



Services trade, trade barriers and their measurement

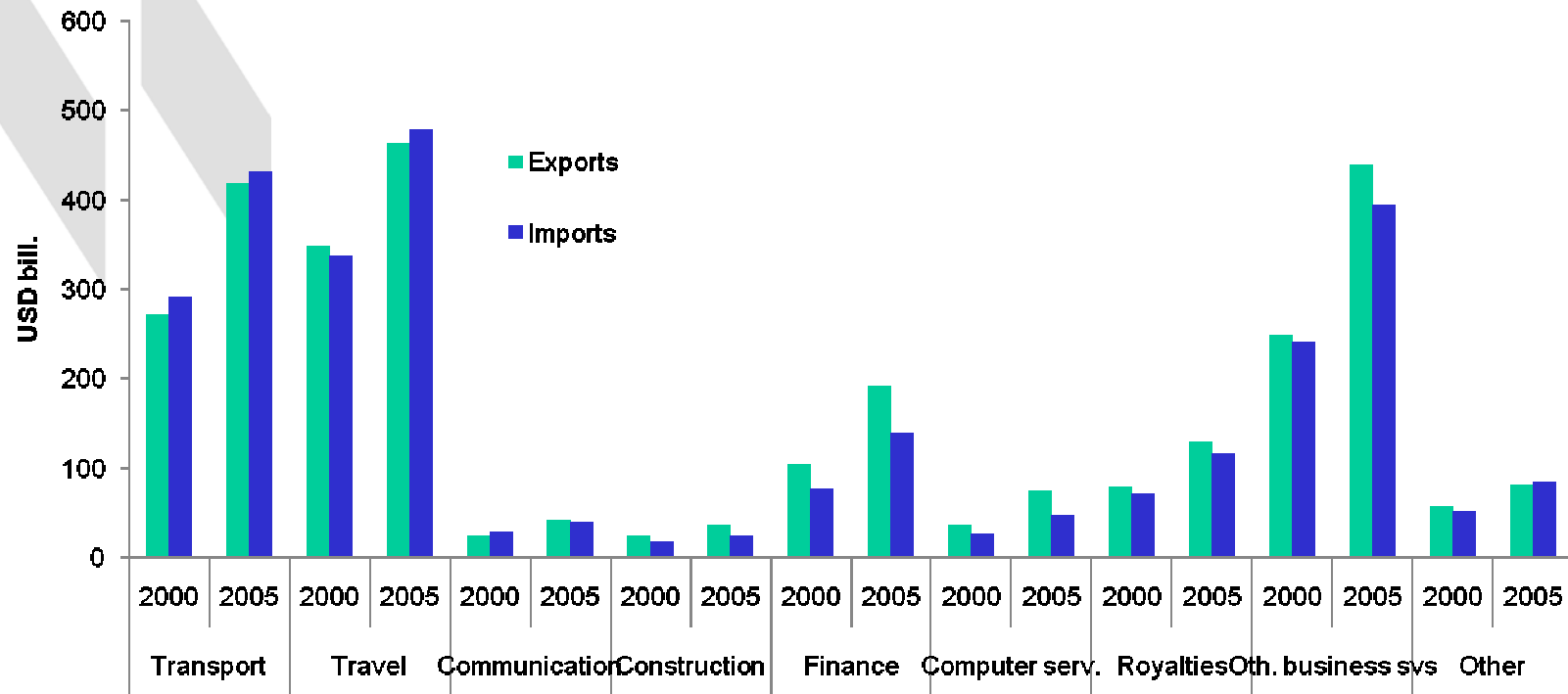
CEPII-OECD workshop 22 November 2007



Overview of presentation

- Barriers to trade in services;
- How to quantify barriers to trade in services?
- Further research – a trade restrictiveness index for services

Trade in services by sector

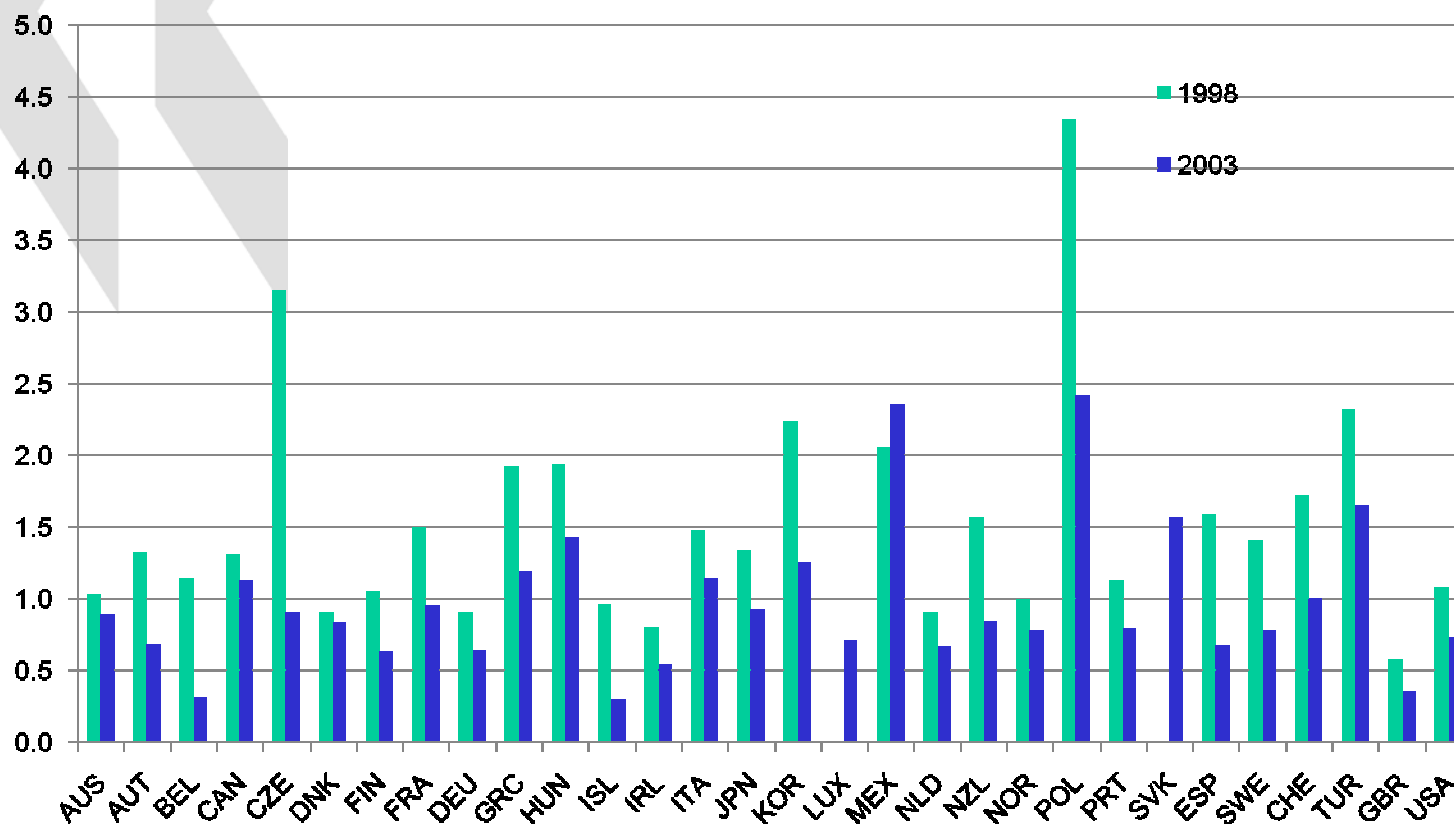


Barriers to trade in services

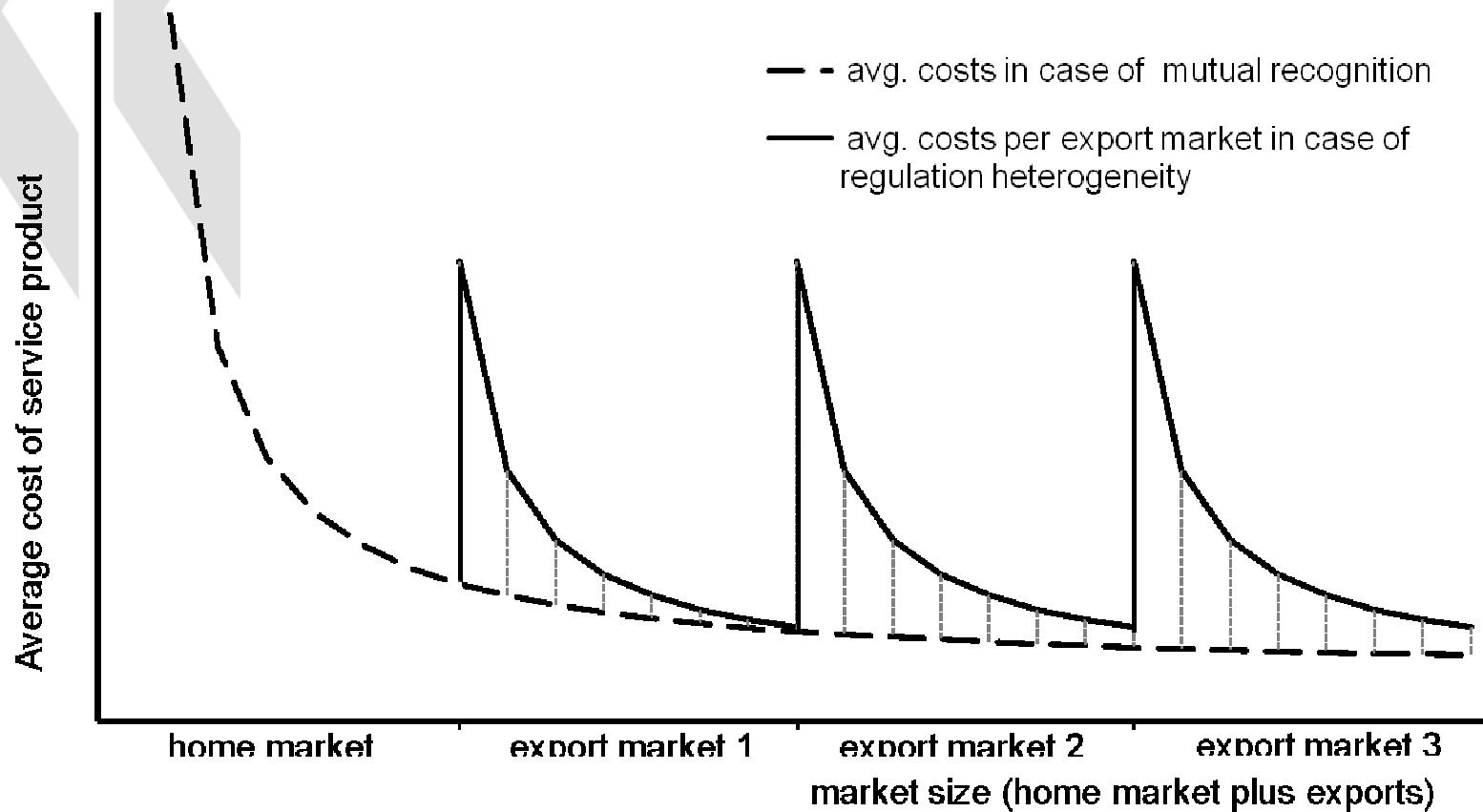
- Services trade barriers are mainly behind the border in OECD countries;
- These take the form of domestic regulation;
- Regulation induces entry costs as well as additional operating costs of foreign suppliers;
- Both the level of regulation and differences in regulation have an impact on trade costs and trade.

The OECD product market regulation indicators, barriers to trade and investment

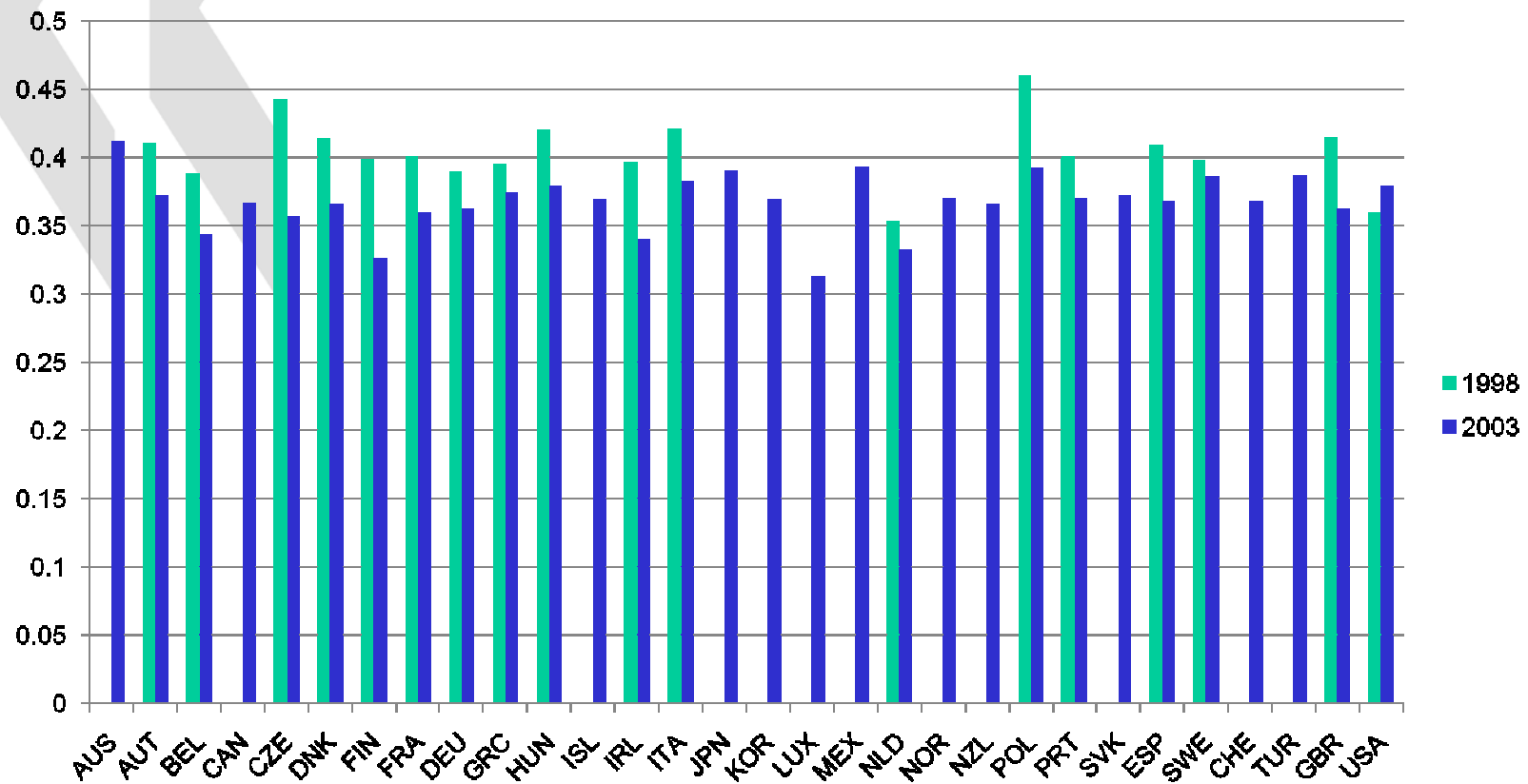
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Why regulatory *differences* matter



Average heterogeneity index by country



Quantifying the trade impact of domestic regulation

- How does the level of regulation affect:
 - Market entry (the extensive margin)?
 - Trade flows (the intensive margin)?
- How do differences in regulation affect
 - Market entry?
 - Trade flows?
- How can we derive from this (and/or from other sources of information):
 - A (tariff equivalent?) trade barrier for services?
 - The cost of entering the market?

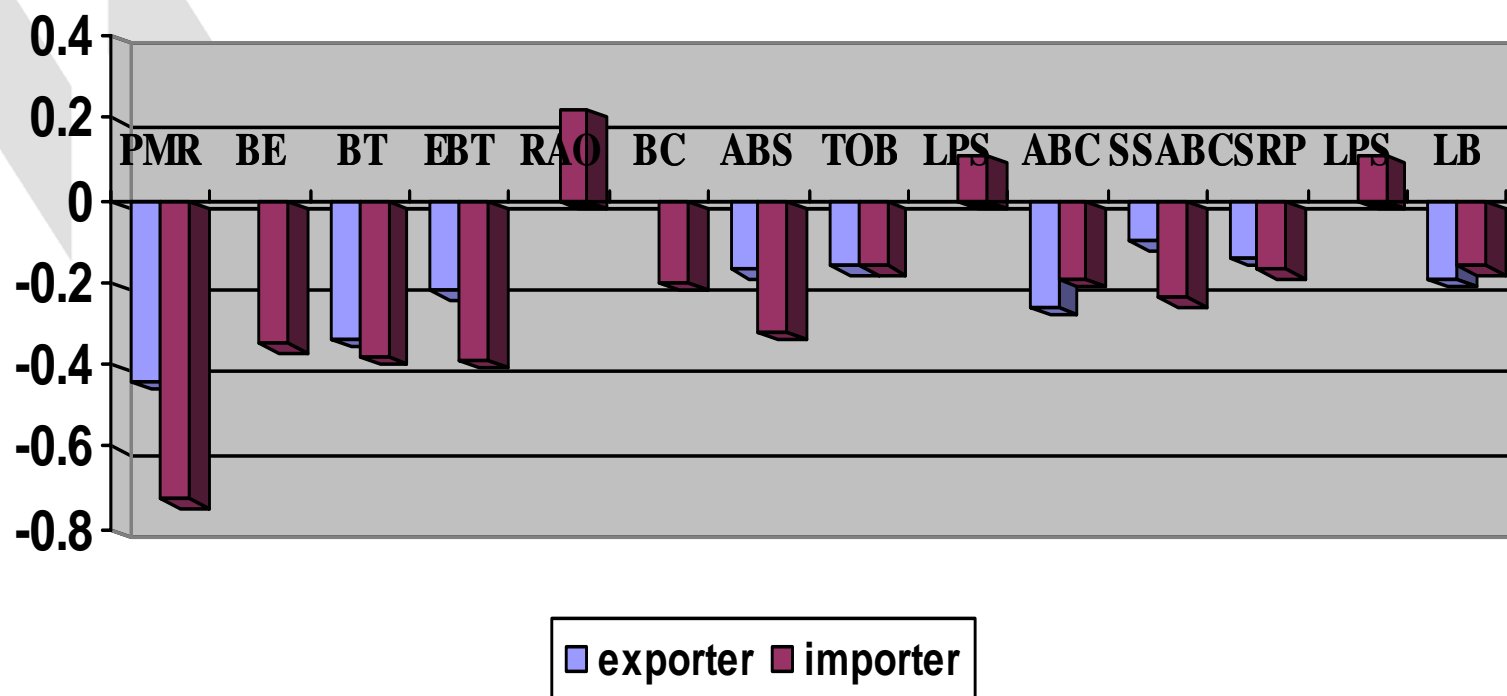
Methodology

- Estimating the gravity model:
 - Probit estimates of the probability to enter a market (the extensive margin)
 - The PPML estimator for estimating the impact of regulation on trade flows;
 - Includes both regulatory levels and regulatory heterogeneity
- Next step: assess how regulation affect choice of mode of entering a market

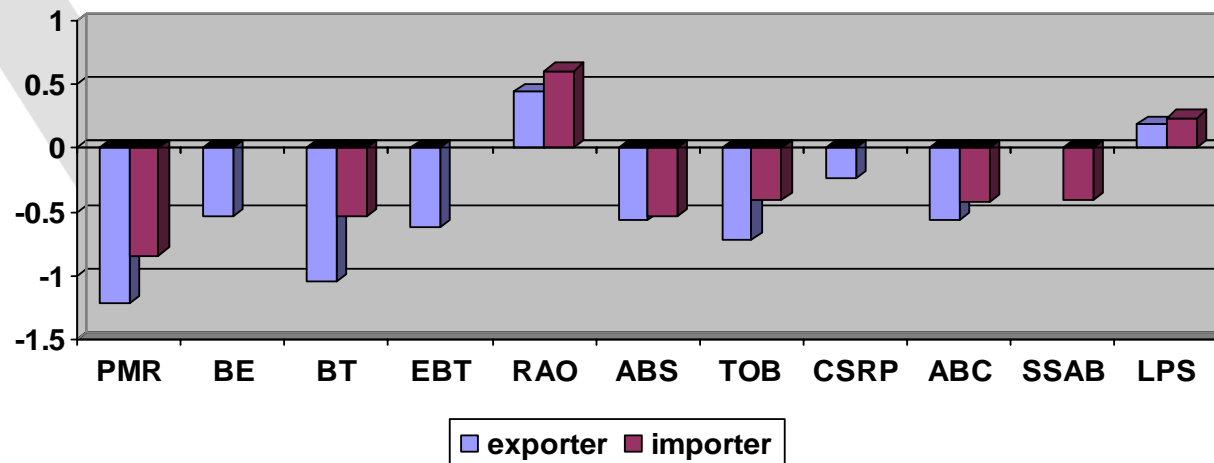
Results - probit

- Regulation both in exporter and importer country matters;
- For total services, regulation indices in the **importing** country are strongest;
- In other business services, regulation **at home** constrains domestic firms from entering foreign markets and this effect is stronger than the impact of regulation in the importing country;
- Regulatory heterogeneity has a negative and highly significant impact on market entry for total services trade (but no significant impact was found on other business services).
 - NB: Bilateral trade data for US only available for total trade.

Results PPML – total services, elasticities



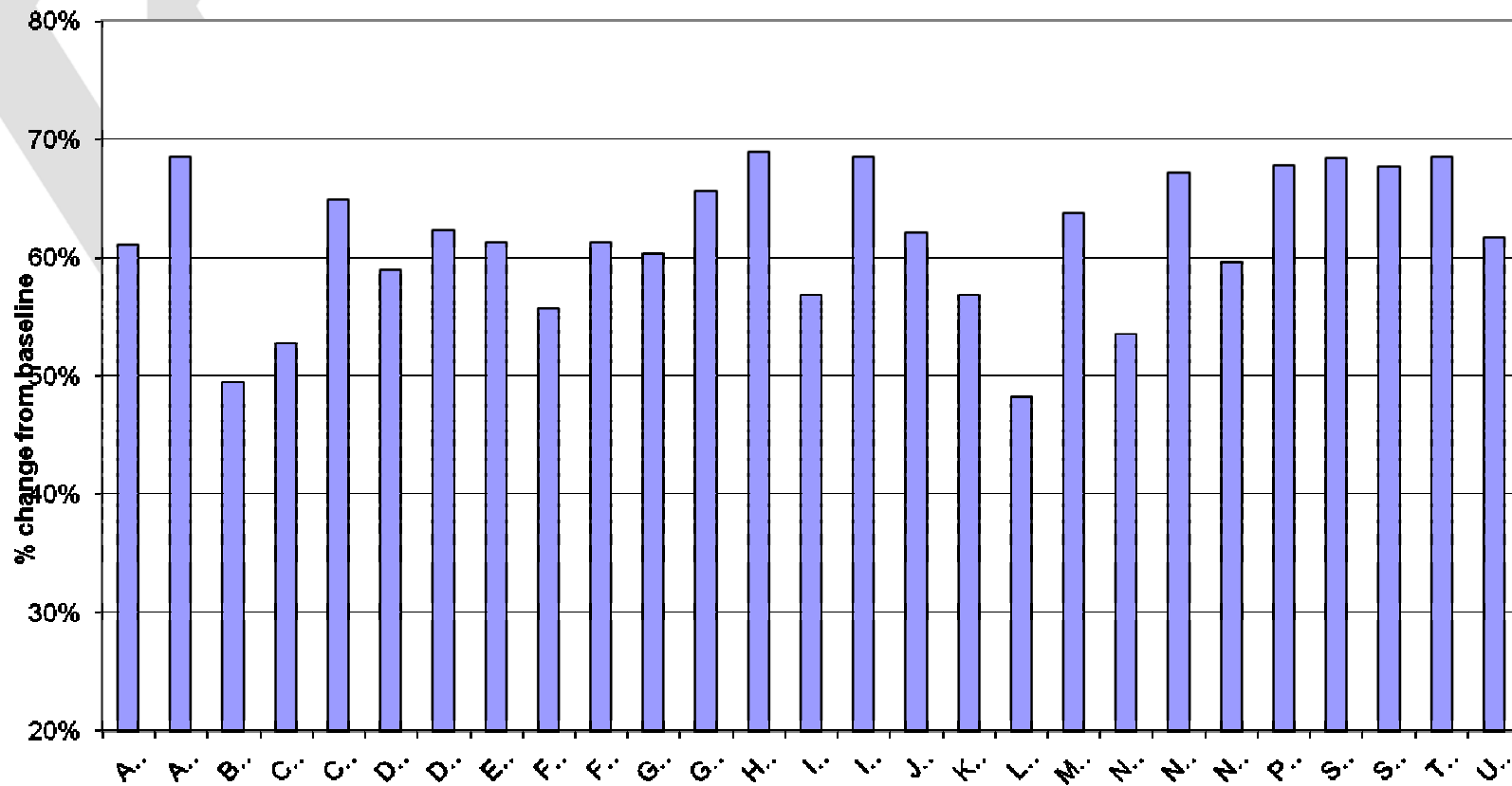
The trade impact of regulation intensity – other business services



Caveats

- Results sensitive to estimation technique (log or not for the levels or regulation);
- The larger effect of exporter regulation on exports for business services and no significant effect of heterogeneity robust to estimation technique;
- The large and negative effect on regulatory levels on business services are also robust:
- The more detailed the indicators, the less robust results – the overall regulatory framework appears to matter more than the details.
 - An argument for developing aggregated restrictiveness indicators

Predicted change in exports following full regulatory harmonisation



Future research – quantify services trade restrictions - a STRI

- The simplest possible (for goods) is the average tariff rate converted to an index between 0 and 1 as follows:

$$TRI = \frac{1}{1+T}$$

$$T = \sum_i \theta_i t_i$$

$$\sum_i \theta_i = 1$$

But this is not a appropriate for services trade

T

- T has to be a tariff equivalent
- Variable trade costs can be converted to a tariff equivalent, but recurring fixed costs usually cannot;
- Entry barriers (sunk costs) cannot be converted to a tariff equivalent;
- Should a STRI capture both fixed and variable costs?
- If so, by separate indicators?

What to aggregate ? ;

- Which measures can be aggregated into one index?
 - “apples with apples”, “oranges with oranges”
 - Apples and oranges (fruits) if a common measure can be found (value, weight, calorie content, vitamin content....);
- A common denominator is required. The more aggregated the index, the more general the common denominator.

What about the individual components of the index, t_i

- Identify and quantify the individual components of the T;
 - Categorise the components (e.g. market access, national treatment; variable, fixed; by mode)
 - Quantify/assign scores to the components:
 - Expert judgement,
 - Statistical methods,
 - Econometric methods – e.g. the gravity model

And the weights?

?

- By impact on trade?
- By impact on welfare?
- By contribution to variation in trade barriers?
- When modes are to be aggregated into a sector index: Are modes substitutes, complements or independent?
- No single correct answer – it depends on what the index will be used for;

Conclusions

- The gravity model is useful tool for quantifying the impact of trade barriers on trade, both on the extensive and the intensive margin;
- Data on both trade and regulation leave much to desire;
- Further research needs to shed light on:
 - To what extent regulatory barriers in services are additive, multiplicative or a combination;
 - Identify binding barriers;
 - To what extent a regulatory measure affects the intensive or extensive margin – or both;
 - To what extent the four modes of trade in services are complementary, substitutes or neither
- Comments and suggestions are very much welcome