



TRADE IMPACT  
FOR GOOD

# From Tariffs to Standards

## Assessing the role of Non-Tariff Measures

FIW-Workshop

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# Plan

## 1. SME Competitiveness Outlook 2016:

### Meeting the standard for trade

- Thematic part: Standards and regulations
- Country profiles and regional analysis

## 2. The effect of NTMs on countries' GVC participation

- Introduction
- Measure of GVCs
- Measure of NTMs: Regulatory distance
- Empirical framework
- Results

# Meeting the Standard for Trade

ITC Flagship Report 2016 provides evidence on how standards and regulations affect SME international competitiveness.

Report contains:

- Comprehensive analysis based on
  - NTM regulatory data (ITC, UNCTAD, World Bank)
  - Firm-level surveys on NTMs
  - Voluntary sustainability standards
- Global thought leader insights
- Case studies
  
- Guidance for SME managers
- 5 Point Action Plan for Policy Makers
- How to think strategically about standards:
  - Regional snapshots
  - 35 country profiles



# For entrepreneurs, terminology is not of primary concern

The terms 'standard' and 'regulation' mean different things to those who use them.

ITC firm-level surveys show that what matters for SME interviewees is whether access to a selected market depends on meeting the relevant quality level, not whether that level is imposed by the government or a non-governmental actor.

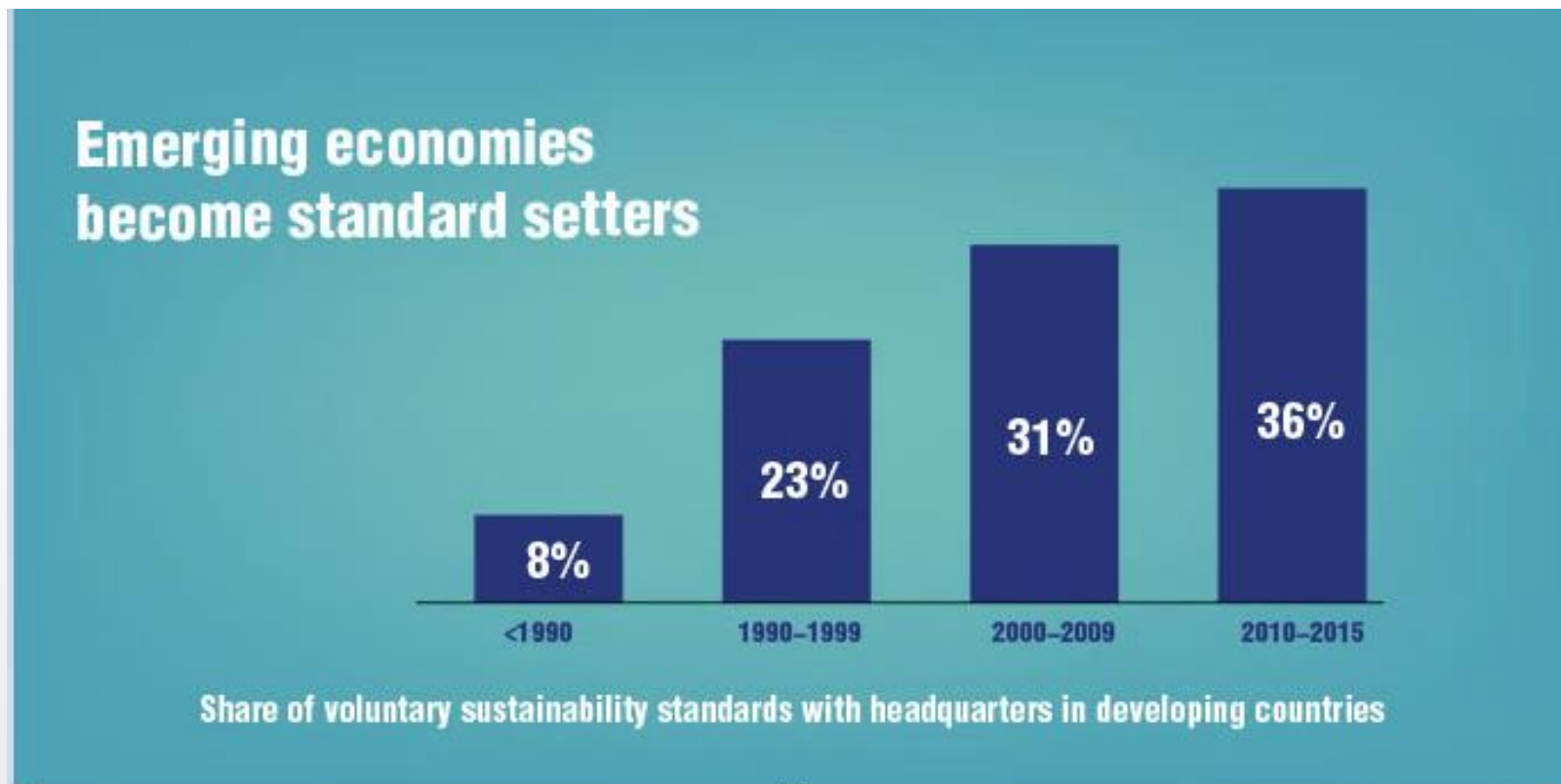
In this presentation:

- Standard – a required or agreed level of quality or attainment.
- Regulation – a rule or directive made and maintained by an authority, often a government.

# Standards are an inherent part of international trade

- They are pervasive and diverse;
- They affect every aspect of running a business;
- They are in high demand by consumers (protection, environmental, social sustainability)
- They can facilitate trade

# Standards are not only set in industrialized countries



**#SMEOutlook**

**Standards are here to stay ...**

**...but they also represent a cost for business**



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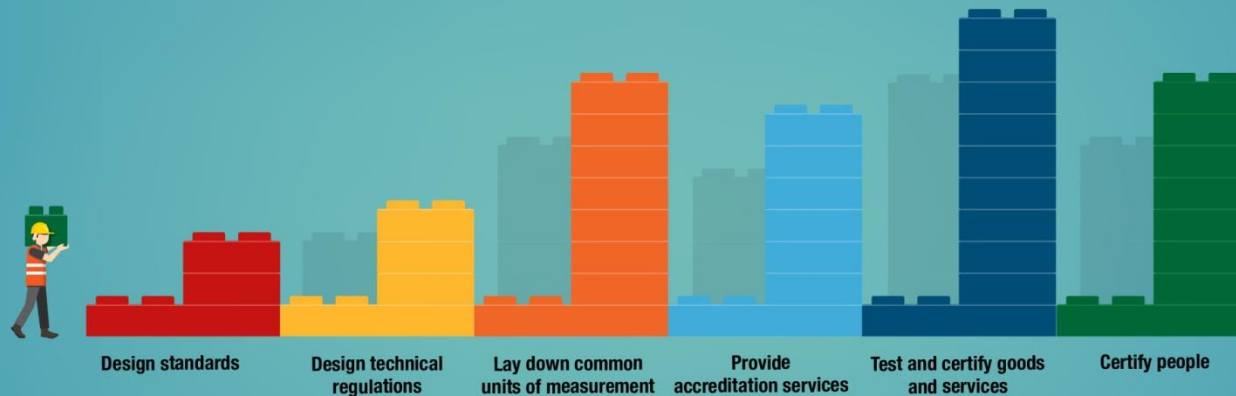
# Regulatory burdens hit small firms twice as hard as large firms





# Governments may have to make hard choices

**Governments build technical infrastructure piece by piece**



**But standards and regulations are often sector or even product-specific**

Being part of an GVC reduces costs for SMEs



But only the most competitive SMEs manage to enter GVCs



# Hard choices; but way forward exists

## Five-point government action plan

- 1 Facilitate access to information and technology 
- 2 Strengthen firm capacity to implement requirements 
- 3 Be strategic when investing in technical infrastructure 
- 4 Strengthen governance at home 
- 5 Facilitate trade through international mechanisms 



**#SMEOutlook**

**Information on growth opportunities  
and on SME competitiveness  
is needed for strategic decisions**



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# Asia Pacific



- Still unexploited export potential in **IT and electronics**
- **Chemicals** are promising avenue for export diversification (21% of the top 200 products are in this sector)
- International management and quality standards well adopted in large economies like **China and India, but several other economies in region are lagging behind**
- Shift from electronics/IT to chemicals will imply **shift from compatibility standards to consumer protection standards**

More on:

<http://www.intracen.org/smecompetitiveness>

#SMEOutlook



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# The effect of NTMs on countries' GVC participation

Loe Franssen and Olga Solleder



# Introduction

- Harmonisation/regulatory heterogeneity in the negotiations of mega-regionals
- Multiple channels through which technical measures can affect countries' participation in GVCs
  - Direct
  - Indirect – via imports of intermediates
- Focus on legitimate technical measures (SPS, TBT)

# Summary

## **Research question:**

What is the effect of the regulatory heterogeneity on countries' forward participation in GVCs?

## **Measurement:**

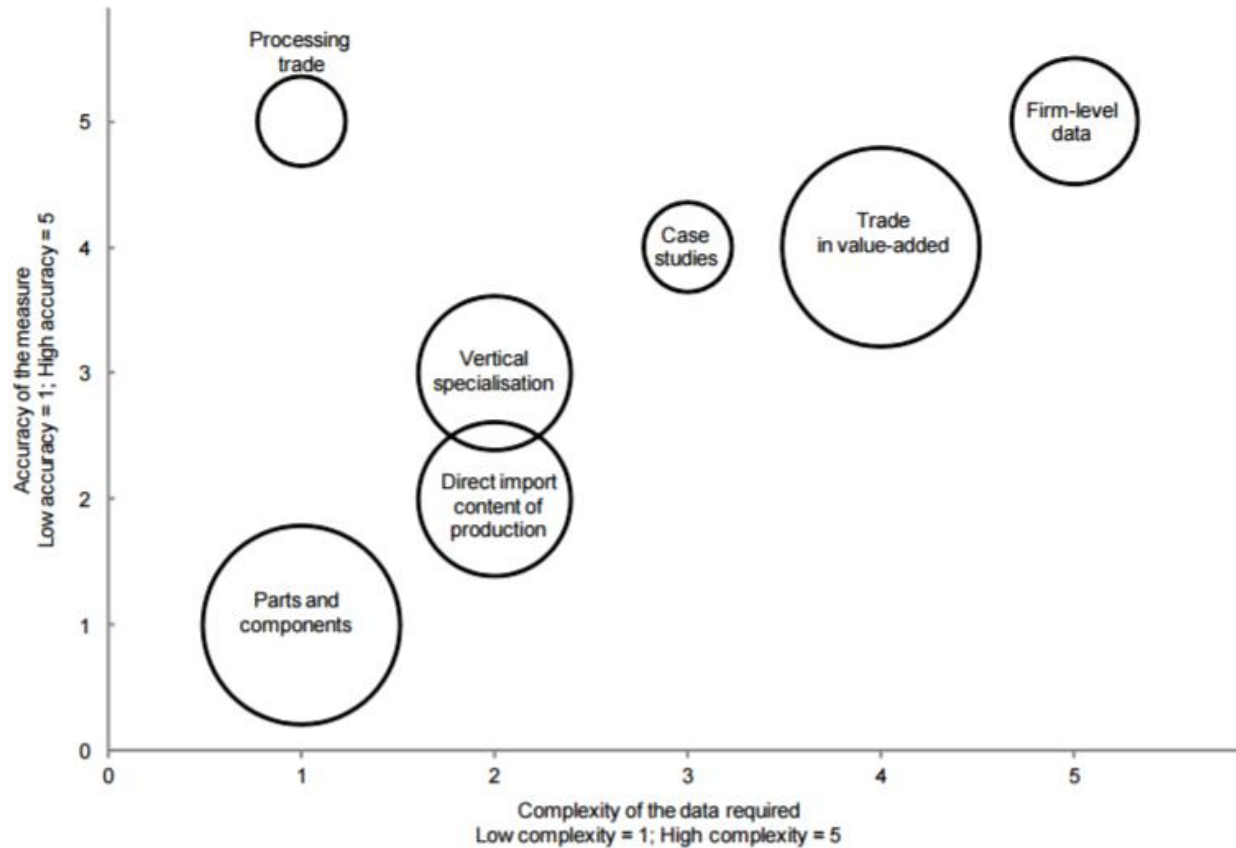
- GVC: intermediate and final goods (UN BEC Classification)
- NTMs: regulatory distance combined with Input-Output tables

## **Findings:**

Export of final goods is negatively associated with the regulatory distance on intermediate inputs.

# Measuring GVC

Figure 7: Summary of main strands of the empirical research on GVCs



Notes: The size of the circles represents the coverage of each measure relatively to the real size of the GVCs phenomenon in the world economy, with larger circles standing for higher coverage. The x-axis corresponds to the complexity of data required to compute the measure and the y-axis stands for the accuracy of the resulting quantification, i.e., to what extent the measure records with precision the aspects of GVCs that it aims to assess.

Source: João Amador and Sónia Cabral, 2014

# Literature review: GVCs

- Trade in parts and components
  - Feenstra et al (2000); Egger and Egger (2001)
- Firm-level data
  - Shepherd & Stone (2012)
- Trade in value added / Input-output
  - Feenstra and Hanson 1996
  - Daudin et al (2011) ; Johnson and Noguera (2012) Koopman, Wang, Wei (2014)

# Literature review: NTMs (1)

- Frequency based measures
  - Cadot & Malouche (World Bank, 2012)
  - Gourdon (CEPI, 2014)
- Ad Valorem Equivalents (AVEs)
  - Kee, Nicita and Olarreaga (2009)
  - Grübler, Ghodsi and Stehrer (2015)
  - Ghodsi and Stehrer (2016)
  - Fontagné, Mitaritonna, Signoret (2016)

# Literature review: NTMs (2)

- Expert evaluations
  - Borchert, Gootiiz and Mattoo (World Bank, 2012)
- Regulatory distance
  - Kox and Lejour (2005)
  - Kox and Nordås (2007, 2009)
  - Winchester et al (2012)
  - Knebel et al (UNCTAD, 2016)
  - Nordås (2016)
  - EU NTM Impact project

# Regulatory distance: example

NTM types and codes for a specific product at HS-6 level: e.g. beef	Country X	Country Y	Country Z
A21: Maximum residue limit	1	1	0
A81: SPS inspection	1	1	0
A83: SPS certificate	0	1	0
A14: Special authorization	0	0	1

b) data-analysis of "distance in regulatory structures"



a) in-depth analysis of specific regulations to compare the stringency of measures

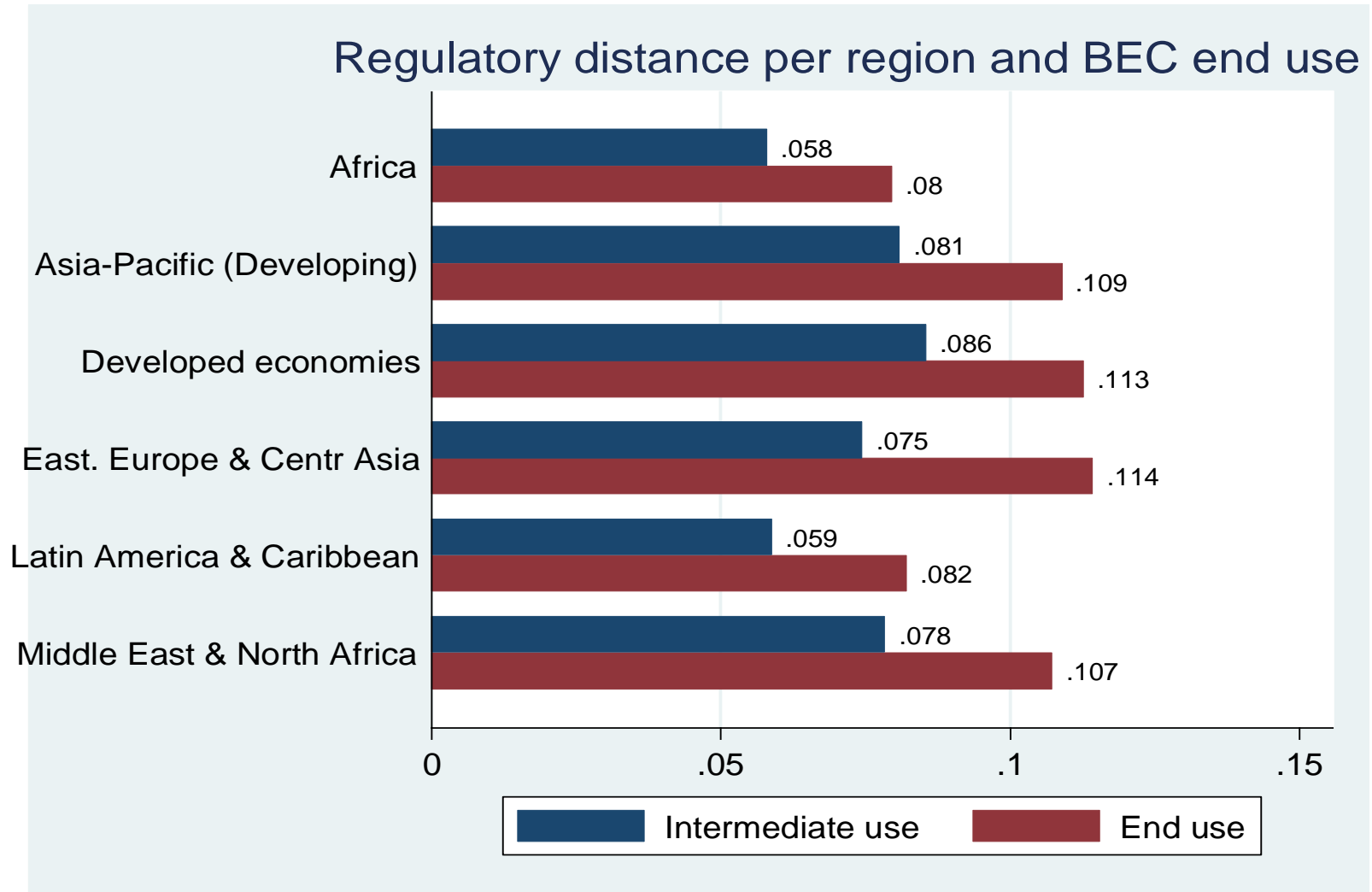
Source: Knebel et al, 2016

Aggregating over product  $p$  and measure type  $k$ , the unweighted regulatory distance between industry  $j$  in the home country  $c$  and industry  $i$  in the partner country  $f$ :

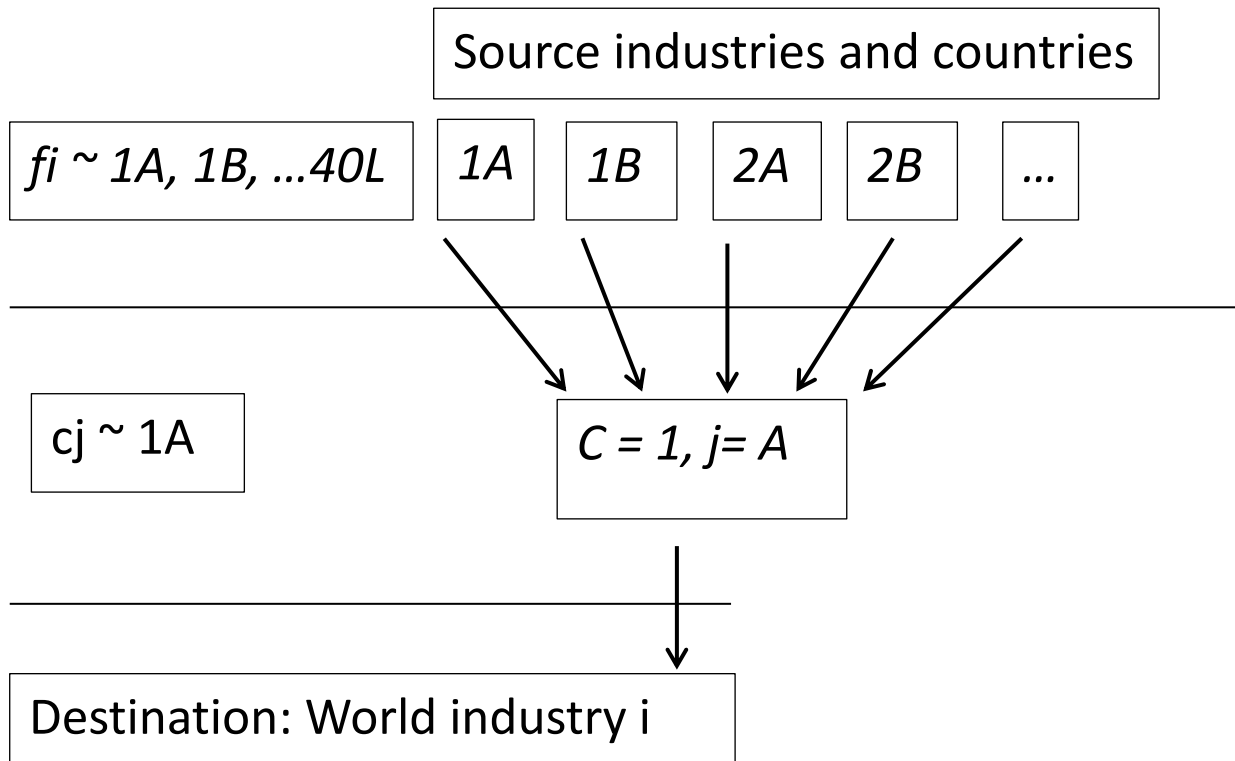
$$RD_{cjfi} = \frac{1}{pk} * \sum_{pk} |n_{cjfipk} - n_{ficjpk}|$$



# Regulatory distance: summary stats



# Regulatory distance applied to GVC



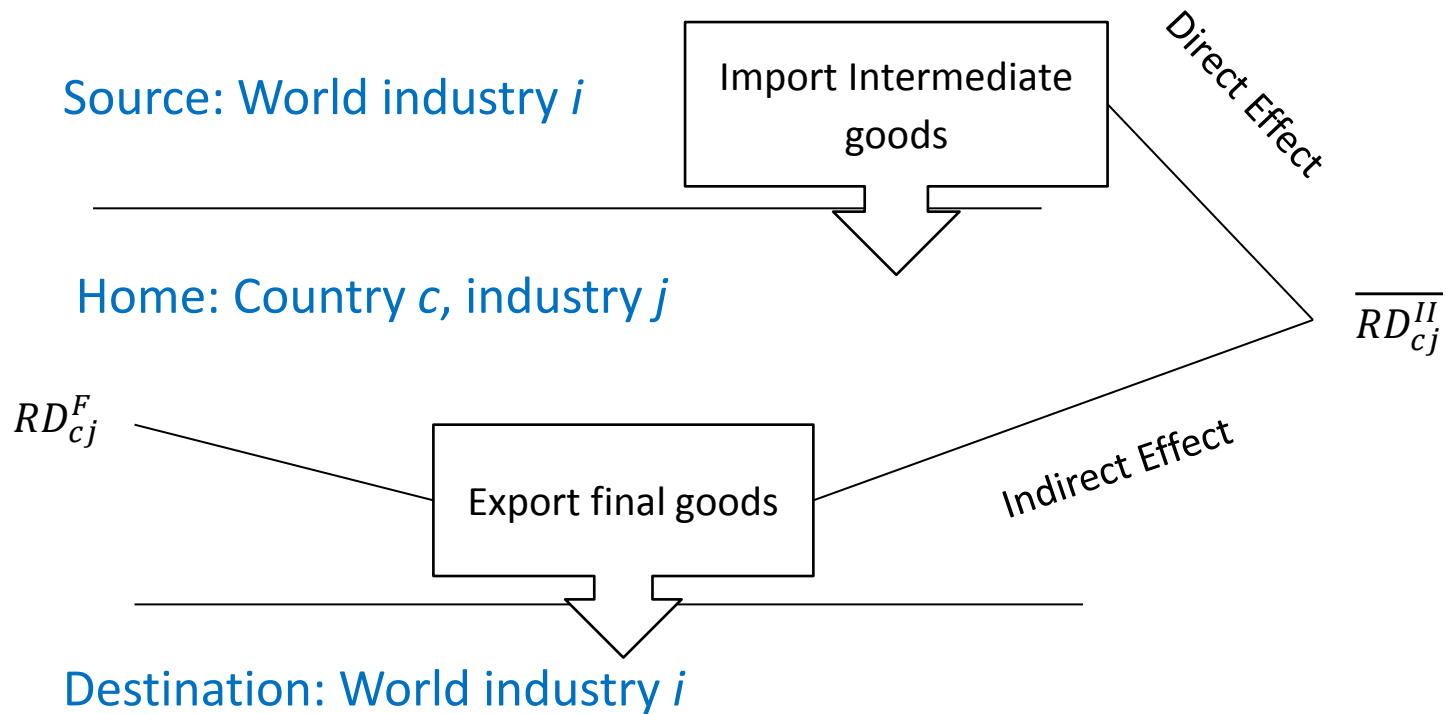
The extent to which the regulatory distance between  $c_j$  and  $i$  is a problem depends on how much  $c_j$  relies on  $i$ . Therefore, in estimating the effect of RD on the exports of  $c_j$ , we weigh  $RD_{ficj}^{II}$  by the relative contribution of foreign industry  $i$  to domestic industry  $c_j$  via IO coefficients, indicated as  $a_{icj}$ :

$$\overline{RD}_{c_j}^{II} = \sum_f \sum_i IO_{ficj} * RD_{ficj}^{II}$$

# Data

<b>Name</b>	<b>Source</b>	<b>Level</b>	<b>Scope</b>
Regulatory database on NTMs	ITC, UNCTAD and World Bank	HS 6	48 countries, cross-section, technical regulations only
Trade Map	ITC	HS 6	Export values of final goods
EORA Multi Region Input Output (MRIO) Database	Lenzen, Kanemoto, Moran and Geschke (2013)	Industry level (ISIC)	IO weights

# Empirical framework

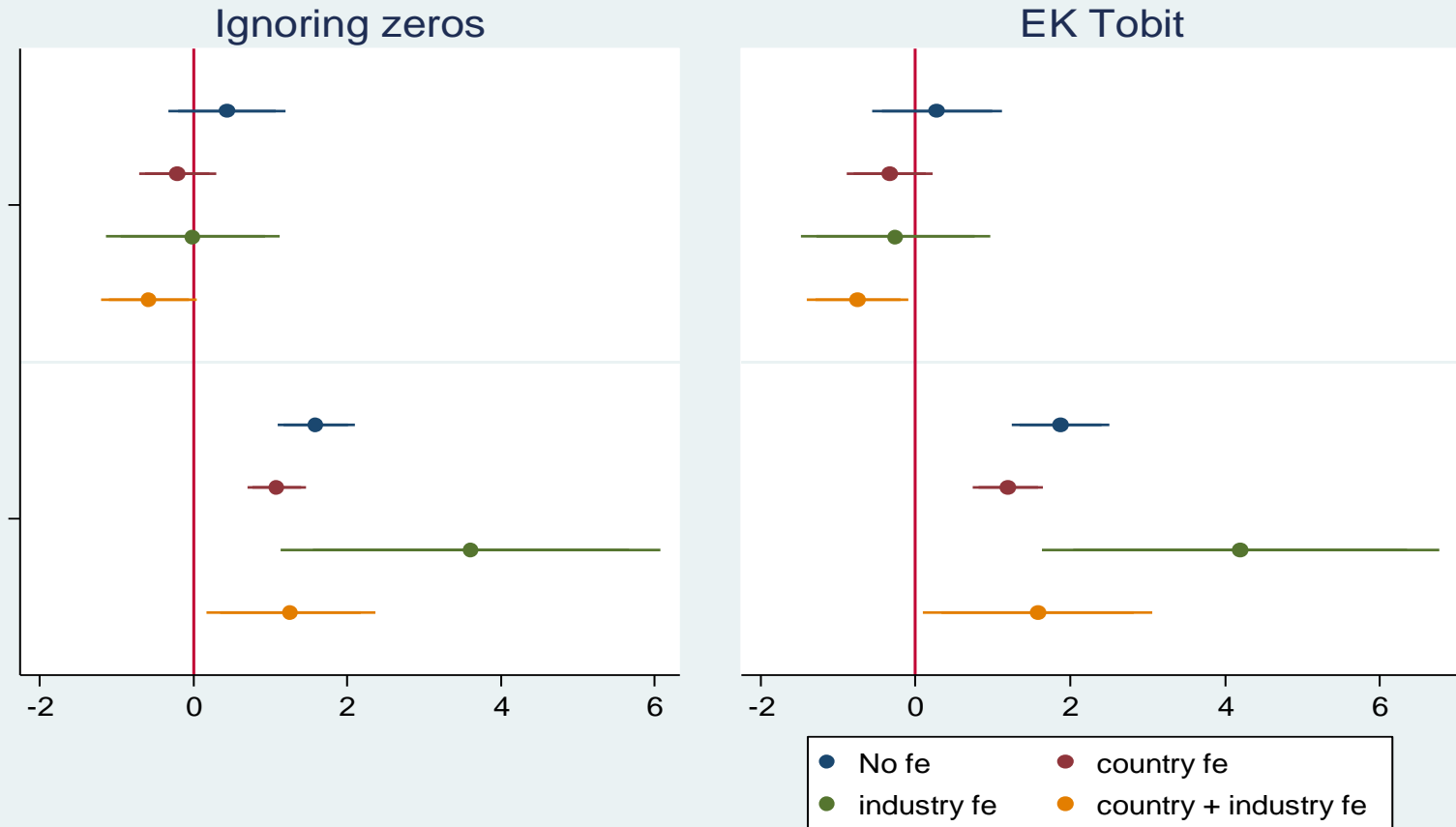


# Estimated equation

$$\ln(\text{Exports}_{cj}^{\text{Final}}) = \alpha_1 \ln(\overline{\text{RD}_{cj}^{\text{II}}}) + \alpha_2 \ln(\text{RD}_{cj}^{\text{F}}) + \delta_c + \varphi_j + \varepsilon_{cj}$$

# Preliminary results

## The Effects of NTMs on Export of Final Goods



Note: The graph shows 95% confidence intervals

# Preliminary results – cont.

	Export of final goods (1)	Export of final goods (2)	Export of final goods (3)	Export of final goods (4)
	no fe	country fe	industry fe	country and industry fe
$\text{Ln}(\overline{\text{RD}}_{\text{cj}}^{\text{II}})$	0.278 (0.649)	-0.333 (-1.183)	-0.257 (-0.413)	-0.745** (-2.233)
$\text{Ln}(\text{RD}_{\text{cj}}^{\text{F}})$	1.873*** (5.872)	1.195*** (5.136)	4.198*** (3.211)	1.581** (2.102)
Constant	16.91*** (7.527)	13.54*** (9.212)	17.32*** (6.038)	11.97*** (6.190)
Observations	400	400	400	400



# Concluding remarks

- We integrate the regulatory distance concept into GVCs.
- Regulatory distance is negatively related to countries' forward participation in GVCs.
- Policy implications:  
International standards > harmonisation > national standards

# Next steps

- Theoretical model/better identification
- Extension to the panel dataset