

Digital Restrictiveness and its Economic Impacts

WTI | EUI World Trade Forum 2019

25 October, Bern

Erik van der Marel

Senior Economist at ECIPE

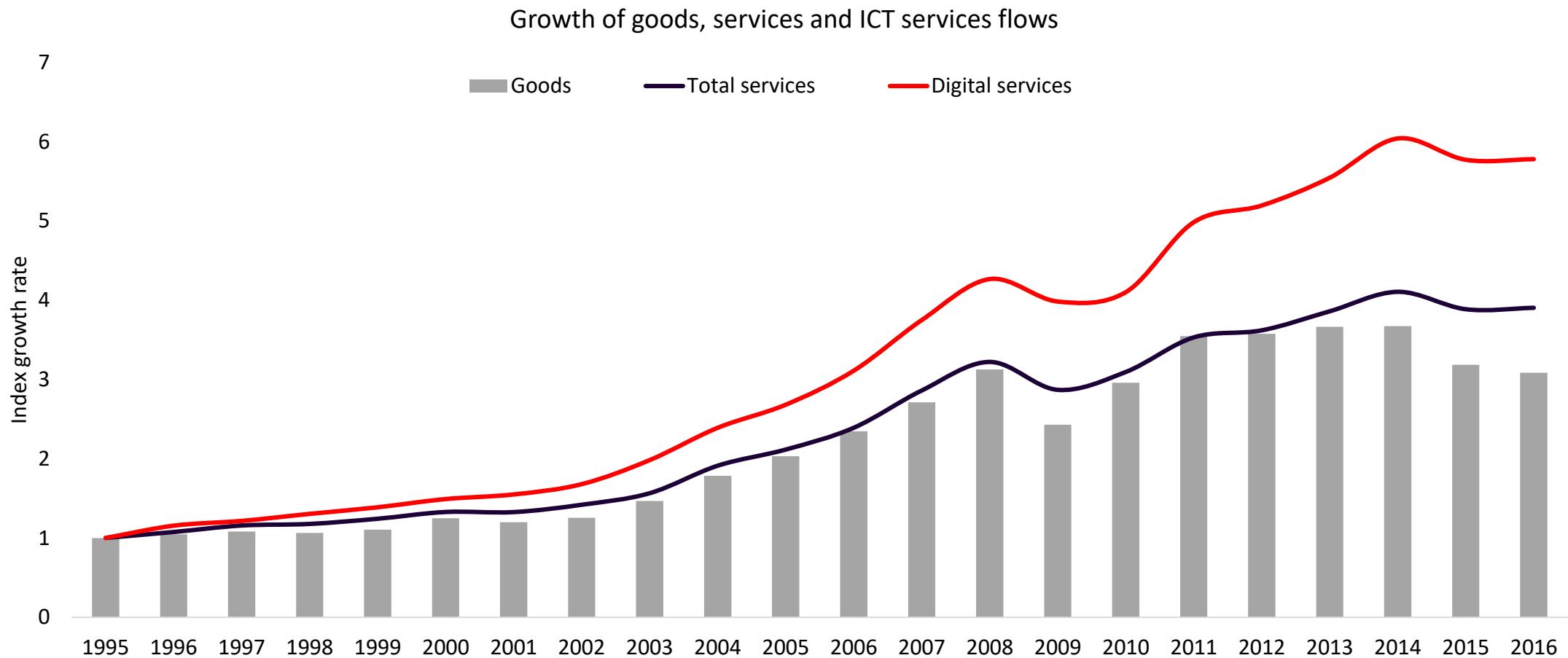
Université Libre de Bruxelles (ULB) - Solvay Brussels School

E

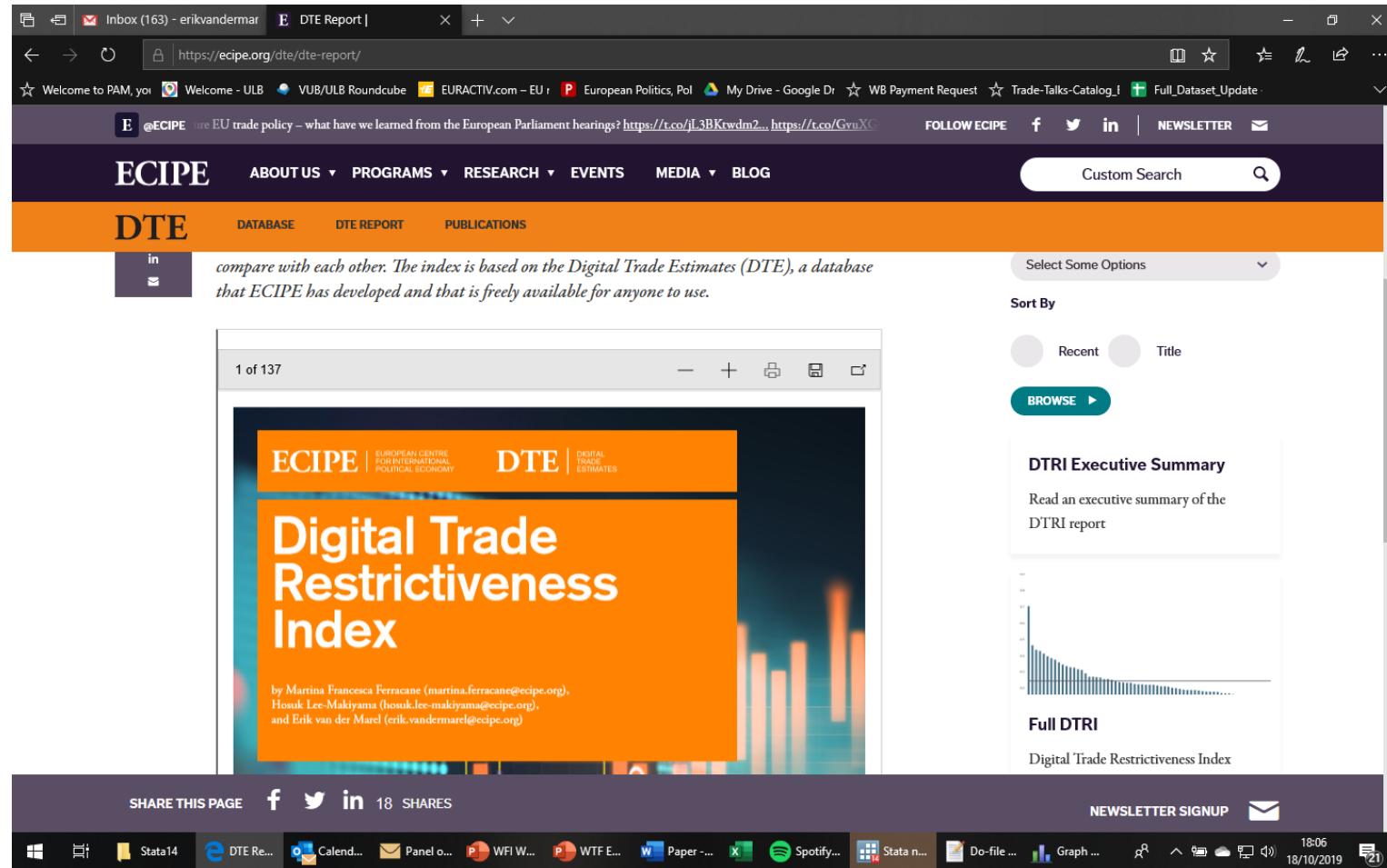
Concept

- Restrictions to digital trade and technologies
- Economic impacts of these digital restrictions

Services over the internet



Digital Trade Restrictiveness Index



The screenshot shows a web browser window with the following details:

- Address Bar:** https://ecipe.org/dte/dte-report/
- Header:** ECIE DTE Report | Inbox (163) - erikvandermar
- Page Title:** ECIE | DTE | Digital Trade Estimates
- Page Content:** The main content area displays the ECIE DTE Executive Summary. It features a large orange graphic with the text "Digital Trade Restrictiveness Index" and a bar chart. Below the graphic, it says "by Martina Francesca Ferracane (martina.ferracane@ecipe.org), Housuk Lee-Makiyama (housuk.lee-makiyama@ecipe.org), and Erik van der Marel (erik.vandermarel@ecipe.org)".
- Right Sidebar:** Includes sections for "Select Some Options", "Sort By" (Recent, Title), a "BROWSE" button, and a "DTRI Executive Summary" section with a "Read an executive summary of the DTRI report" link.
- Bottom Navigation:** "SHARE THIS PAGE" with social media icons (Facebook, Twitter, LinkedIn) and a "18 SHARES" count. "NEWSLETTER SIGNUP" with an envelope icon.
- Taskbar:** Shows various open applications including Stata14, DTE Report, Calendar, Panel o..., WiFi W..., WTF E..., Paper ..., Spotify..., Stata n..., Do-file ..., Graph ..., and a file with 21 pages.

E

The role of data in globalization

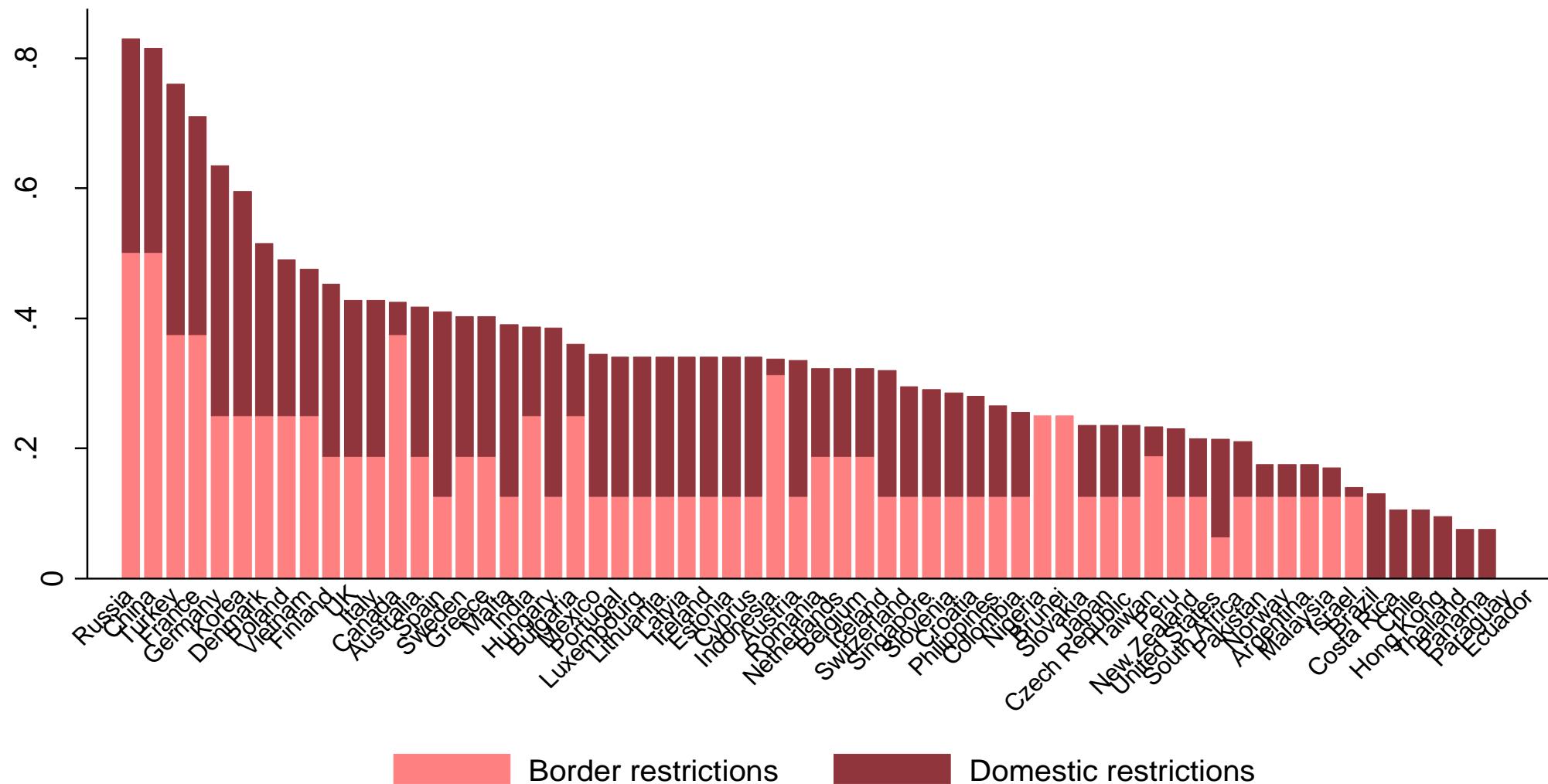
- Contribution of data to GDP > goods (McKinsey)
- Particularly great role in Artificial Intelligence (Goldfarb and Trefler, 2018)

What “trade” policies are problematic?

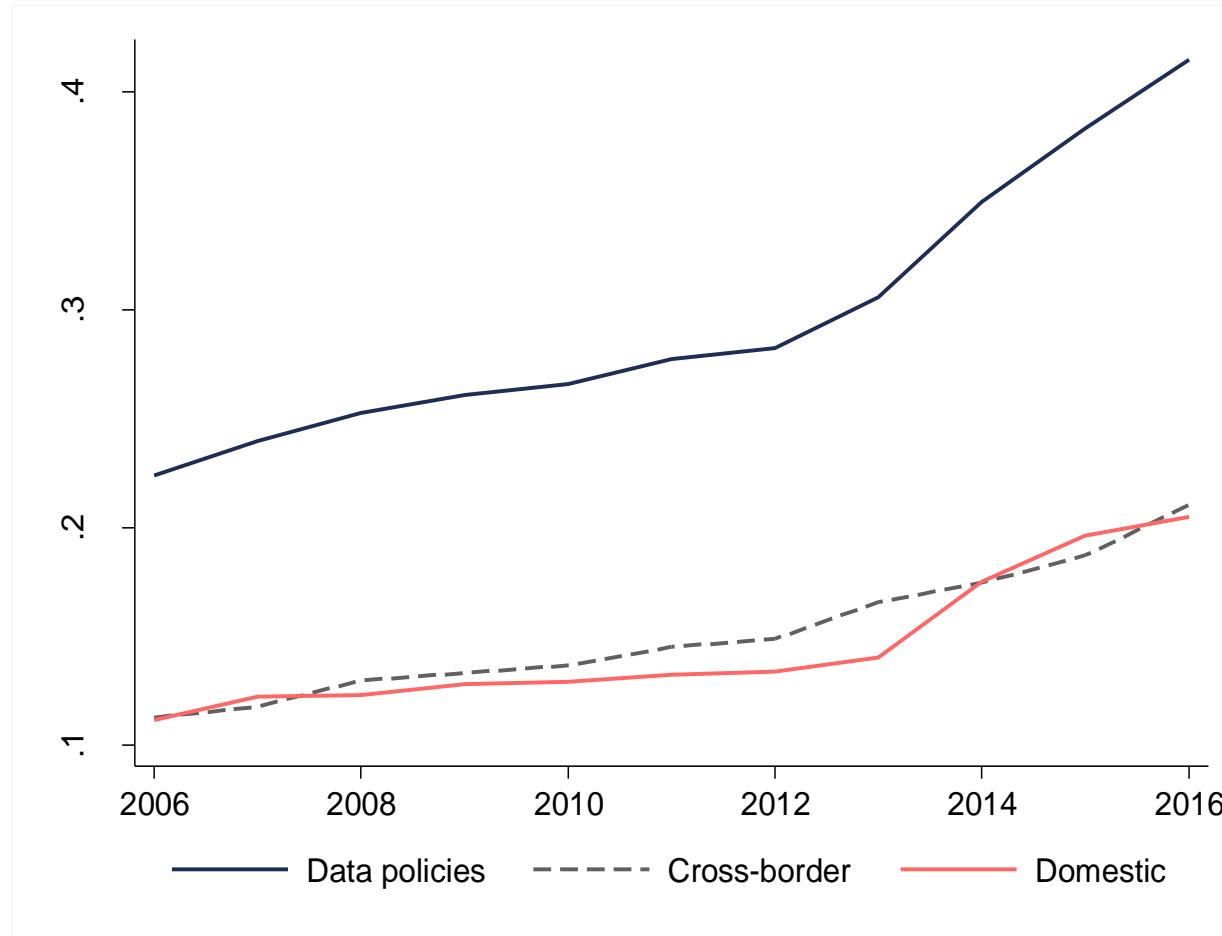
	Internet com services	Cloud-based data processing	Digital content	E-commerce	IoT
Data measures					
Data protection and privacy	x	x	x	x	x
Data localization	x	x		x	x
Cybersecurity measures					
Disclosing source codes		x	x	x	x
Restrictions on cryptography	x	x	x	x	x
Censorship					
IPR measures					
Intermediate liability	x		x	x	
Ancillary copyrights	x		x	x	

USITC (2017)

Restrictions in data



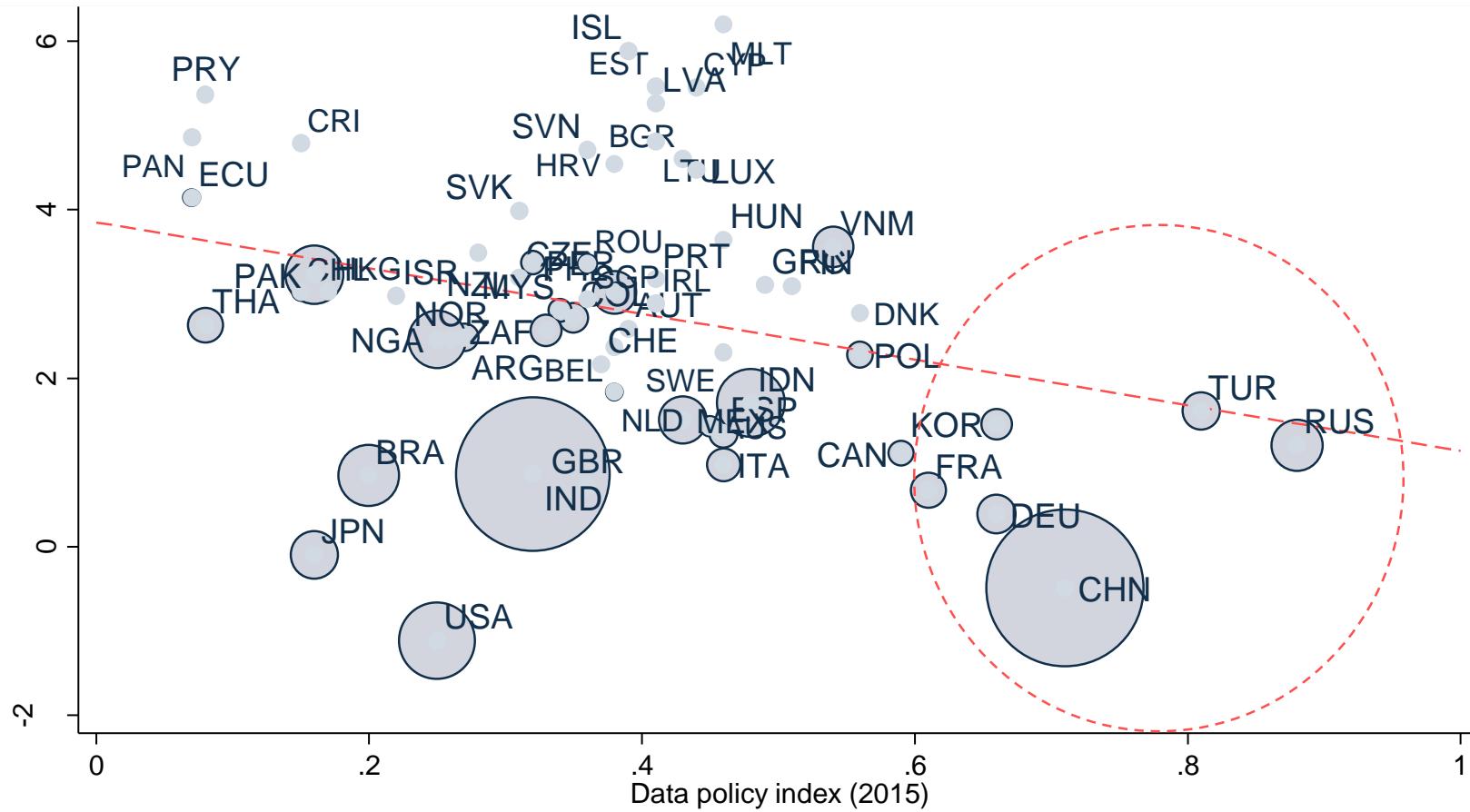
“Global” trend in data policies



Impacts

- On trade in services (performed over the internet)
- On productivity (of local firms)
- On digital innovation (in East Asia)

On trade in services



On trade in services

- Especially w.r.t. cross-border data policies
- Especially on imports over the internet

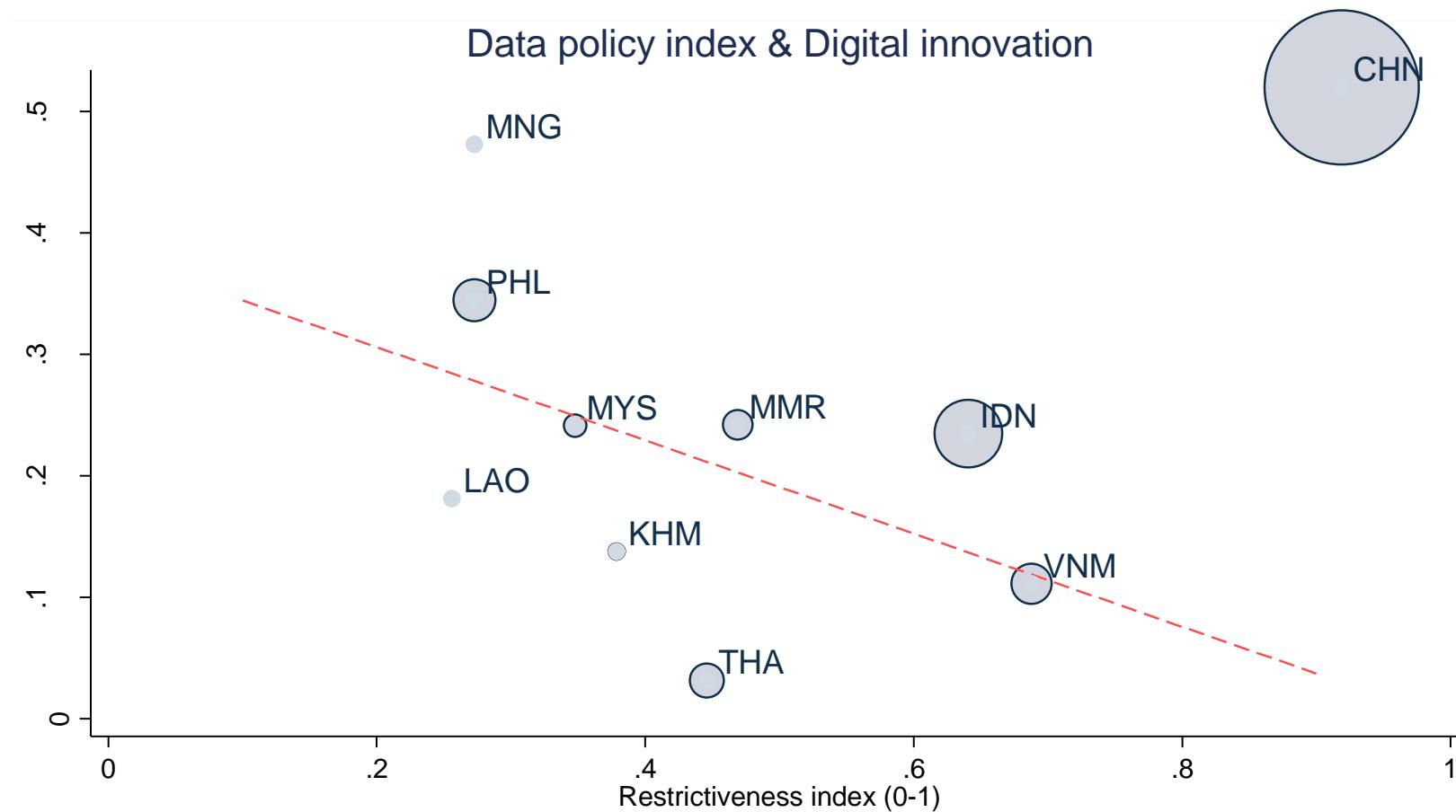
On productivity

	(1) TFP	(2) TFP	(3) TFP	(4) TFP
ln(D/L) * Data policy	-0.334*** (0.000)			
ln(D/L) * Data policy CB		-0.257*** (0.000)		-0.305*** (0.000)
ln(D/L) * Data policy DOM			-0.330*** (0.000)	-0.340*** (0.000)
FE Country-Year	Yes	Yes	Yes	Yes
FE Sector-Year	Yes	Yes	Yes	Yes
Firm controls	Yes	Yes	Yes	Yes
Observations	3516012	3516012	3516012	3516012
R2A	0.866	0.865	0.866	0.866
R2W	0.023	0.015	0.022	0.023
RMSE	0.444	0.445	0.444	0.444

On productivity

- Especially w.r.t. policies for domestic use of data
- Especially on local small and medium sized firms (SMEs)

On digital innovation



On digital innovation

- Especially w.r.t. acquiring licenses for foreign technology
- Especially on local firms in East Asian countries

Conclusion

- Digital restrictions matter, especially for intangible trade
- Larger manufacturing-based (middle-income) countries ↑
- However, enabling environment matters too (example EU)
 - And trust