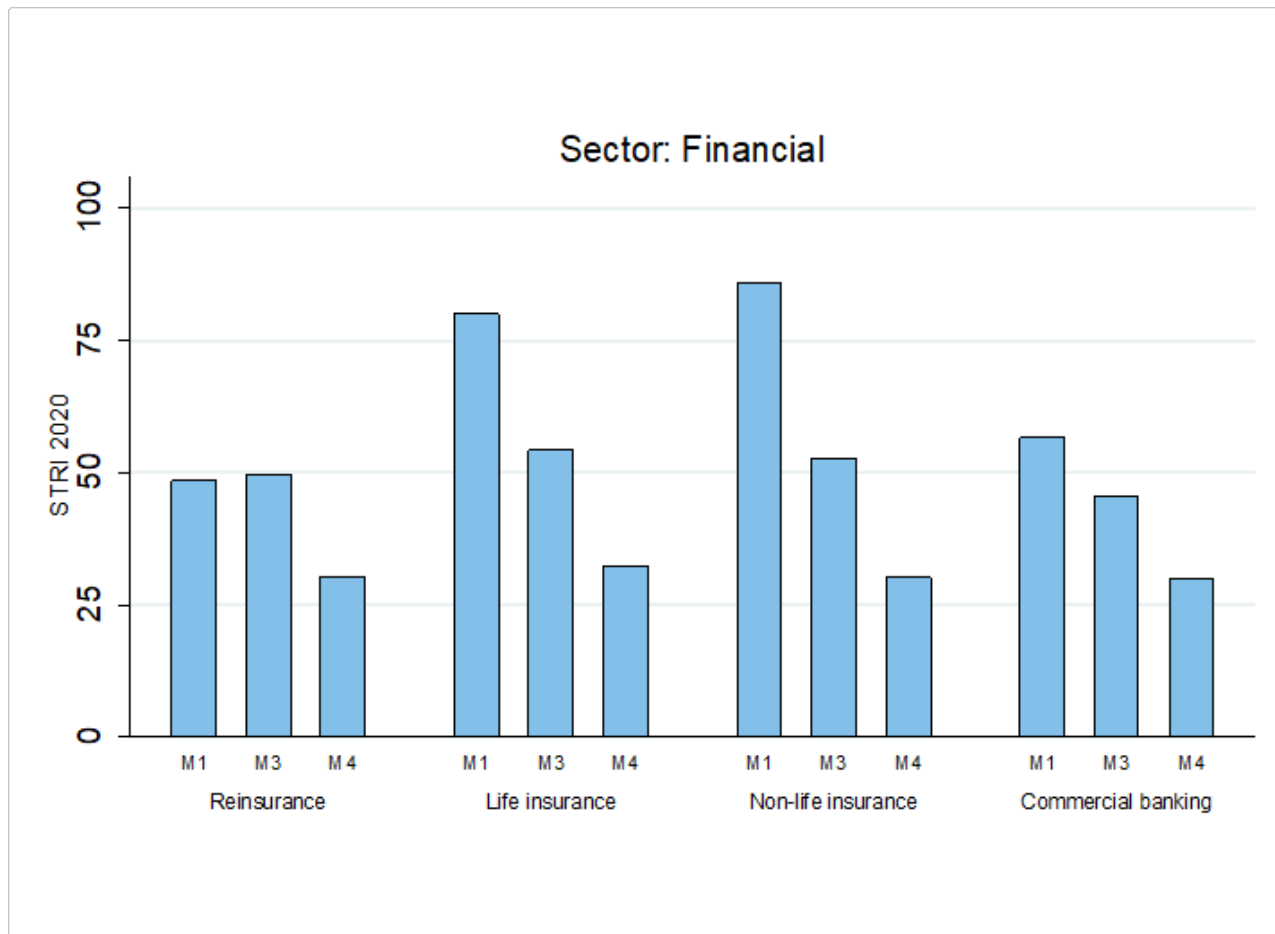
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Services Trade Costs and Policy Reform

How do applied policies matter for services trade?

- ▶ Structural gravity framework
 - ↪ Ability to estimate MFN-type STRI policies
 - ↪ **Impact of STRI on the border friction** can be identified
 - ↪ Trade-off: data demands vs consistent estimation of well-defined quantities
 - ↪ Cross-modal impact on variable trade costs of applied policies
- ▶ Construction of AVE for services policy changes
 - ▶ AVE = percentage change in iceberg trade costs associated with change in STRI
 - ▶ AVEs thus defined show how $\Delta STRI$ alters the border effect

$$AVE_j^d \equiv \frac{\tau_{ij}|STRI^1}{\tau_{ij}|STRI^0} - 1 = \left(\frac{STRI^1}{STRI^0} \right)^{-\frac{\hat{\gamma}_2}{\theta}} - 1$$

- ▶ We evaluate counterfactual policy reforms that would reduce STRI scores primarily on Mode 4



Services Trade Costs and Policy Reform

How do applied policies matter for services trade?

- ▶ Linking 4 different data sources:
 1. WTO BaTiS trade in services dataset;
 2. Gross Output from UN SNA;
 3. Gravity variables (CEPII GeoDist)
 4. STRI 2020 scores for AU economies

- ▶ Dimensions of the dataset:
 - ▶ 5 services sectors: Transportation, Insurance, Financial, Information/Communication, Professional services
 - ▶ 27 economies
 - ▶ EBOPS-ISIC bridge table developed by WTO

- ▶ PPML estimation with full sets of exporter-/importer fixed effects

Services Trade Costs and Policy Reform

Cross-modal effects of policy restrictiveness

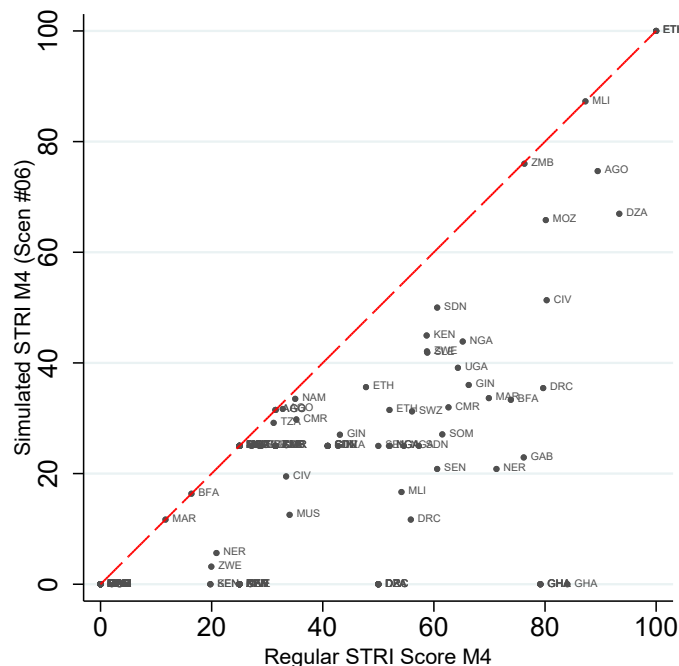
	INFORMATION & COMMUNICATION			PROFESSIONAL SERVICES		
	(10)	(11)	(12)	(13)	(14)	(15)
Distance (log)	-0.8803 *** (0.051)	-0.8914 *** (0.051)	-0.8908 *** (0.051)	-0.643 *** (0.025)	-0.6454 *** (0.025)	-0.6679 *** (0.025)
Contiguity	-0.0676 (0.279)	-0.2523 (0.281)	-0.1077 (0.279)	0.8068 *** (0.117)	0.8575 *** (0.117)	0.8231 *** (0.118)
Common language	0.7271 *** (0.043)	0.7283 *** (0.043)	0.7332 *** (0.043)	0.355 *** (0.022)	0.3518 *** (0.022)	0.3528 *** (0.022)
Border	-8.4849 *** (0.295)	2.5941 (2.404)	-0.6241 (1.918)	-6.9373 *** (0.146)	15.0382 *** (2.123)	7.7724 *** (2.405)
Border x STRI (Overall)		-3.1302 *** (0.685)			-5.3779 *** (0.525)	
Border x STRI (M1)						2.4099 *** (0.480)
Border x STRI (M3)			-1.2889 ** (0.546)			-3.138 *** (0.282)
Border x STRI (M4)			-1.1772 *** (0.102)			-2.7584 *** (0.549)
Observations	5304	5304	5304	5302	5302	5302
Log-likelihood	-2019.78	-2009.32	-1966.72	-5821.67	-5791.2	-5766.91

Services Trade Costs and Policy Reform

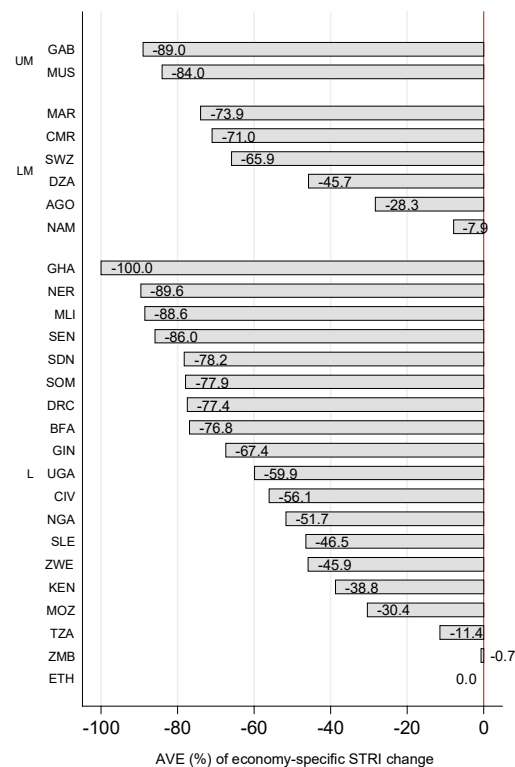
Mode 4 policies:

Quotas, ENTs, LMTs, nationality + residency req, recognition of quals

Hypothetical M4 STRI: Prof Services



AVEs



Services Trade Costs and Policy Reform

Summary

- ▶ Caveat: for want of bilateral sectoral services trade statistics for AU economies, BaTiS dataset contains constructed flows
- ▶ Services gravity results specifically for Africa mostly sensible, with significant effects of policy on the border barrier
- ▶ Policy impact across modes of supply
 - ↳ Consistent picture of complementarity for Mode 4 policies affecting BOP trade flows
 - ↳ Some evidence of substitutability across Mode 3 and Mode 1
- ▶ Scope for counterfactual policy simulations



Conclusions

1. WB-WTO Services Trade Policy Database:
 - ▶ First-ever complete picture of applied services trade policies in Africa
 - ▶ Expanding coverage: 27 economies in this paper, to rise to 54
 - ▶ New sectors: Health, Tourism, AV, Computer, Construction, Postal
 - ▶ STRI scores obtained with improved methodology
2. Policy restrictiveness scores (STRI)
 - ▶ Indices can be used in AVE construction
 - ▶ Which in turn can be key inputs into CGE analyses
 - ▶ STPD facilitates cross-country comparisons across all income brackets
3. Policy changes matter substantially for services trade costs

Thank you