

Measuring Services Trade Restrictions

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Motivation: Policy Transparency and Analysis

Limited data on service trade policy, despite the importance of services sectors in terms of both output and international transactions

Identifying and Quantifying Services Trade Restrictions could help in

- advancing national policy reform by facilitating the analysis of services policies;
- informing international negotiations by providing data on actual policies;

Structure of presentation

1. A new Services Trade Restrictions Database

(available at iresearch.worldbank.org/servicestrade)

2. Measuring Services Trade Barriers

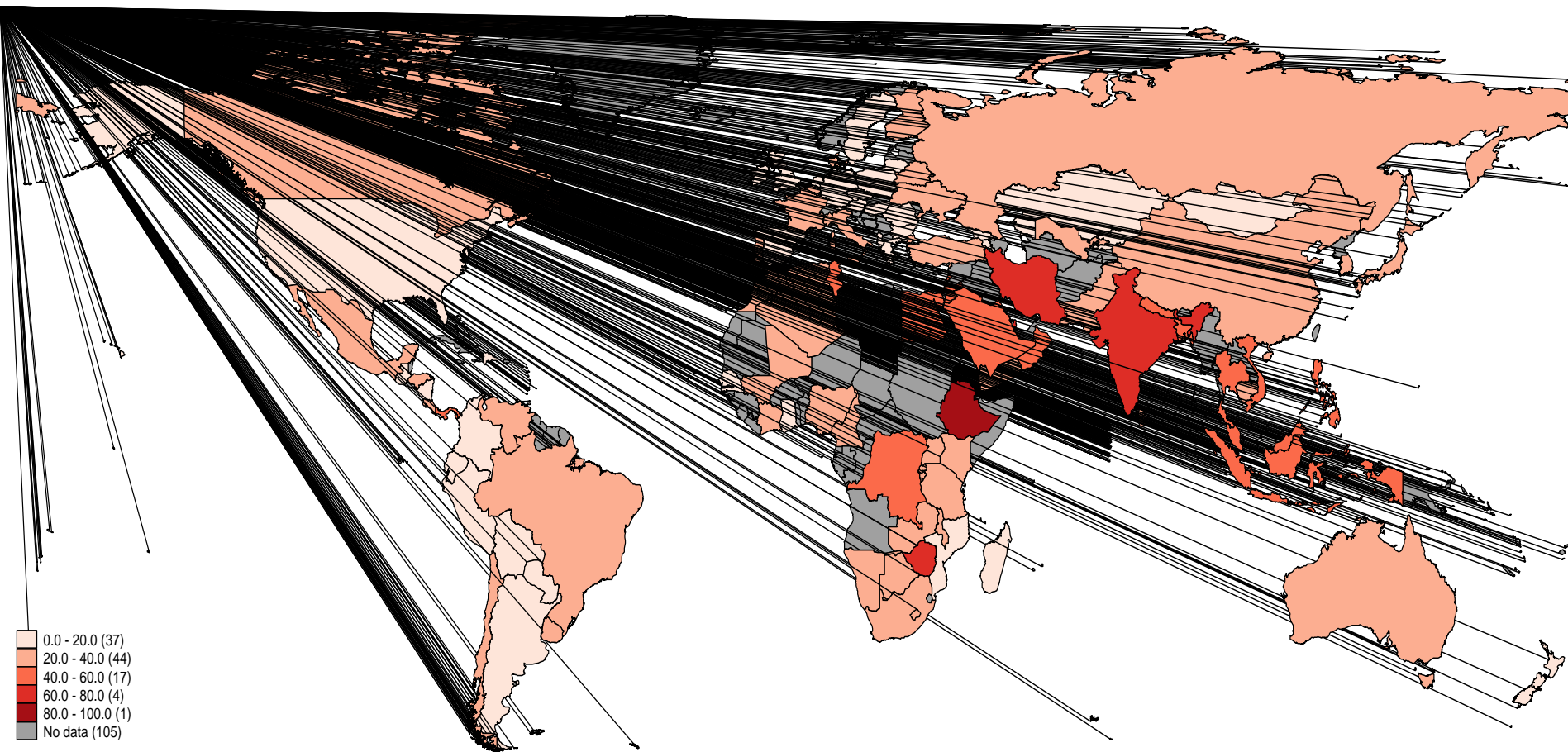
3. Do policy barriers matter?

- a. Investment flows
- b. Access to services: banking
- c. Trade facilitation
- d. Industrial policy

4. Qualifications and Looking Ahead

Data: country coverage

103 countries (of which 79 developing)



Data: sector/mode coverage

Sectors/Sub-sectors	Mode 1	Mode 3	Mode 4
Banking			
Bank lending	x	x	
Deposit acceptance	x	x	
Insurance			
Automobile insurance	x	x	
Life insurance	x	x	
Reinsurance	x	x	
Telecom			
Fixed-line		x	
Mobile		x	
Retailing			
Retail distribution		x	
Transport			
Air passenger domestic		x	
Air passenger international	x	x	
Maritime shipping international	x	x	
Maritime auxiliary services		x	
Road trucking		x	
Railway freight		x	
Professional Services			
Accounting	x	x	x
Auditing	x	x	x
Legal advice foreign law	x	x	x
Legal advice dom law		x	x
Court representation		x	x

Data: policy coverage

Policy dimensions covered:

- Barriers to foreign entry and ownership
- Licensing requirements
- Restrictions on operations
- Regulatory environment

Focus is on measures that discriminate against foreign services and service providers; but we also cover certain non-discriminatory measures which significantly affect trade.

Policy information was collected through detailed questionnaires administered by local law firms and governments were given the opportunity to comment (about half did).

Measuring policy restrictiveness

Real value of the Database is the rich information on a range of policy variables. But there is also a need for measures that facilitate depiction of patterns and empirical analysis.

Three approaches:

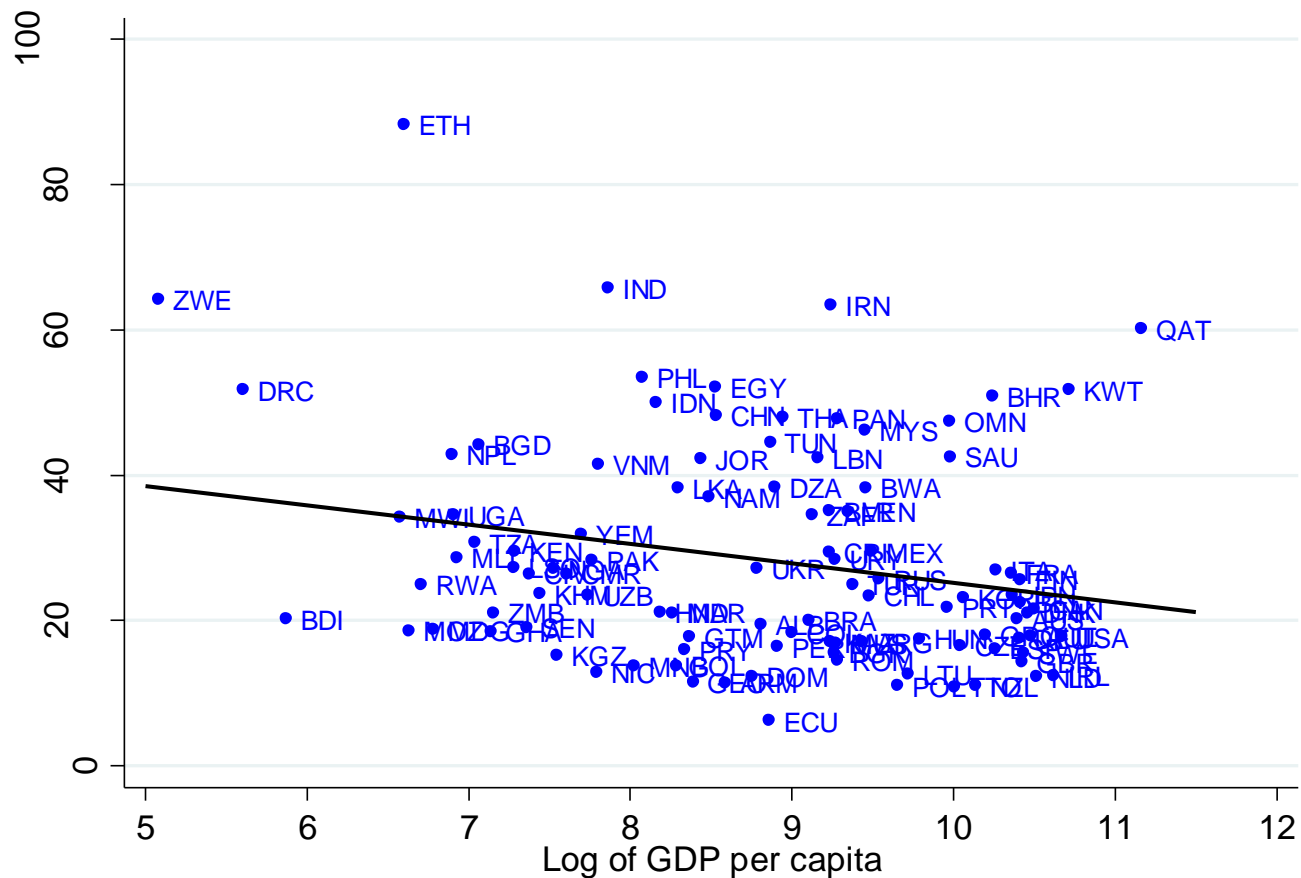
- The Services Trade Restrictiveness Index (STRI)
 - scores based on expert judgment
 - on a five-point scale from completely open to completely closed
[0, 25, 50, 75, 100]
- Ordinal Ranking of Policy Combinations
 - ranks different combinations of policy at the country-sector level in terms of relative openness
- Measuring restrictiveness by impact using econometric approaches
 - estimates the restrictiveness of policies based on their impact on some outcome variable of interest, controlling for other determinants

Example of Ordinal Ranking: Bank Lending (mode 3)

Bin	Example (total/bin)	Sector open to foreign entry	Entry through establishment	Operations	Entry as a branch
1	Argentina (38)	yes	No restriction	No restriction	No restriction
2	Namibia (4)	yes	No restriction	No restriction	Not allowed
3	Ghana (26)	yes	No restriction	Nationality req	Not allowed
4	India (24)	yes	Nat treatment violation	Nationality req; repatriation restr	license limit branches
5	Iran (1)	Entry not allowed	n/a	n/a	n/a

Global patterns

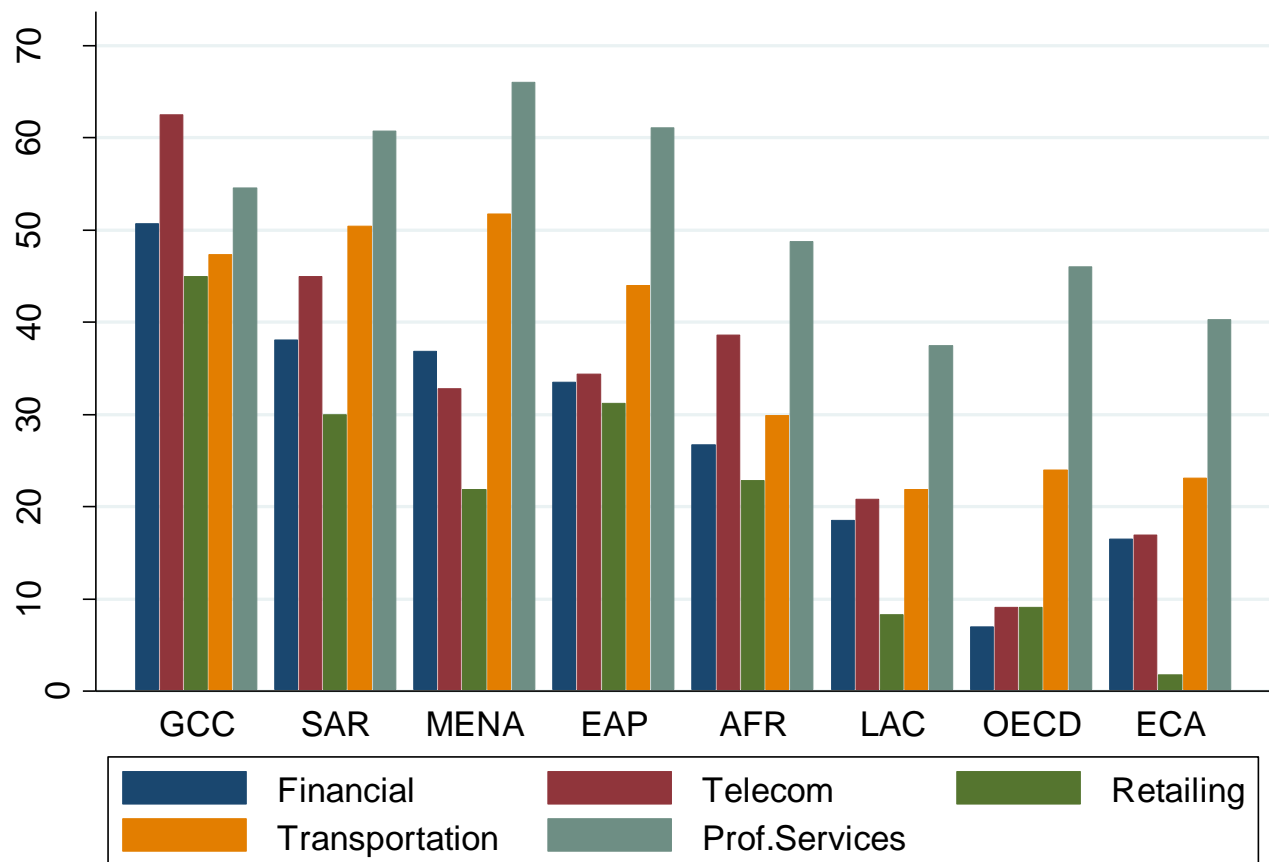
Country-level STRI and per-capita income:



Note: GDP per capita 2007, PPP (constant 2005 internat US\$)

Global patterns

STRI by sector and region:



Note: 103 countries included.

Analyzing the impact of policies

1. How do services policies shape investment flows?
 - ⇒ Cross-country, cross-sector inbound FDI flows
 - ⇒ FDI flows into banking
2. How do they affect access to services?
 - ⇒ Banking
3. Comparing quantification methodologies

(1) Investment flows across sectors

How does policy restrictiveness affect global M&A activity?

	(1)	(2)	(3)	(4)	(5)	(6)
Log(GDP) 2007	0.6271***			0.6466***		
Log(GDP per capita) 2007	0.5958***			0.4448***		
Population Density (people/sqkm)	0.0007			0.0009*		
Dummy STRI (25-50]	-0.3347*	-1.2122***	0.0266			
Dummy STRI (50-75]	-1.0844*	-2.0094**	0.1350			
Dummy STRI (75-100]	-2.5569***	-5.1664***	-1.6993**			
No Investment (0%)				-1.2156***	-3.0110***	0.1062
Minority Ownership				-1.2573***	-1.1678**	-1.0676**
Limit number of licenses				0.2131	0.4931	0.5100**
Discrim licensing criteria				-0.6286***	-0.8852***	-0.5587**
Restriction repatr earnings				-0.6951**	0.4245	-0.7666*
No recourse/appeal				-0.6813**	-1.5015***	-1.0085**
Observations	744.0000	744.0000	744.0000	478.0000	478.0000	478.0000
Pseudo R ²	0.7901	0.6434	0.8792	0.7795	0.7215	0.8818
Log L	-4.280e+05	-7.272e+05	-2.462e+05	-3.613e+05	-4.563e+05	-1.936e+05
Sector fixed effects	yes	no	yes	yes	no	yes
Country fixed effects	no	yes	yes	no	yes	yes

Dependent variable is total value of sectoral M&A inflow in million USD;

Poisson estimation with robust standard errors based on 8 services sectors.

(1) Investment flows in banking

How does policy restrictiveness affect global M&A activity in banking?

	(1)	(2)	(3)
Log(GDP) 2007	0.6611***	0.6786***	0.6544***
Log(GDP per capita) 2007	0.6133***	0.3982***	0.5967***
Population Density (people/sqkm)	0.0007	0.0005	0.0008
STRI (25, 50]	-0.4418*		
STRI (50, 75]	-2.5633***		
STRI (75, 100]	-20.9608***		
Restr on Branches only		0.5189	
Operational Restr		-0.8227***	
Major Restr Establishment		-0.8571***	
No acquisitions (0%)			-3.5001***
Minority ownership			-0.7339
Limit number of licenses			-0.1728
Restriction repatriation earnings			-1.0985**
No recourse/appeal			-0.0068
No branch entry			0.0595
Restr on cross-border trade			-0.1471
Constant	-1.5984	0.5918	-1.3882
Observations	93	93	93
Pseudo R-sq	0.7950	0.8071	0.8016
Log L	-1.158e+05	-1.090e+05	-1.121e+05

Dependent variable is total value of M&A inflow to the Banking sector in million USD.
Poisson estimation with robust standard errors.

(3) Availability of credit to the private sector

How does policy restrictiveness affect availability of credit in banking?

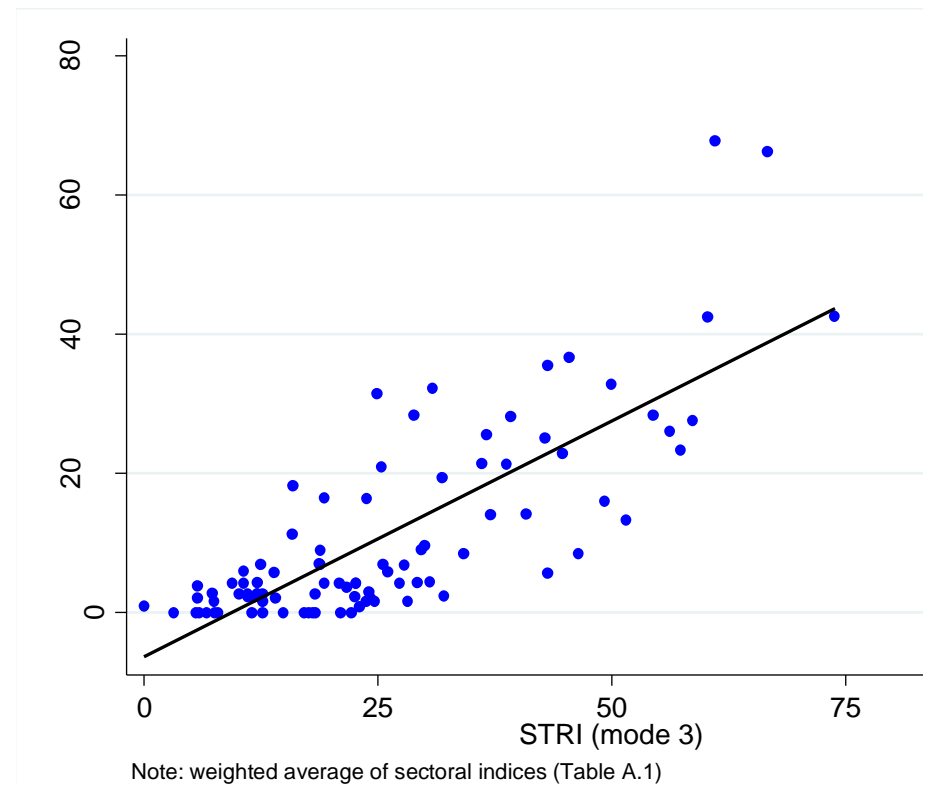
	(1)	(2)	(3)
Log(GDP) 2007	28.7852***	23.1826***	28.9766***
Log(Population)	-21.8667***	-16.3525***	-20.9216***
Population Density (people/sqkm)	0.0296*	0.0242*	0.0232
STRI (25, 50]	-14.7005		
STRI (50, 75]	-68.1747***		
STRI (75, 100]	-51.2875***		
Restr on Branches only		-16.8306	
Operational Restr		-29.6466***	
Major Restr Establishment		-32.8754***	
No acquisitions (0%)			-58.1234***
Minority ownership			0.5520
Limit number of licenses			-24.8711**
Restriction repatriation earnings			2.2888
No recourse/appeal			2.9468
No branch entry			-6.0036
Restr on cross-border trade			9.5379
Constant	-12.8094	13.4692	-15.7323
Observations	91	91	91
R-squared	0.4629	0.4925	0.4756

Dependent variable is domestic credit to the private sector (% GDP). Linear regression with robust standard errors. Domestic credit as a percentage of GDP is taken from the World Development Indicators for the year 2008. For Kyrgyztan the corresponding 2007 figure and for Zimbabwe the 2006 figure is used for want of missing 2008 values in both countries.

(3) Comparing methodologies: STRI and Econometric Estimates

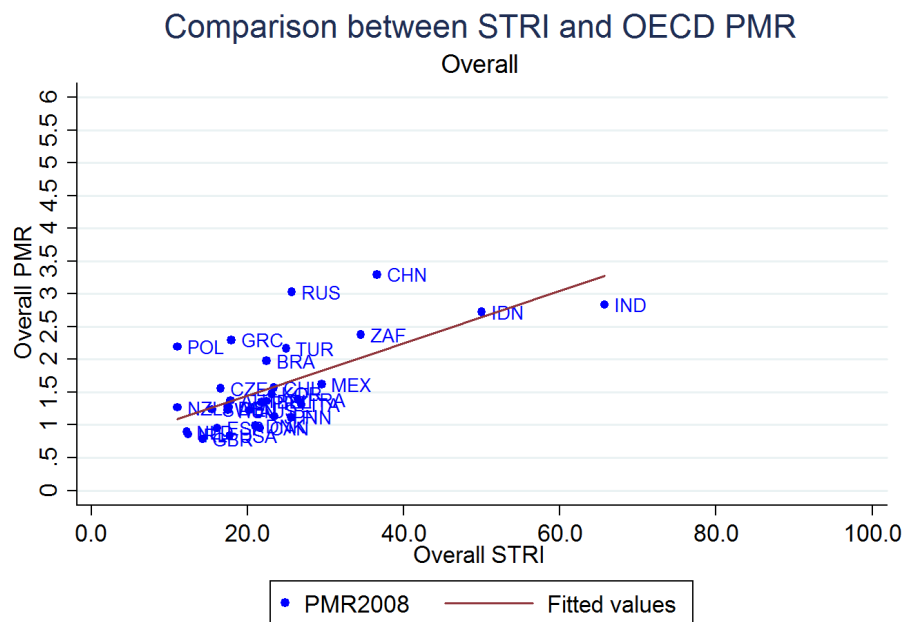
A Comparison of the STRI with an Econometric Estimate of Restrictiveness:

	(3) All Cntr
Log(GDP) 2007	0.6466***
Log(GDP per capita) 2007	0.4448***
Population Density (people/sqkm)	0.0009*
No Investment (0%)	-1.2156***
Minority Ownership	-1.2573***
Limit number of licenses	0.2131
Discrim licensing criteria	-0.6286***
Restriction repatr earnings	-0.6951**
No recourse/appeal	-0.6813**
Observations	478
Pseudo R-sq	0.7795
Log L	-3.613e05



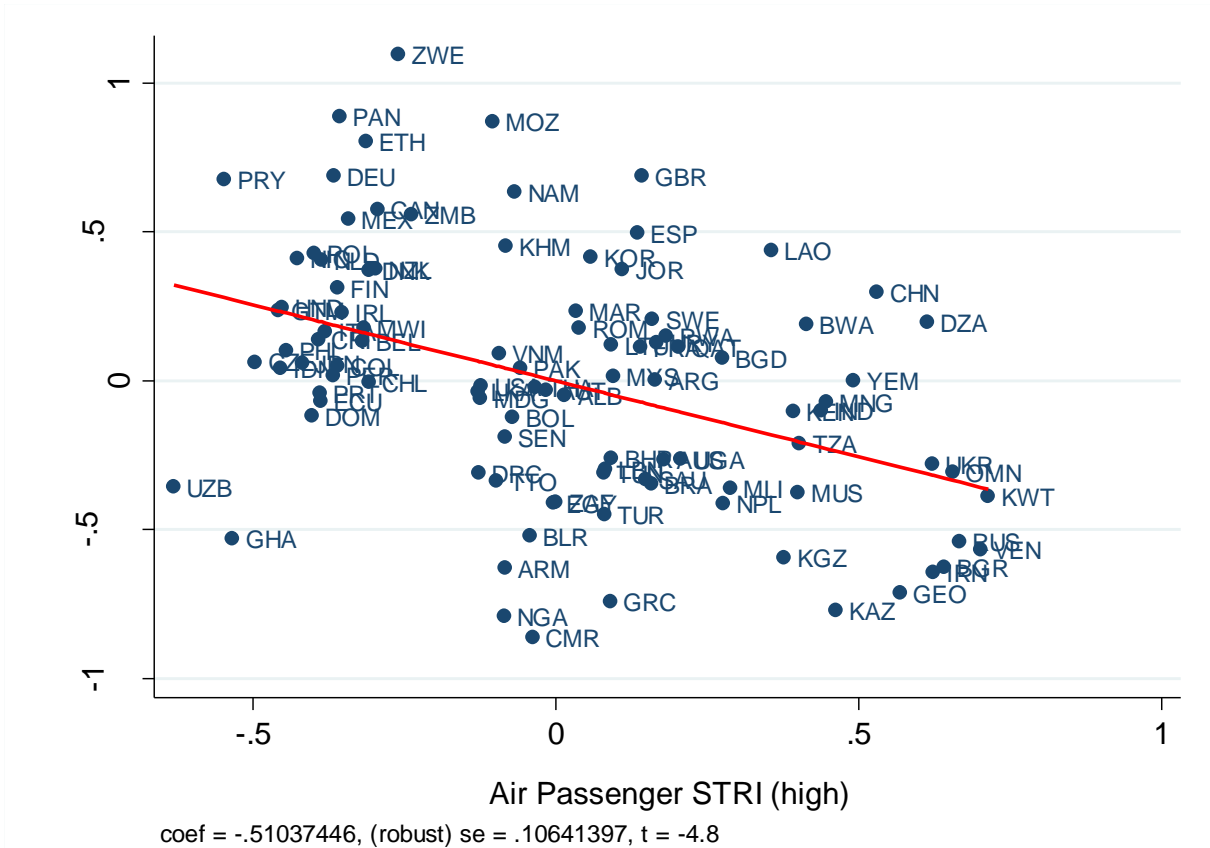
(3) Comparing methodologies

A Comparison of the STRI with the OECD Product Market Regulation:



Services reform as trade facilitation

Number of flights per airline and restrictive air transport policies:



New work would find other indicators of performance and examine more rigorously the links between policy and performance

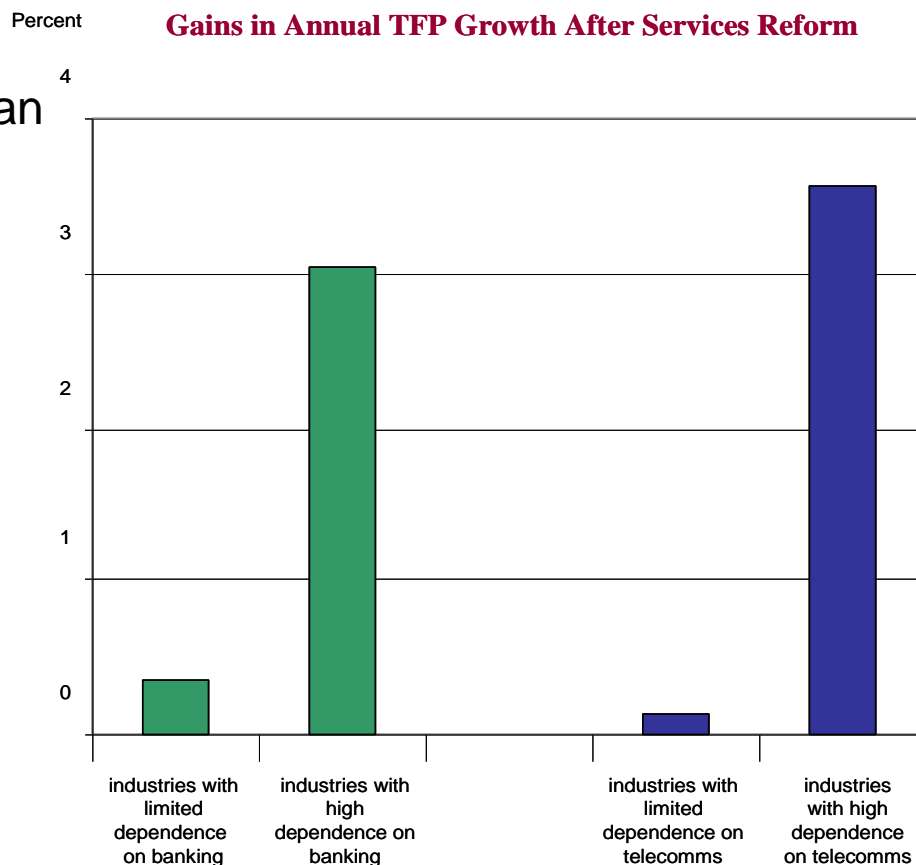
Services reform as industrial policy

India's services reform has boosted not only productivity and exports in services, but also the performance of downstream manufacturing industries

Study based on panel data for 4,000 Indian firms for the 1990-2005 period finds that

banking, telecommunications and **transport** reforms all have significant positive effects on the productivity of manufacturing firms

New work would help policy-makers understand the implications of alternative sequencing of reforms in goods and services.



Source: Arnold, Javorcik, Lipscomb and Mattoo (2010).

Qualifications

1. Absence of cross-sectoral data on market structure means we are capturing restrictions on entry and not the prevailing extent of competition.
2. Limited information on prudential and pro-competitive regulation makes it hard to assess :
 - how far such measures offer additional protection
 - how far the effect of liberalization depends on the state of regulation
3. Limited information on, and difficult assessment of, actual implementation of policies, such as licensing requirements. Fortunately, some evidence in *Doing Business and Investing Across Borders*.
4. Paucity of comparable data on (sector-specific) outcome variables - prices, quality, diversity of services - makes it hard to infer restrictiveness of policy by estimating impact on outcomes. But we try!

Looking ahead

- Improving the coverage and quality of data
- Refining quantification methodologies
- Rigorous analyses of the impact of policy choices
- Investigation of the determinants of policy choices