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The Impact on Connectivity and Competitiveness of Services Trade Policies

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The Impact on Connectivity and Competitiveness of Services Trade Policies

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Disclaimer

- I deliver this presentation in my personal capacity.
- All interpretations and conclusions expressed are those of the researchers. They should not be attributed to either the World Bank or the WTO Secretariat, or WTO members or the Governments they represent.

Salience of Services

Role of services in a competitive open economy

- Facilitates the mobility of goods, capital and people
- Realizing full potential of supply chain trade will require aligning flows of **services**, **investment**, **know-how** and **people**
- Services inputs embodied in goods production and exports

  - How important are policy interventions compared to other determinants?
  - How big is the effect of policies and regulations?

Agenda

Selected aspects of impact on competitiveness

1. Impact on **connectivity**
   - ⇒ Maritime transport costs; logistics services
     (Bertho, Borchert and Mattoo, 2016 JCE)
   - ⇒ Air transportation and downstream productivity
     (Borchert, Gootiiz, Grover and Mattoo, 2015 WE)

2. Impact on **foreign investment** flows
   - ⇒ Services M&A deals
     (Barattieri, Borchert and Mattoo, 2016 CJE)

3. Services as **embodied inputs** into exports

Trade Facilitation

Liner shipping policies raise maritime shipping costs and reduce the value of containerized seaborne trade flows:

- Bulk of global merchandise goods trade is seaborne
  - Pivotal role of containerized cargo shipping using liner vessels
- AVE of Maritime Trade Costs manifold of tariffs
- Principal determinants of MTC:
  distance, scale economies, and policy measures
  - In particular investment restrictions: market entry, post-entry operations, reg environment.
  - Liner shipping different from tramp or dry bulk shipping
- MTC by far the most important determinant of seaborne trade flows

Trade Facilitation

Liner shipping policies raise maritime shipping costs and reduce the value of containerized seaborne trade flows:

Maritime Transport Costs

	(1)	(6)
log distance	0.1153**	0.0986*
Transhipment	0.1043*	0.1327**
log total import vol	−0.0664***	−0.0573***
log import imbalance	−0.0573***	−0.0560***
Carriers	−0.0109**	−0.0160***
Cargo reservations		−0.0688
Liner conference		0.0628
Port terminal costs		−0.0004
STRI 2nd quartile		0.2319***
STRI 3rd quartile		0.3031***
STRI 4th quartile		0.5199***
Observations	18,664	16,298
Censored obs	11,148	9710
Log-likelihood	−14050	−12320
Rho(u_1, u_2)	−0.0011	−0.0156

Marginal effect: **26-68%**

Seaborne Trade Flows

	(1)	(2)
Distance	−1.4031***	−0.7230***
Contiguity	−0.9388	−1.1961**
PTA	0.4697	0.5543**
Common language	0.3115	0.3543*
Avg applied tariff	−0.0074	−0.0079
MTC predicted		−2.8301***
MTC (>median)		
Distance (>median)		
MTC pred (USA)		
MTC pred (BRA)		
MTC pred (CHL)		
MTC pred (NZL)		
Observations	18,499	16,150
Log-likelihood	−350730	−321778
R-squared	0.6068	0.6113

Marginal effect: **48-77%**

Source: Bertho, Borchert and Mattoo (2016)

Trade Facilitation

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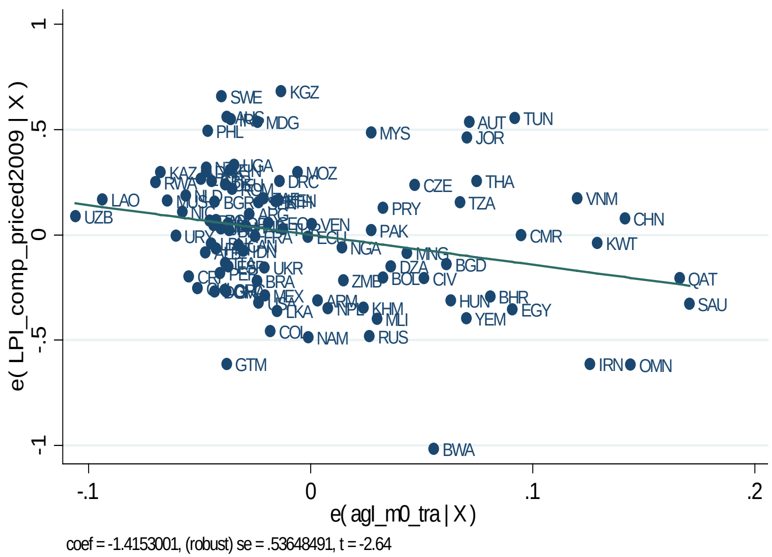
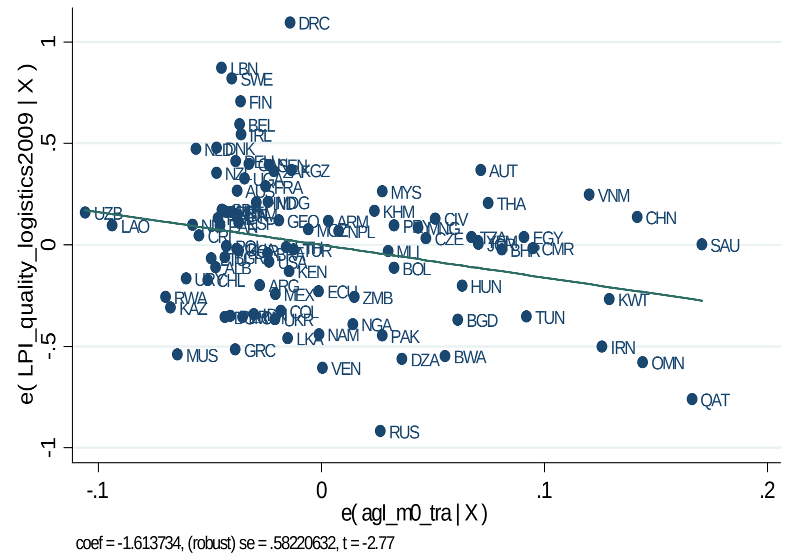
Services reform as trade facilitation: More restrictive transport policies are associated with more expensive and poorer quality logistics services

Availability of competitively priced logistics services

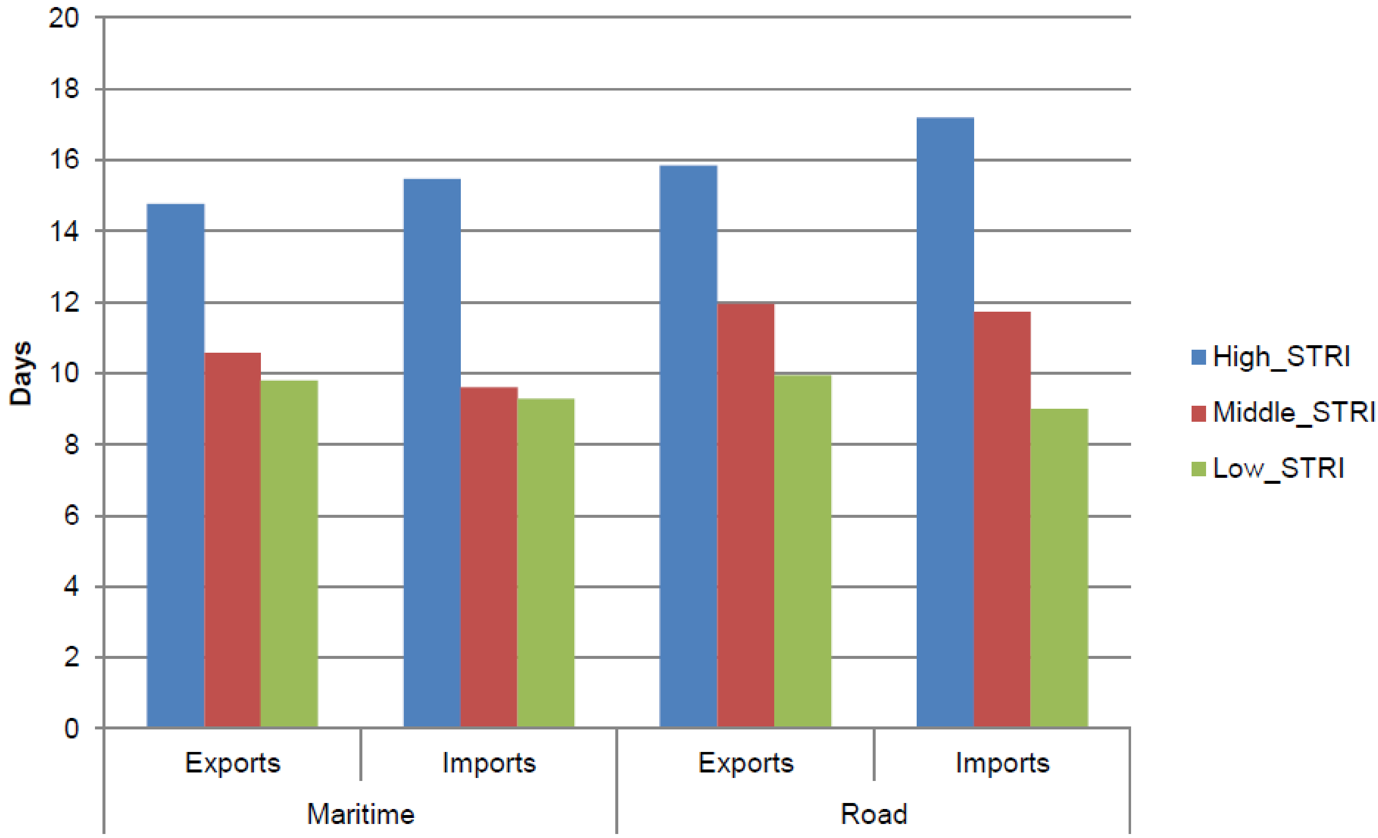


Quality of logistics services



Trade Facilitation

OECD STRI and **time to export/import**, 2013:



Source: Nordås and Rouzet (2015), OECD Trade Policy Papers No. 178, Fig.5

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Connectivity

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Air passenger transportation: intensive margin vs extensive margin

Implications for air cargo connectivity

	(1)	(2)	(3)
		OLS	
	F-STRI	F/A-STRI	A-STRI
Log GDP (2007)	0.5804***	0.2000***	0.3804***
	(0.0381)	(0.0328)	(0.0346)
Log GDP p.c. (2007)	0.2824**	0.2427***	0.0397
	(0.1255)	(0.0723)	(0.0866)
Urban population (% of total)	-0.0056	-0.0039	-0.0017
	(0.0049)	(0.0030)	(0.0033)
Population Density (people/sqkm)	-0.0000	-0.0001	0.0000
	(0.0003)	(0.0002)	(0.0003)
Percent Tourists/Population	0.3151**	0.1126*	0.2026*
	(0.1359)	(0.0570)	(0.1042)
LLC Dummy	-0.1526	0.0443	-0.1967
	(0.1602)	(0.1269)	(0.1590)
Africa Dummy	0.1004	0.2669*	-0.1667
	(0.1666)	(0.1468)	(0.1771)
airports paved runways	0.0000	0.0001**	-0.0001
	(0.0001)	(0.0000)	(0.0000)
STRI intermed	-0.1486	-0.2907***	0.1420
	(0.1319)	(0.0961)	(0.1127)
STRI high	-0.4234***	-0.4941***	0.0707
	(0.1317)	(0.1106)	(0.1346)

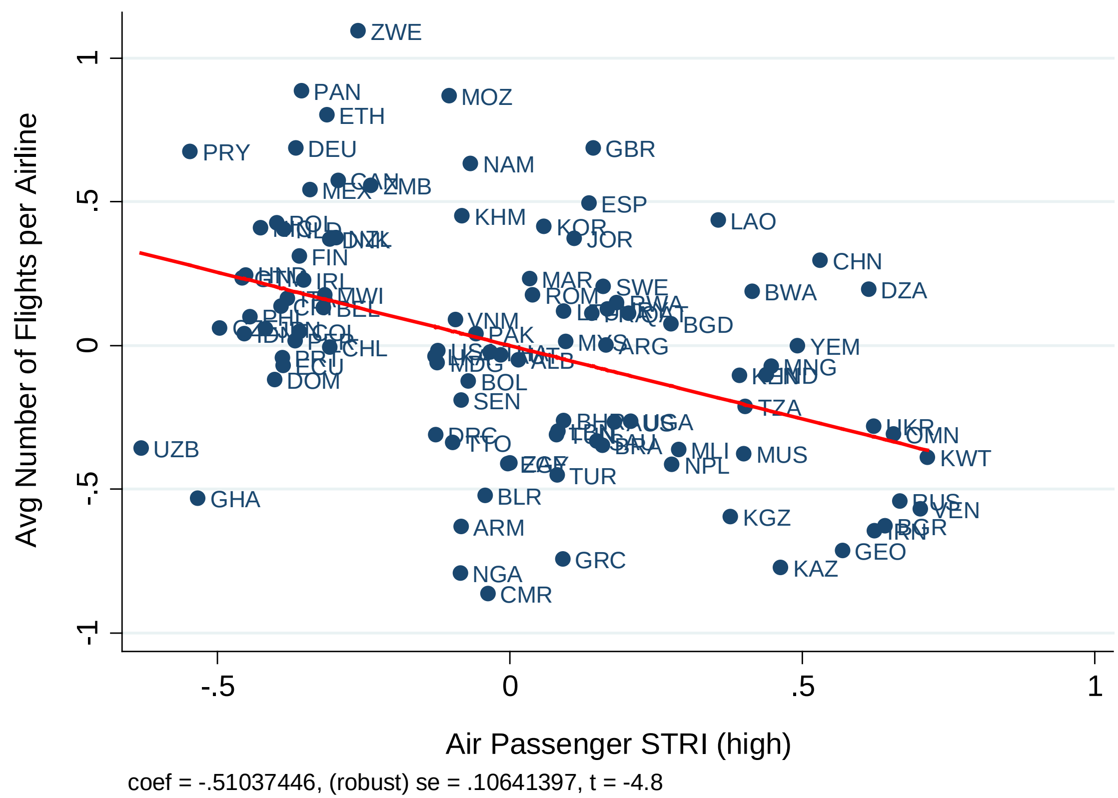
BASA provisions affecting frequency/capacity, eg. including fifth freedom rights, weekly flight limitations, designation clauses

Marginal effect: **25-40%**

Source: Borchert, Gootiiz, Grover and Mattoo (2015)

Connectivity

Number of flights per airline and restrictive air transport policies:



Source: Borchert, Gootiiz, Grover and Mattoo (2015)

Manuf competitiveness

Services reform as industrial policy:

Several studies provide robust empirical evidence on benefits of services liberalization on **productivity** in services and manufacturing sectors:

- Fernandes and Paunov (2012, JDE) on **Chile**
- Arnold, Javorcik, Lipscomb, Mattoo (2012) and Topalova, Khandelwal (2011, REStat) on **India**
- Arnold, Javorcik, Mattoo (2011, JIE) on **Czech Republic**
- Fernandes (2009) on transition economies
- Arnold, Mattoo, Narciso (2008, JAE) on **Sub-Saharan Africa**
- Shepotylo and Vakhitov (2012, WPS5944) on **Ukraine**

Manuf competitiveness

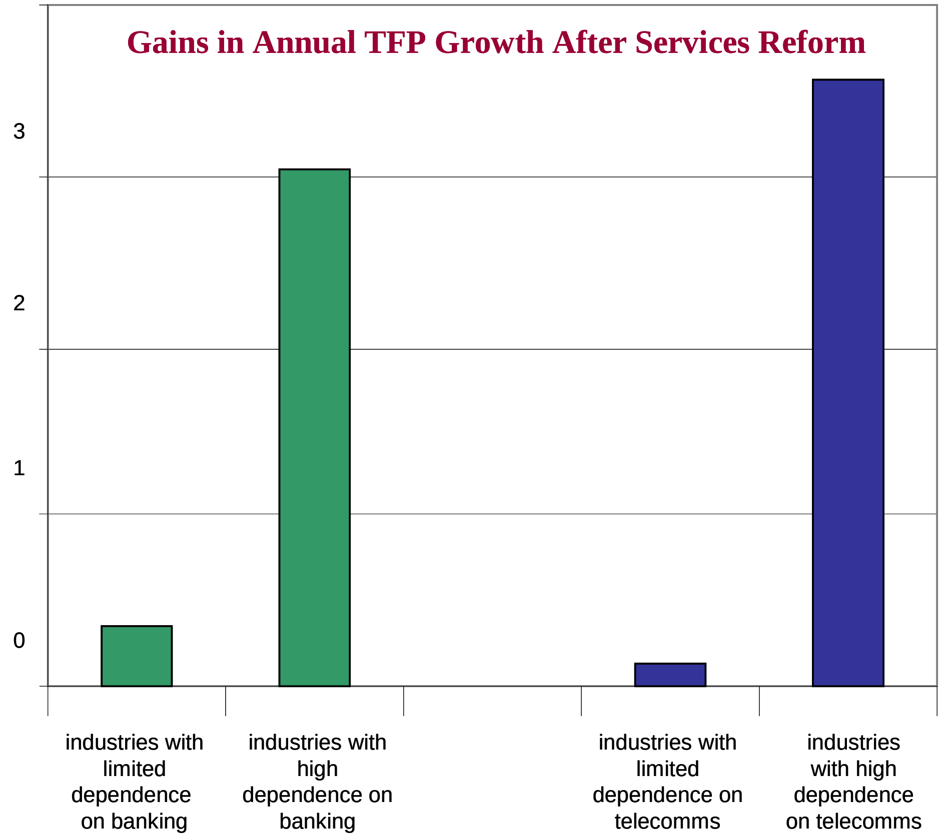
India's services reform has boosted not only productivity and exports in services, but also the performance of downstream manufacturing industries

Panel data study based on:

- 4,000 Indian firms, 1990-2005
- input-output linkages

Findings:

Banking, **Telecom** and **Transport** reforms all have significant positive effects on the productivity of downstream manufacturing firms



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

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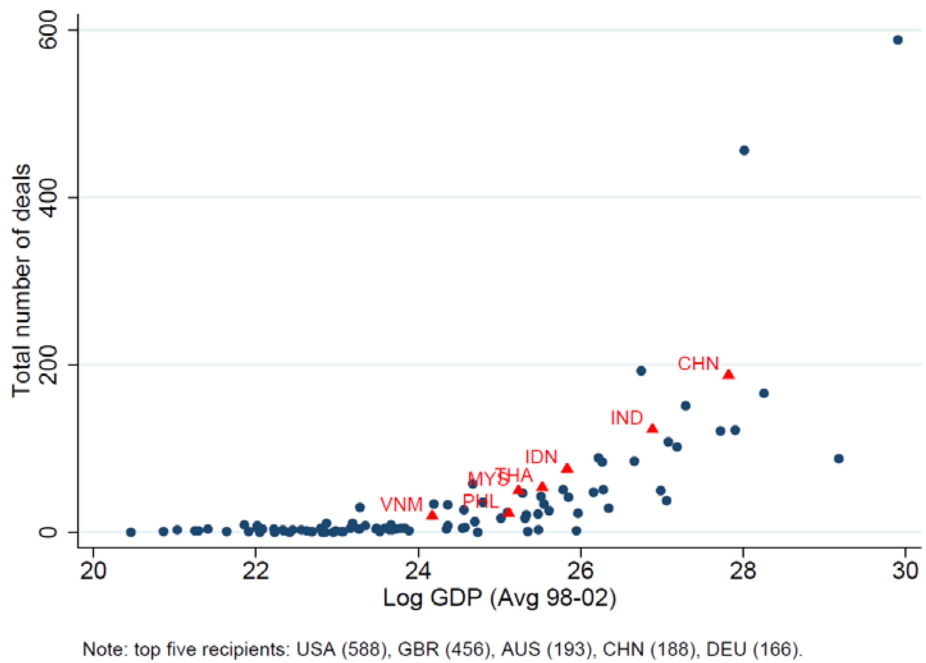
3. Services as **embodied inputs** into exports

Investment

Policy restrictiveness and **global M&A activity** in services sectors

- Natural outcome variable for comprehensive cross-sectoral analysis
- STRI policy data on
  93 economies and
  8 major services sectors;
  Period 2003-2009
- Challenge:
  disentangling policy effect
  from 'gravity forces'



Source: Barattieri, Borchert and Mattoo (2016)

Investment

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Policy restrictiveness and **global M&A activity** in services sectors

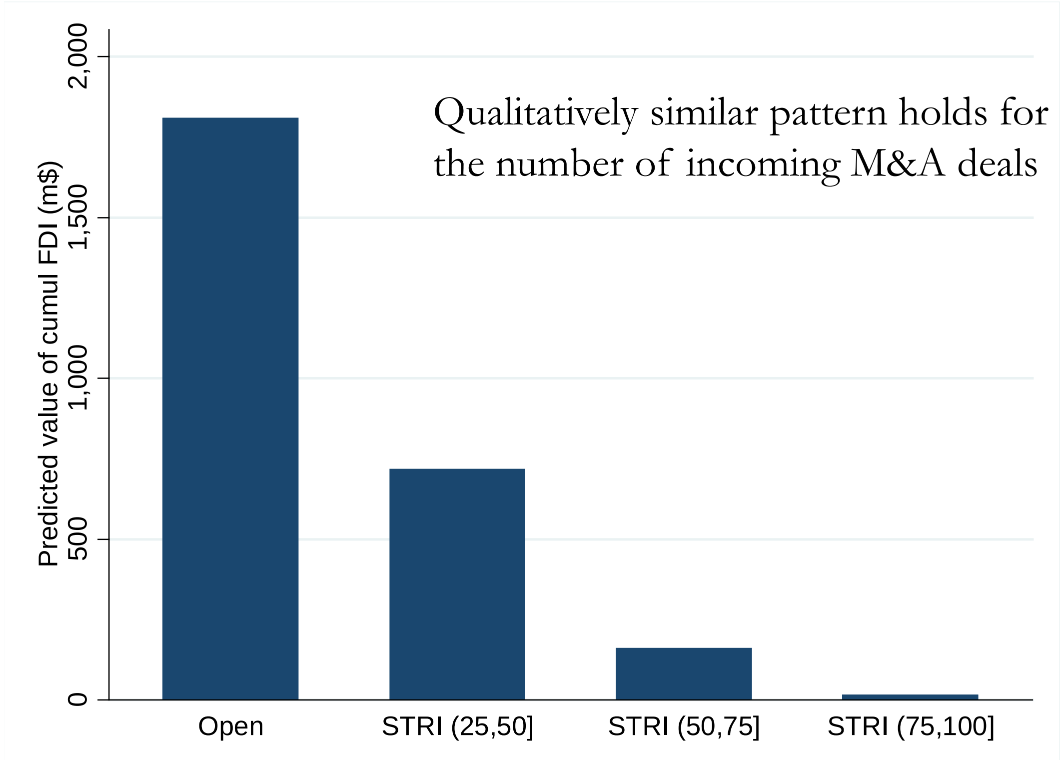
Cross-sectional approach for inward M&A deals:

	(1)	(2)	(4)	(5)
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***		
Dummy STRI (50-75]	-1.0844*	-2.0094**		
Dummy STRI (75-100]	-2.5569***	-5.1664***		
No Investment (0%)			-1.2156***	-3.0110***
Minority Ownership			-1.2573***	-1.1678**
Limit number of licenses			0.2131	0.4931
Discrim licensing criteria			-0.6286***	-0.8852***
Restriction repatr earnings			-0.6951**	0.4245
No recourse/appeal			-0.6813**	-1.5015***
Observations	744.0000	744.0000	478.0000	478.0000
Pseudo R^2	0.7901	0.6434	0.7795	0.7215
Log L	-4.280e+05	-7.272e+05	-3.613e+05	-4.563e+05
Sector fixed effects	yes	no	yes	no
Country fixed effects	no	yes	no	yes

Dependent variable is total value of sectoral M&A inflow in million US
Poisson estimation with robust standard errors based on 8 services se

Investment

Policy restrictiveness and **global M&A activity** in services sectors



Foreign direct investment (M&A) received in 2003-09; predicted values by level of policy restrictiveness.
Pooled Poisson estimation (93 countries, 8 sectors) with country and sector fixed effects.

Investment

Further results from detailed two-step analysis:

Evidence of supportive role of services investment linkage from

1. Bilateral merchandise goods trade associated with more service sector investment: demand for transport/banking/telecoms…

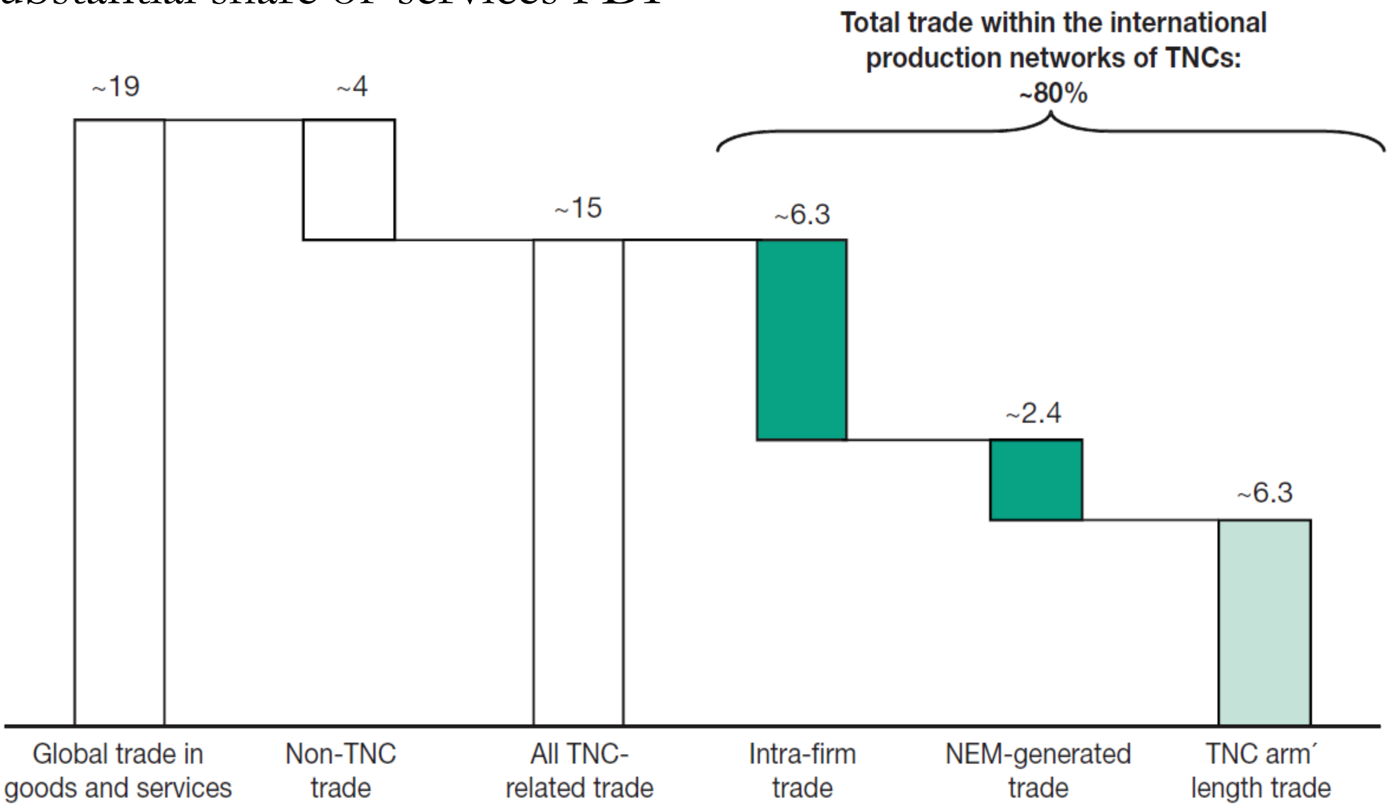
2. Restrictive investment policies reduce M&A in services sectors

3. But detrimental effect of policy barriers partly offset by large manufacturing share in GDP

Investment

FDI as increasingly important driver of trade flows:

- ↳ **investment-trade link** for supply-chain trade
- ↳ substantial share of services FDI



Source: UNCTAD (2013), GVC and Development, Fig.14

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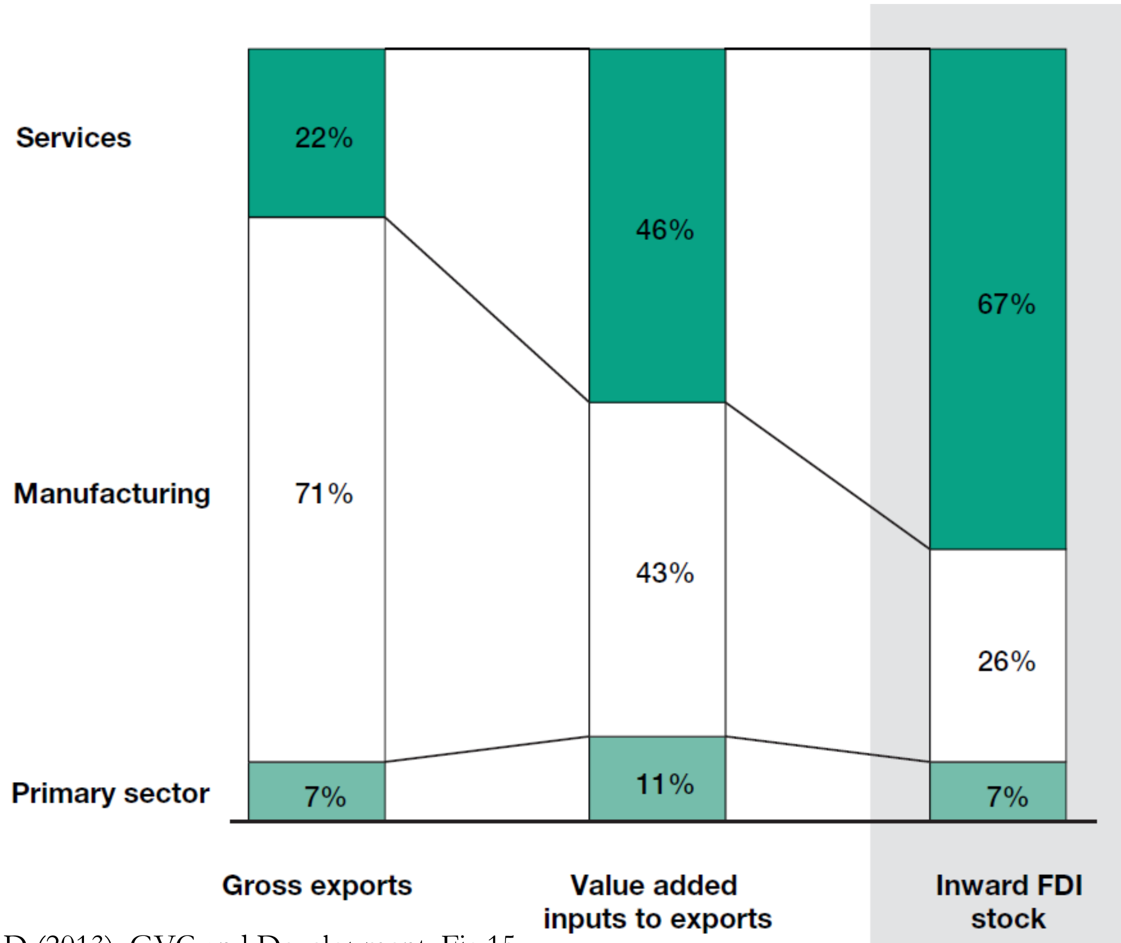
Salience of Services

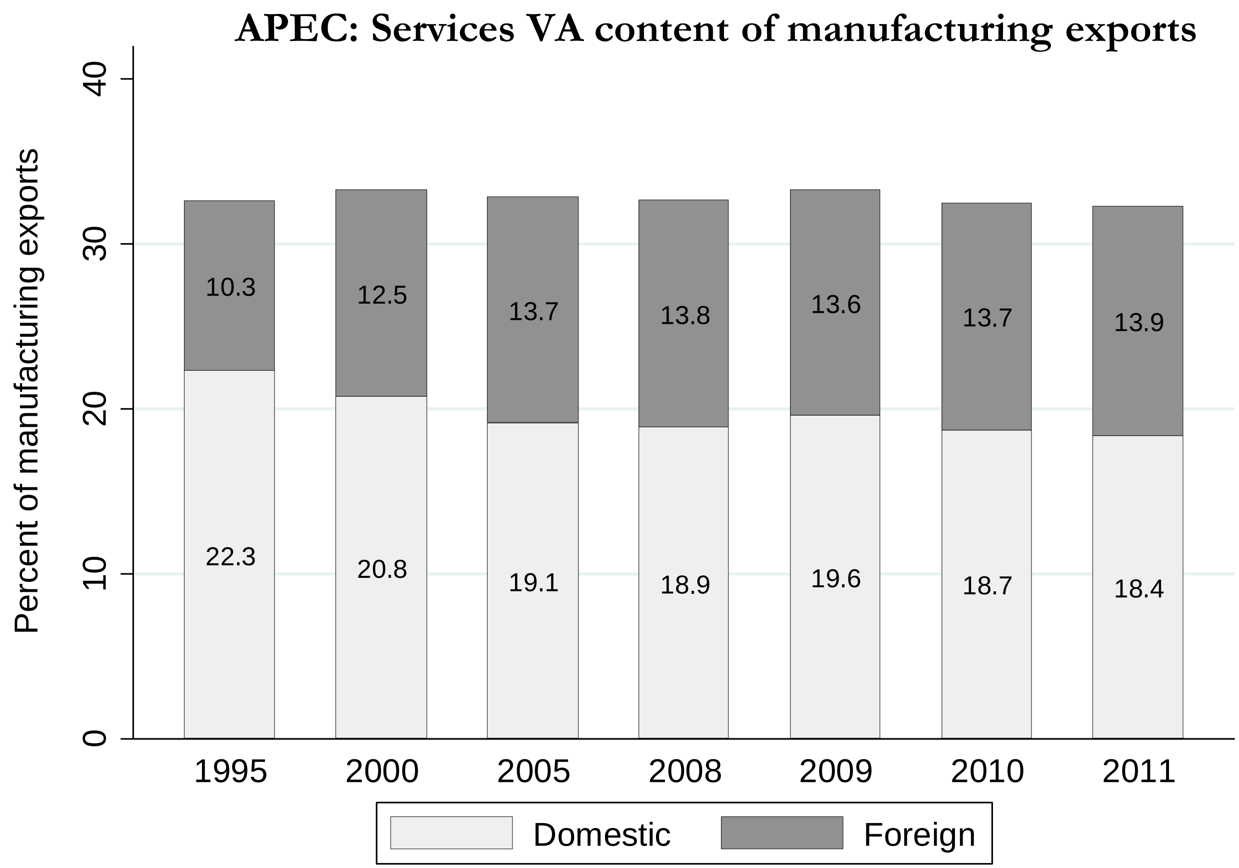
Role of services in gross exports, VA exports, and inward FDI stock:



Source: UNCTAD (2013), GVC and Development, Fig.15

Embodied Services

Services value added as embodied inputs into manufacturing exports

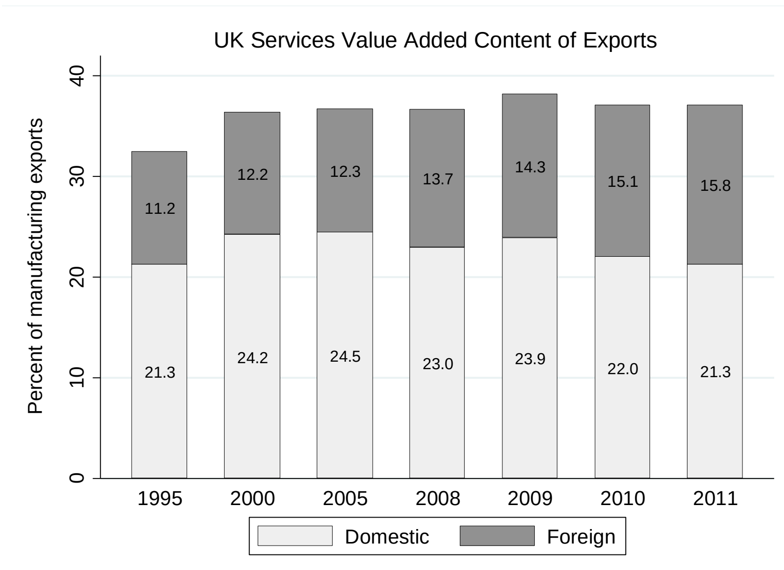


Source: WTO-OECD TiVA (2015)

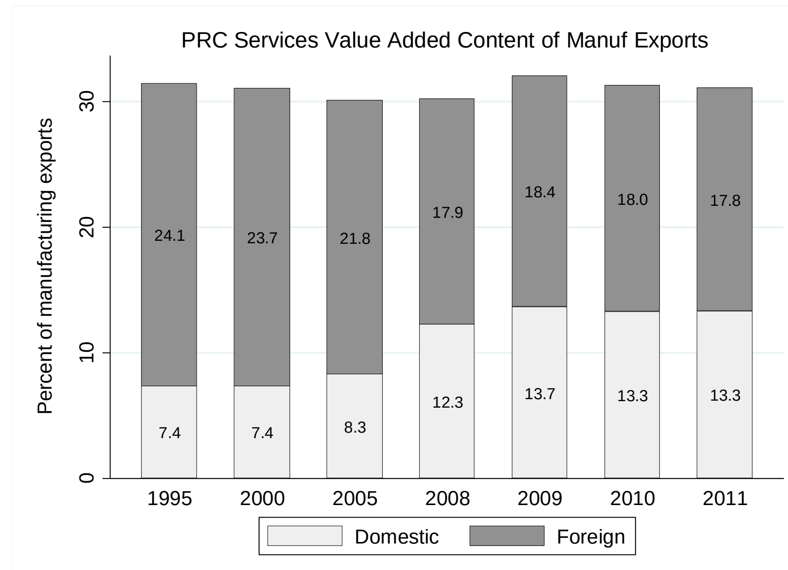
Embodied Services

Services value added as embodied inputs into manufacturing exports

United Kingdom



People's Republic of China (PRC)



Source: WTO-OECD TiVA (2015)

Summary

Profound impact of services trade policies on connectivity, in addition to geography, income and other factors

The barriers that matter are rather different across services sectors:

- Air/banking/broadcasting: ownership, market access
- Rail/telecoms: barriers to competition
- Computer services/accounting: movement of people

Looking ahead:

- Need for research on the effects of mode 1 and mode 4 policies: BPO and KPO/KIPS rely on different modes of supply
- Line between goods/services trade increasingly blurred at the firm level
- We learn about the salience of services as new data become available

Thank you

References

List of further references documenting the World Bank's Services Trade Restrictions Database as well as the impact of services trade policies:

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