

Global Patterns of Services Trade Barriers – New Empirical Evidence

Joint work with Aaditya Mattoo and Batshur Gootiiz

Ingo Borchert

Development Research Group, The World Bank

Korea Development Institute (KDI)

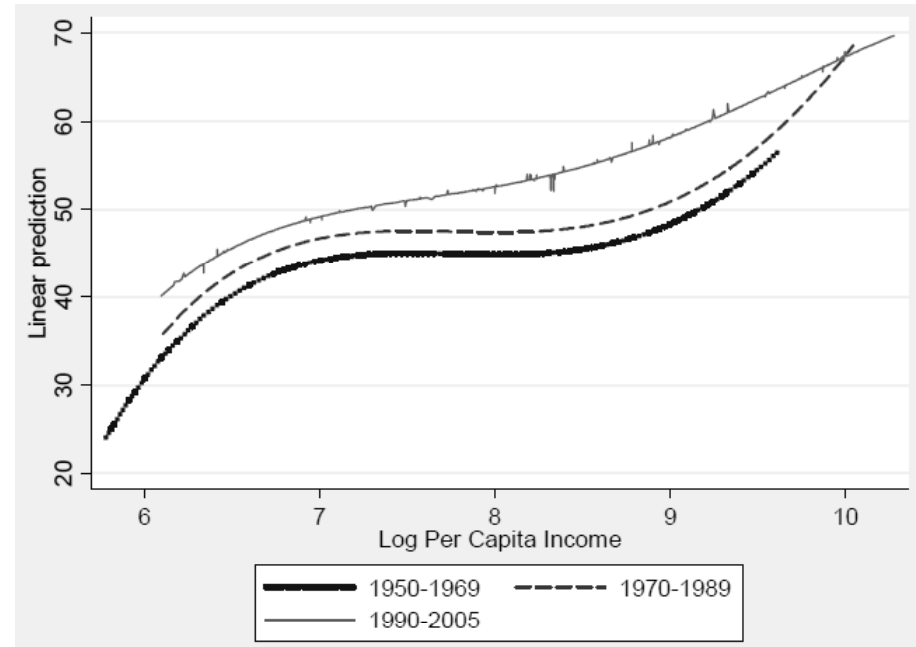
Seoul, 4 February 2010

Agenda

1. Services Trade and Development
2. Barriers to Services Trade
 - The New WB Services Policy Database
3. Quantification
4. Impact on Services Provision
 - Telecommunications
 - Downstream productivity

Motivation

- Openness to services trade and 2 waves of services growth
- Increasing tradability shifts focus to policy barriers
- Gains from service trade: enhanced competition and efficiency domestically, rather than market access abroad.
- Regulatory trade barriers but one aspect in services-development link (supply- and demand-side constraints, efficiency-equity tradeoff)

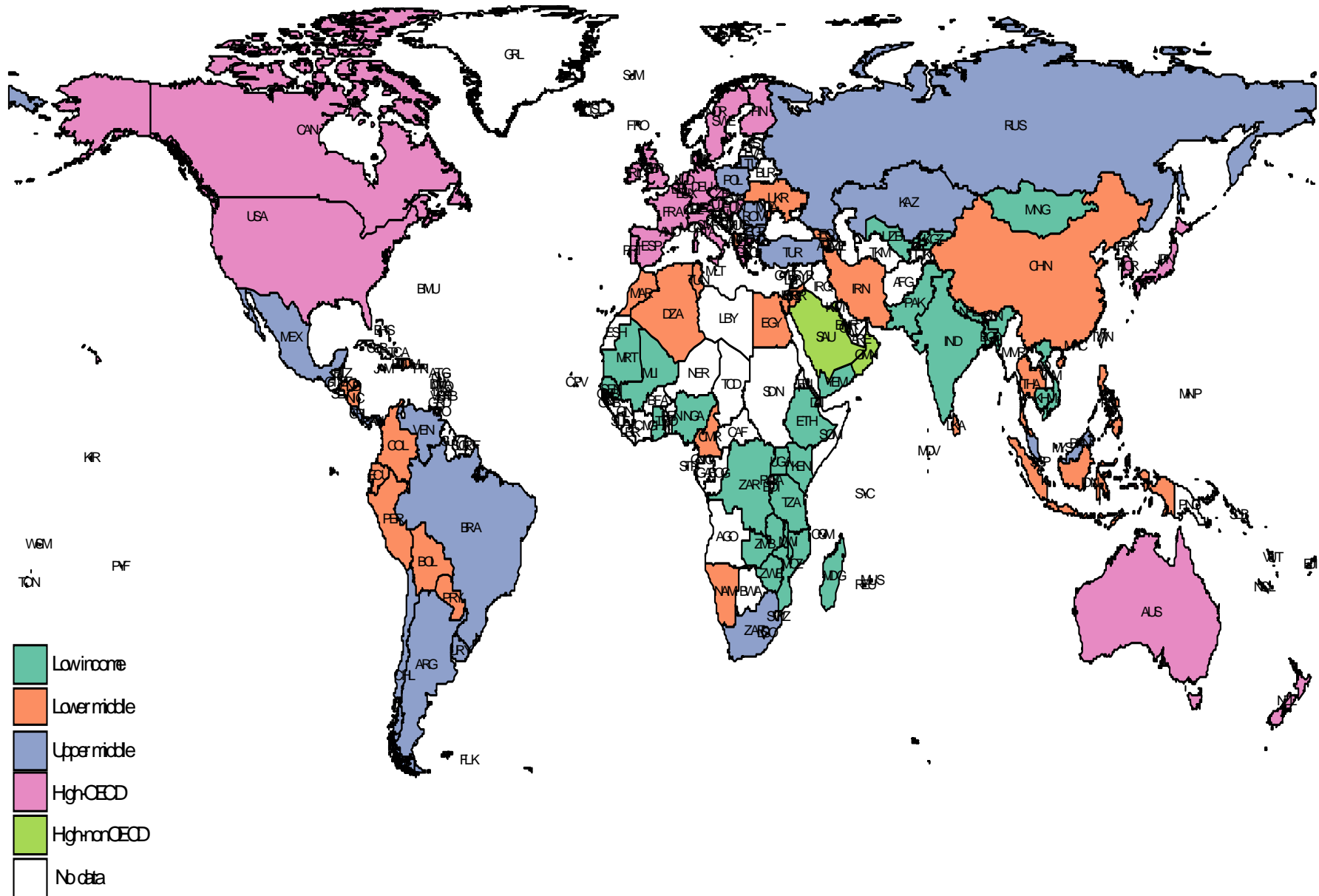


Source: Eichengreen and Gupta (2009), Fig.3

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Services Policy Database: Coverage



Survey Coverage (I)

- 102 countries: 78 developing countries surveyed, comparable data for 24 OECD countries
- Sectoral coverage:
 - Financial Services
 - banking and insurance (modes 1 & 3)
 - Basic telecommunications
 - fixed and mobile (mode 3)
 - Transportation
 - maritime shipping, auxiliary services, air passenger, road/rail freight (modes 1 & 3)
 - Retail distribution (mode 3)
 - Professional Services
 - accountancy and legal (modes 1, 3 & 4)

Survey Coverage (II)

- Policy dimensions covered:
 - Barriers to entry
(license limits, discrimination)
 - Ownership
(foreign equity participation, legal form of entry)
 - Licensing
 - Restrictions on operations
 - Regulatory environment
- Data verification by WTO Delegations

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Alternative Approaches

- Bottom-up Scoring
 - APC, Findlay and Warren (2000), OECD (2009)
- Top-down Estimation
 - using quantities, prices, PCM, transport costs
Kox/Nordas (2007), Shepherd/Dihel (2007)
- In-between: Ordinal Ranking
 - Novel approach to rank order policy bundles

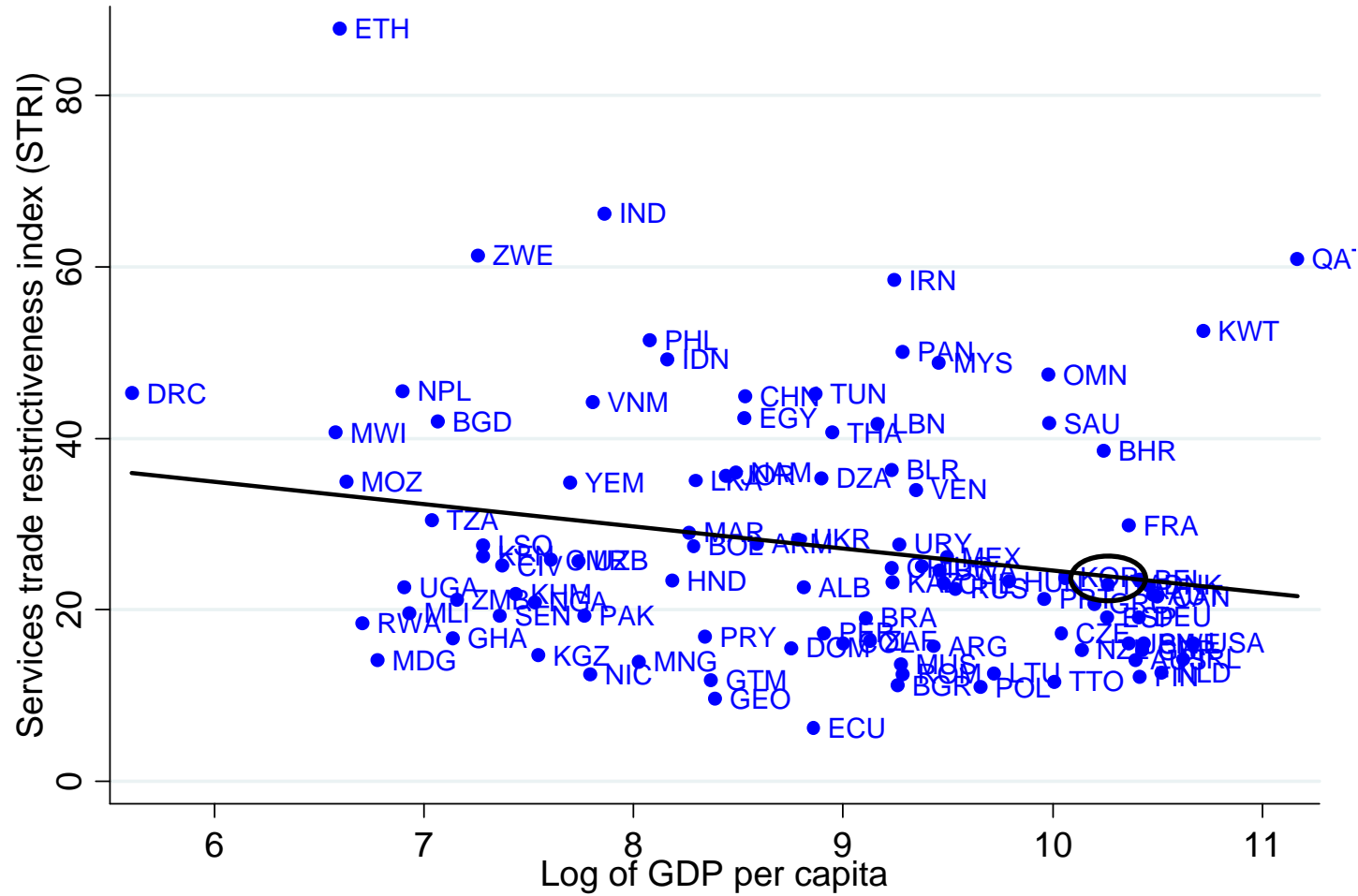
Quantification (I): STRI

- WB's STRI: expert judgment
 - Summary of policy information for each sector/mode
 - Each summary mapped into 5-point scale:
[0, 25, 50, 75, 100]

- Aggregation by weights
 - Modal weights: sector-specific
 - Sector weights: value-added based
 - Country weights: equal weights within region

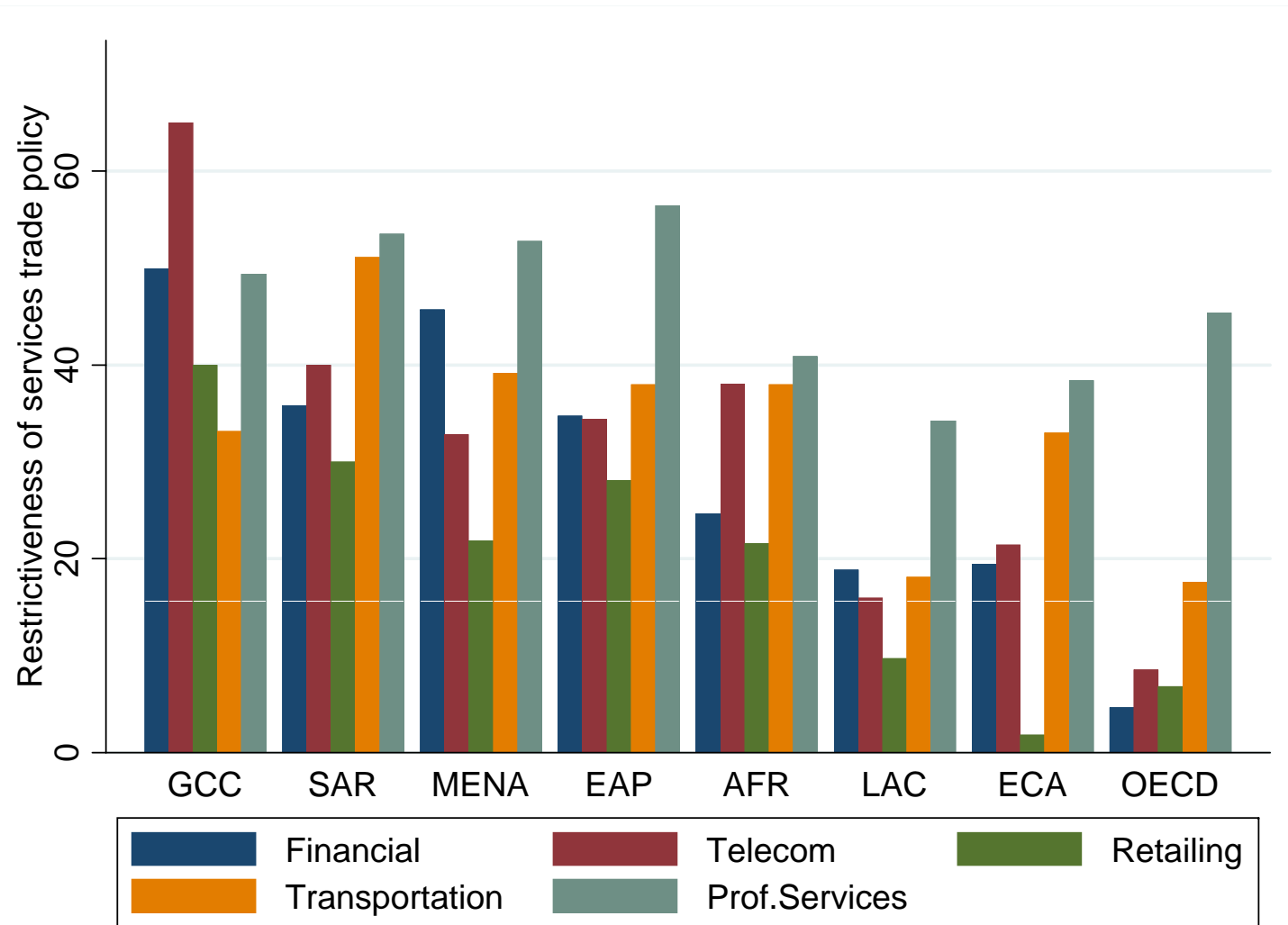
- Problems: “cardinal sin”, double-counting, non-binding restrictions (modal level)

Restrictiveness of Services Trade Policy, 2007-8



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

STRI by Region and Sectors



STRI of Korea in Comparison

	<u>Korea</u>	<u>OECD</u>	<u>World</u>
Financial	2	5	23
Telecom	50	9	26
Retail	0	7	15
Transport	18	18	30
Prof Services	62	45	44
STRI	23.7	19	27.6

Quantification (II): Ranking

- Transparent, objective algorithm
- Retain STRI's desirable properties but:
 - Avoid double-counting of sequential/overlapping measures
 - Focus on binding constraints
(incl sector-specific and interdependent modal choice)
 - Prioritize restrictions
- Construct bundles of policy measures that can be unambiguously ranked
- Result = Rank-ordered groups of countries with similar policy profiles

Results: Ordinal Ranking

Example: Retail Distribution

Country	Rank	Sector open to foreign entry	Entry	Ownership	Operations	Regulatory Environment
Argentina, most OECD	1-3	yes	No restriction	No restriction	No restriction	No restriction
Venezuela	9	yes	No restriction	No restriction	Employment, repatriation restriction	No information
Qatar	12	yes	No restriction	Minority ownership	Employment restriction	No indep regulator, No appeal
China, Indonesia	28	yes	National treatment violation	No restriction	Product (CHN) BoD (IDN)	No indep regulator
Panama, Ethiopia	35	no	n/a	n/a	n/a	n/a

Implicit Barriers

- Fundamental regulatory problem is non-recognition of qualifications/training/exp
- Example: United States
 1. The verification of educational qualifications to establish eligibility to take the professional examination
 2. The remedying of any gaps in education, training and experience before taking (all or part of) the examination.
 3. Passing the professional examination(s), held entirely or in significant part in the US
 4. The fulfillment of additional requirements, (experience, local residency) to obtain professional license
- Cost of excessive regulatory burden:
(physicians, engineers, accountants, architects from India)
 $10,234 \text{ prof} \times \$60\text{-}75,000 = \$614\text{-}768\text{m}$

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STRI and Market Structure (I)

Number of competitors in fixed line and mobile telecom:

	Fixed_1	Fixed_2	Mobile_1	Mobile_2
GDP per capita (2007)	0.0000***	0	0	0
Population	0.0062	0.0182	0.001	0.0051
Population Density	0.0015***	0.0026***	0.0009***	0.0010***
Log sq km (land surface)	0.2974***	0.3577***	0.1887***	0.2005***
Africa Dummy	-1.2353***	-0.9426**	-0.3387**	-0.2049
STRI Fixed/Mobile		-0.0153***		-0.0066***
Constant	-3.6669**	-4.9984***	-1.297	-1.5870**
N	101	101	101	101
ll	-148	-138	-177	-174
r2_p	0.248	0.303	0.103	0.118

Marginal benefit of dismantling major restrictions (STRI = 50):

fixed line: 1 - 1.3 additional operators

mobile: 1 additional operator

STRI and Market Structure (II)

Herfindahl-Hirschman concentration index (HHI)
in mobile telecom:

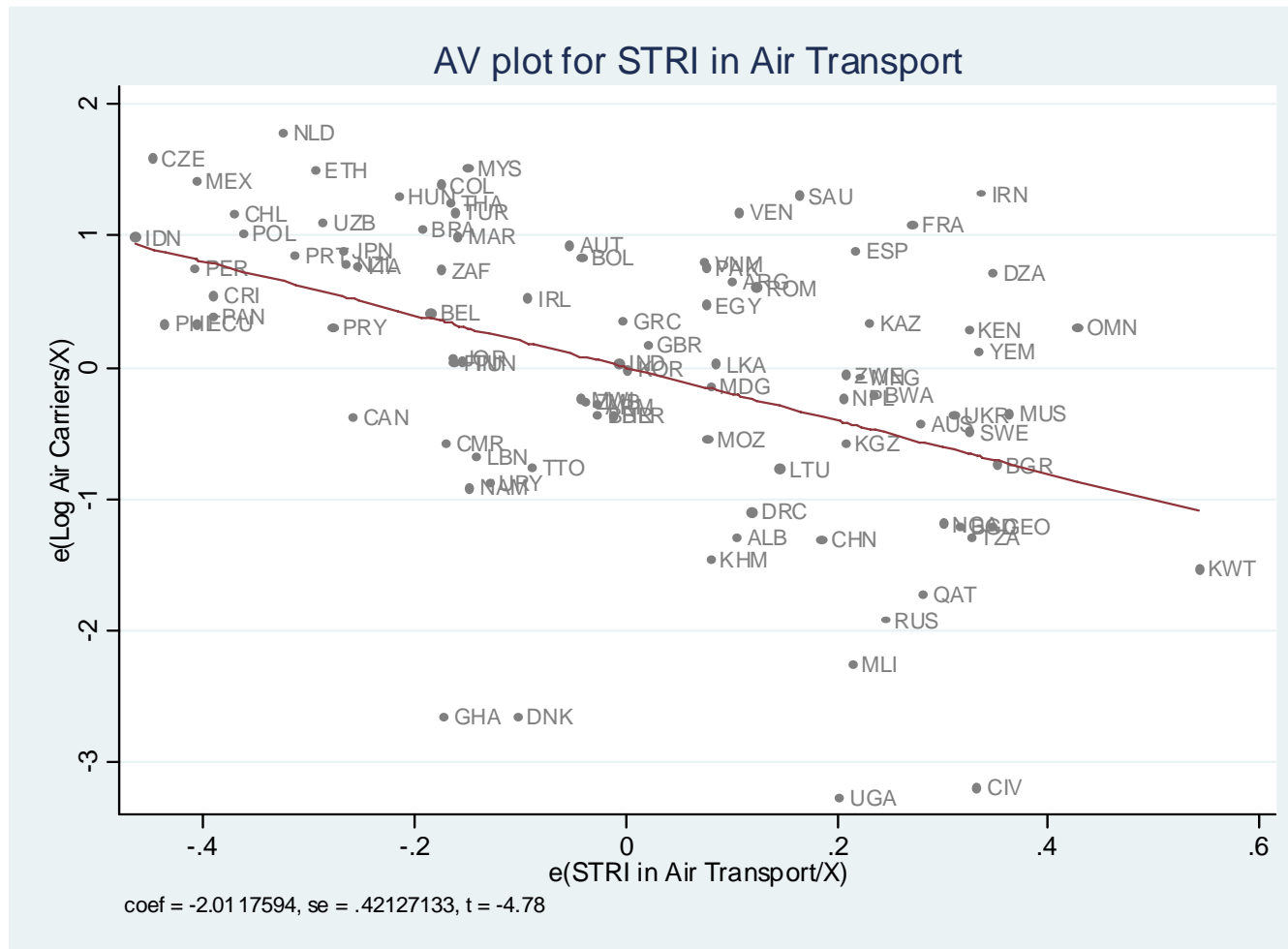
	HHI_1	HHI_2
GDP per capita (2007)	0.01	0.01
Population	12.34	4.3
Population Density	-2.06**	-2.41***
Log sq km (land surface)	-370.32***	-393.59***
Africa Dummy	1416.19**	810.03
STRI Mobile		30.61***
Constant	8366.24***	8631.75***

N	101	101
r2	0.213	0.378

Marginal benefit of dismantling major restrictions (STRI = 50):
Approx. 1,500 HHI index points reduction

STRI in Transportation

Number of air carriers serving a country:



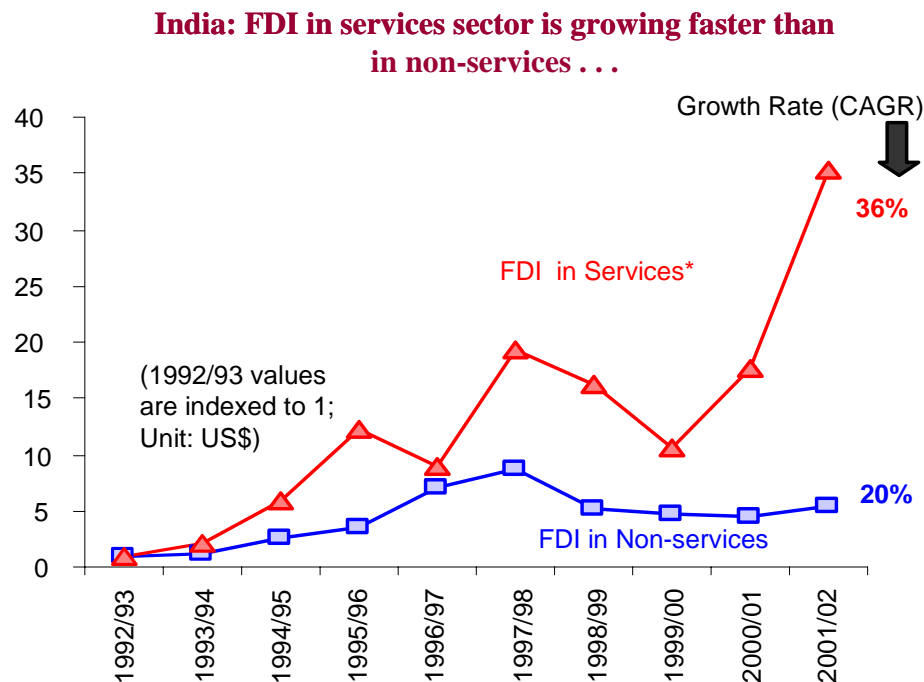
Note: 93 countries, controlling for GDP p.c., size, pop density and market structure.

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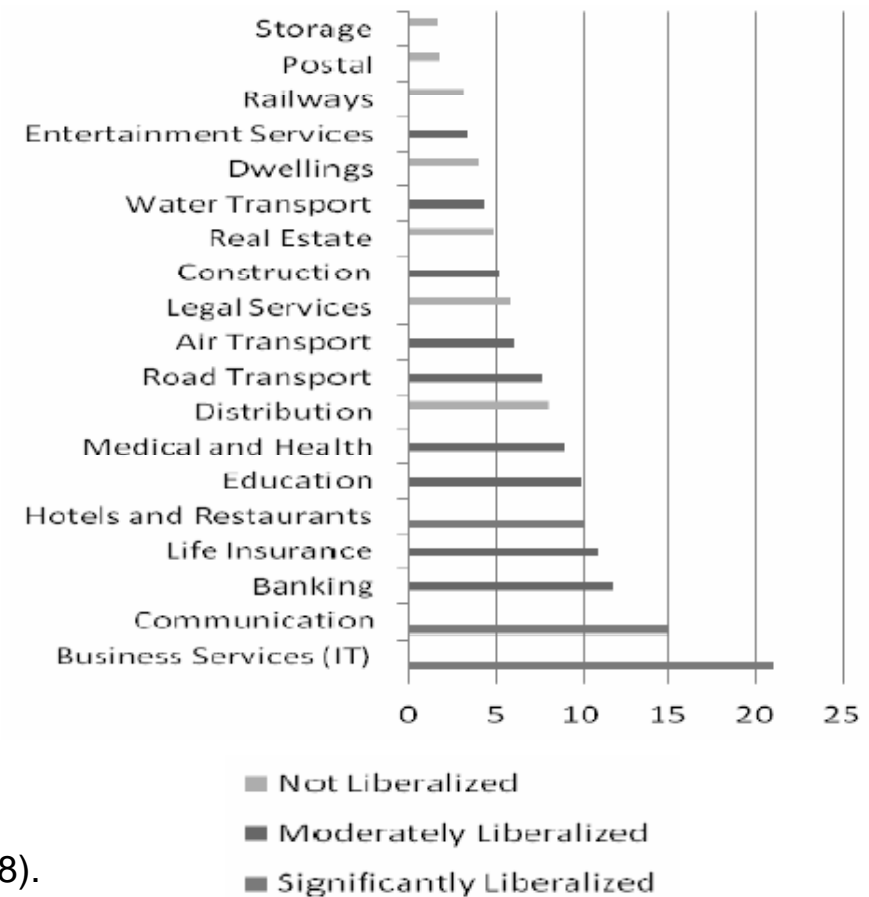
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Services Sector Reform in India (I)

Significant liberalization of FDI through policy reform:

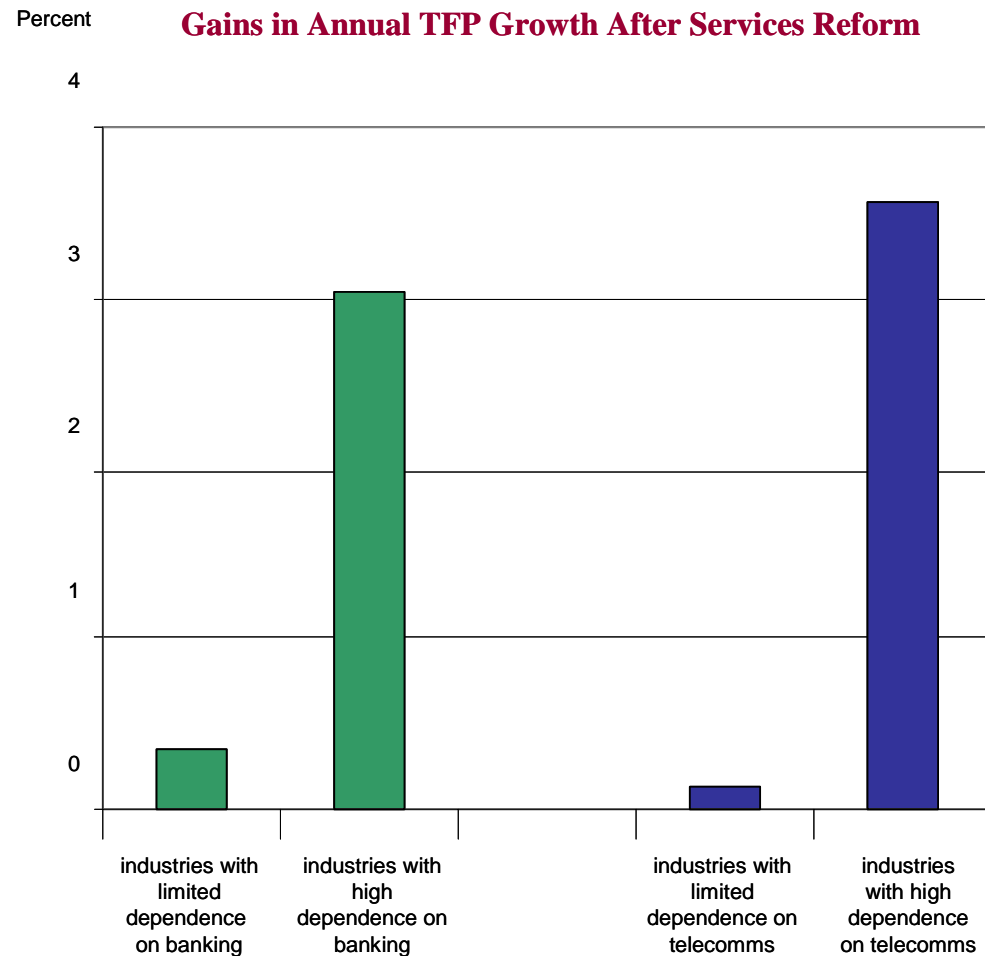


Growth rates of services output by level of liberalization, 1993-2002:



Source: Arnold, Javorcik, Lipscomb and Mattoo (2008).

Services Sector Reform in India (II)



Panel data study based on:

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

Findings:

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

Source: Arnold, Javorcik, Lipscomb and Mattoo (2008).

Benefits of Services Policy Reform

World Bank research on benefits of services liberalization on productivity (services + manufacturing):

- Fernandes (2009) on transition economies
- Arnold/Mattoo/coauthors on India, Czech Republic, Sub-Saharan Africa

Caveat: production/export side!

- Services tend to be skill-intensive;
- Comparative advantage associated with skills, knowledge, intangible assets

Conclusions

- New WB dataset on regulatory measures
- Restricting services trade, namely FDI, is associated with costs in terms of competitiveness and accessibility
- Services availability crucial for productivity of downstream sectors
- We need more nuanced understanding of how barriers affect competition and welfare

Thank you for your attention!

Annex:

additional material

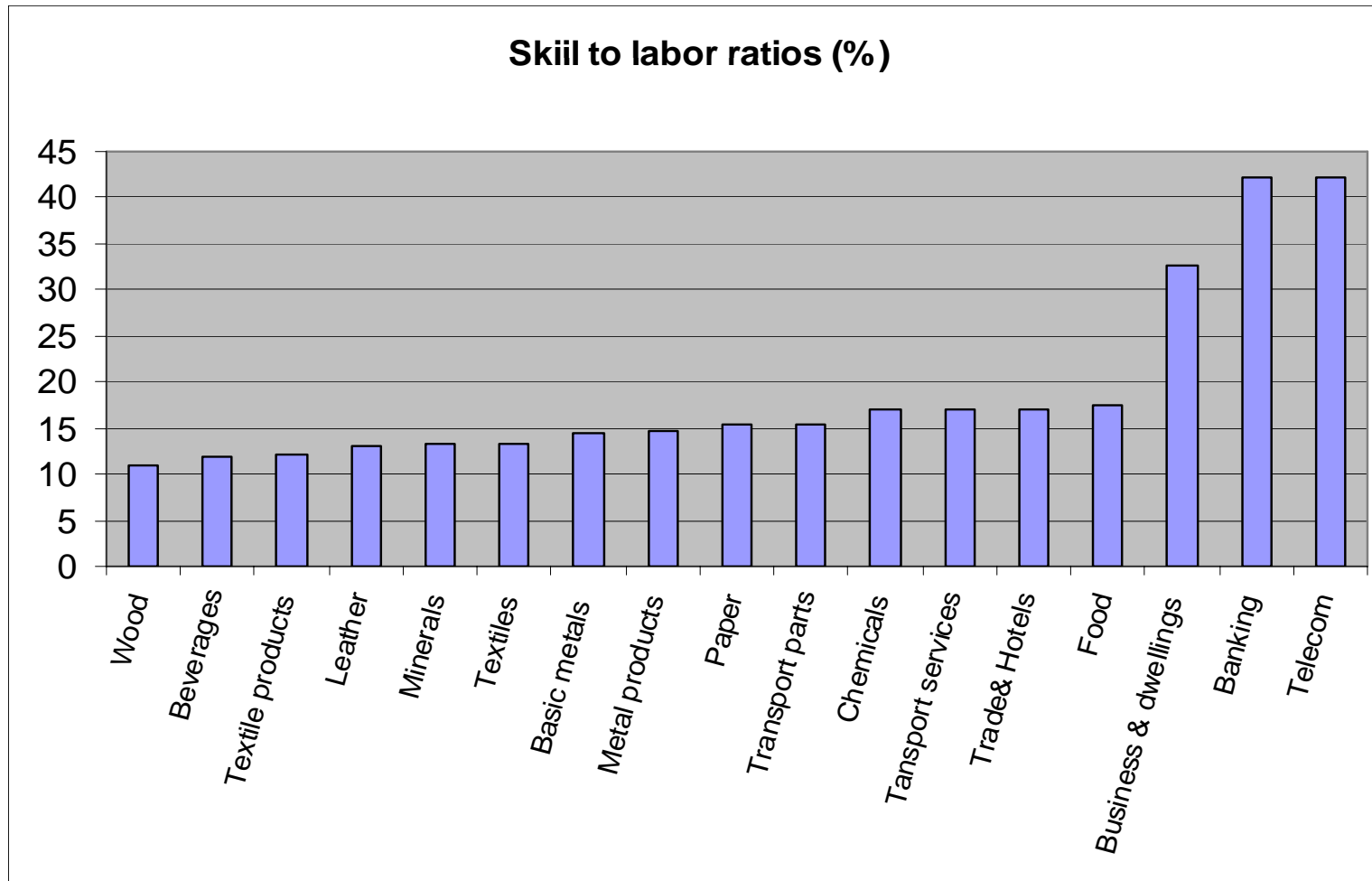
STRI and Market Structure (II)

Market share of largest fixed line incumbent:

	Mktshr_1	Mktshr_2
GDP per capita (2007)	-0.0002	-0.0002
Population	-0.161	-0.2236
Population Density	-0.0186**	-0.0242***
Log sq km (land surface)	-5.4352***	-5.6871***
Africa Dummy	8.8869*	6.1613
STRI Fixed Line		0.1726***
Constant	167.0406***	170.7289***
N	99	99
r2	0.265	0.337

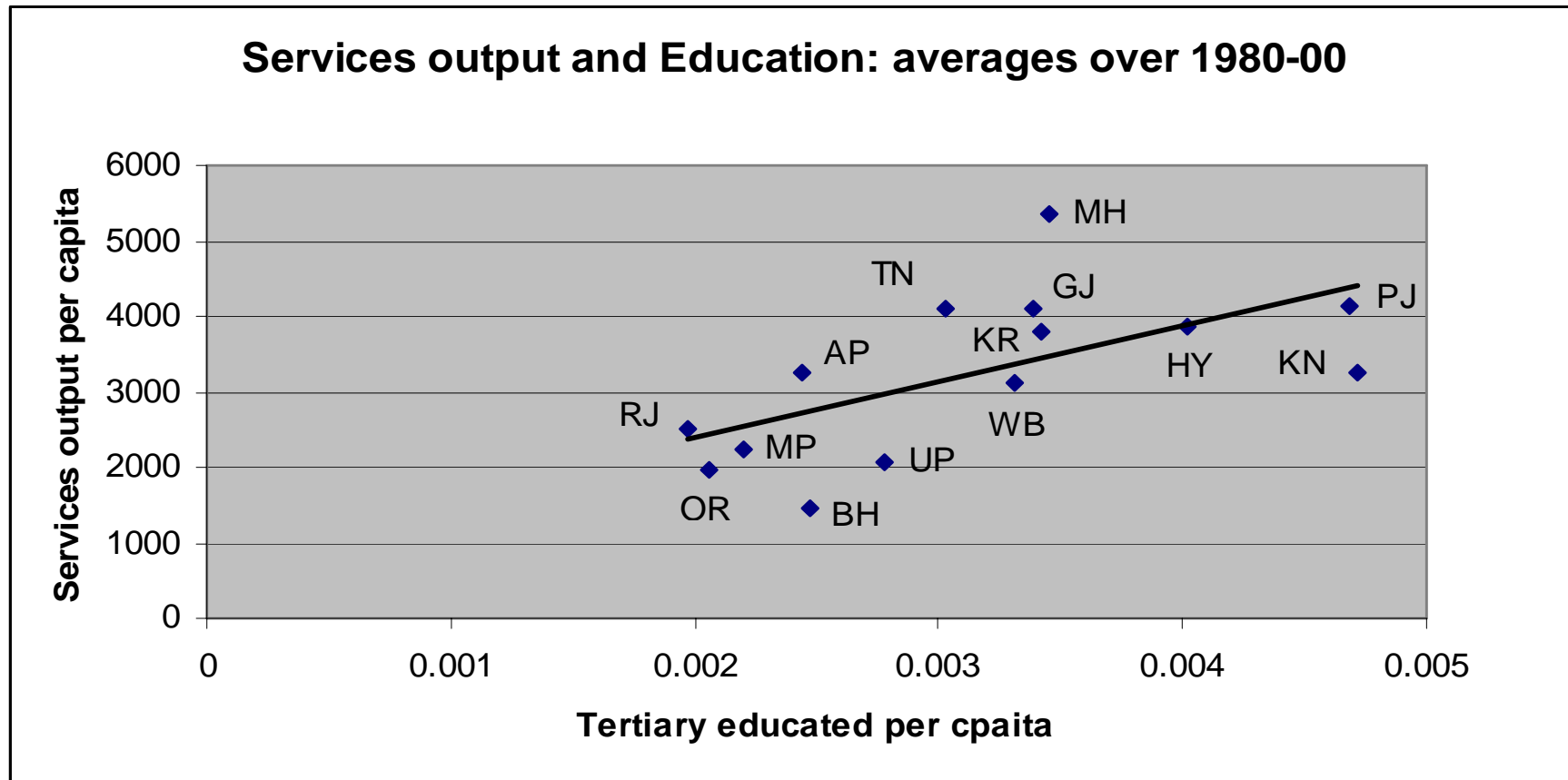
Marginal benefit of dismantling major restrictions (STRI = 50):
 Approx. 9 % reduction in maximum incumbent market share

Production/Export of Services



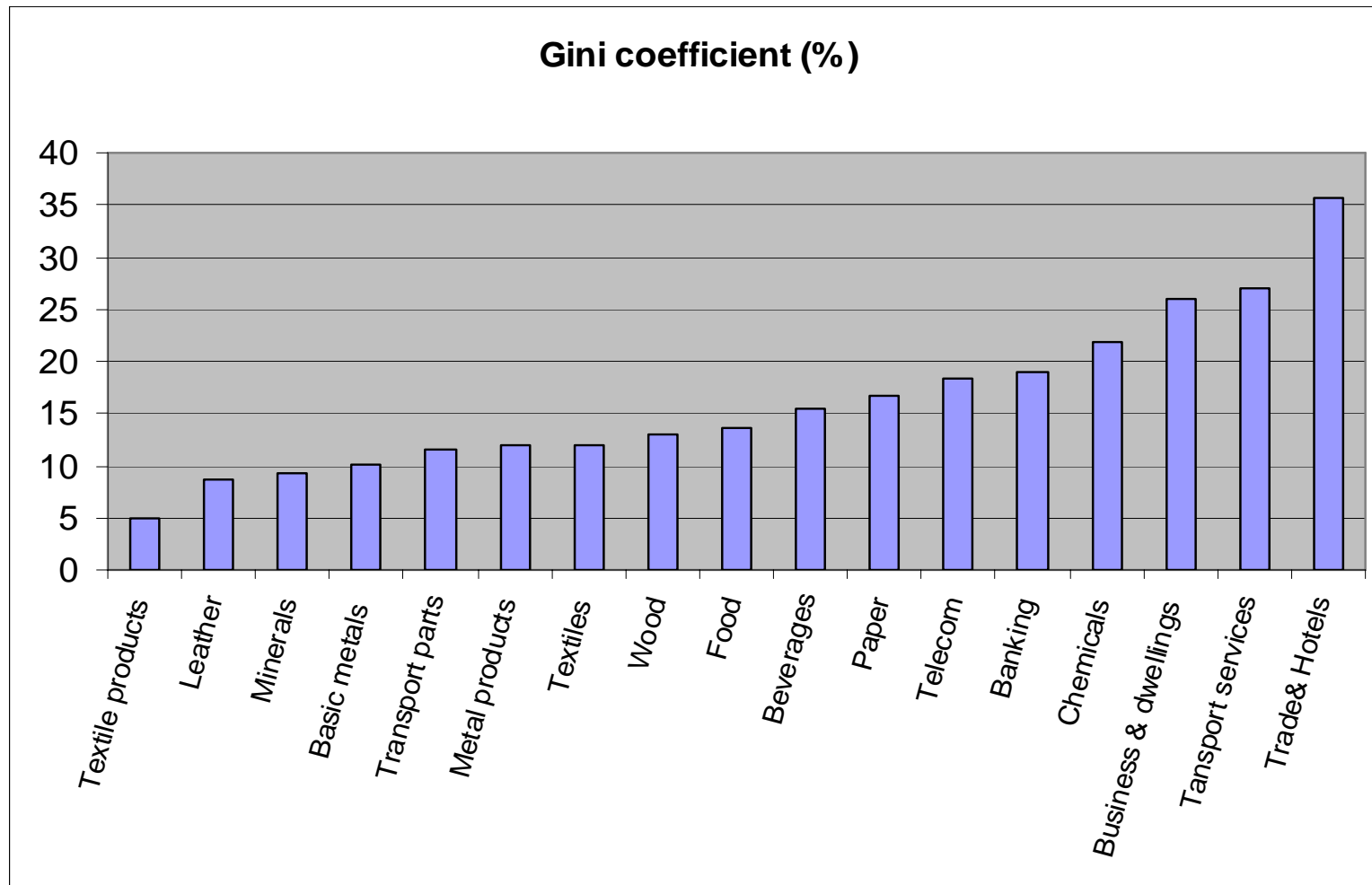
Source: Amin and Mattoo (2006).

Production/Export of Services



Source: Amin and Mattoo (2006).

Production/Export of Services



Source: Amin and Mattoo (2006).

Ranking: Categories of Measures

Regulatory Category	Measures considered
1) Market Entry	<ul style="list-style-type: none">• License limit or stringent quota on market entry• Significantly discriminatory licensing
2) Ownership and Legal Form	<ul style="list-style-type: none">• Only minority ownership allowed in Greenfield• Only minority ownership allowed in acquisitions
3) Specific aspects of Operations	<ul style="list-style-type: none">• Nationality requirement for board of directors• Nationality requirement for employees• Restrictions on type of products or brands• Restrictions on repatriation of earnings
4) Other dimensions of the regulatory environment	<ul style="list-style-type: none">• No independent regulator• No right to appeal decisions.