

Digital Restrictiveness and its Economic Impacts

WTI | EUI World Trade Forum 2019

25 October, Bern

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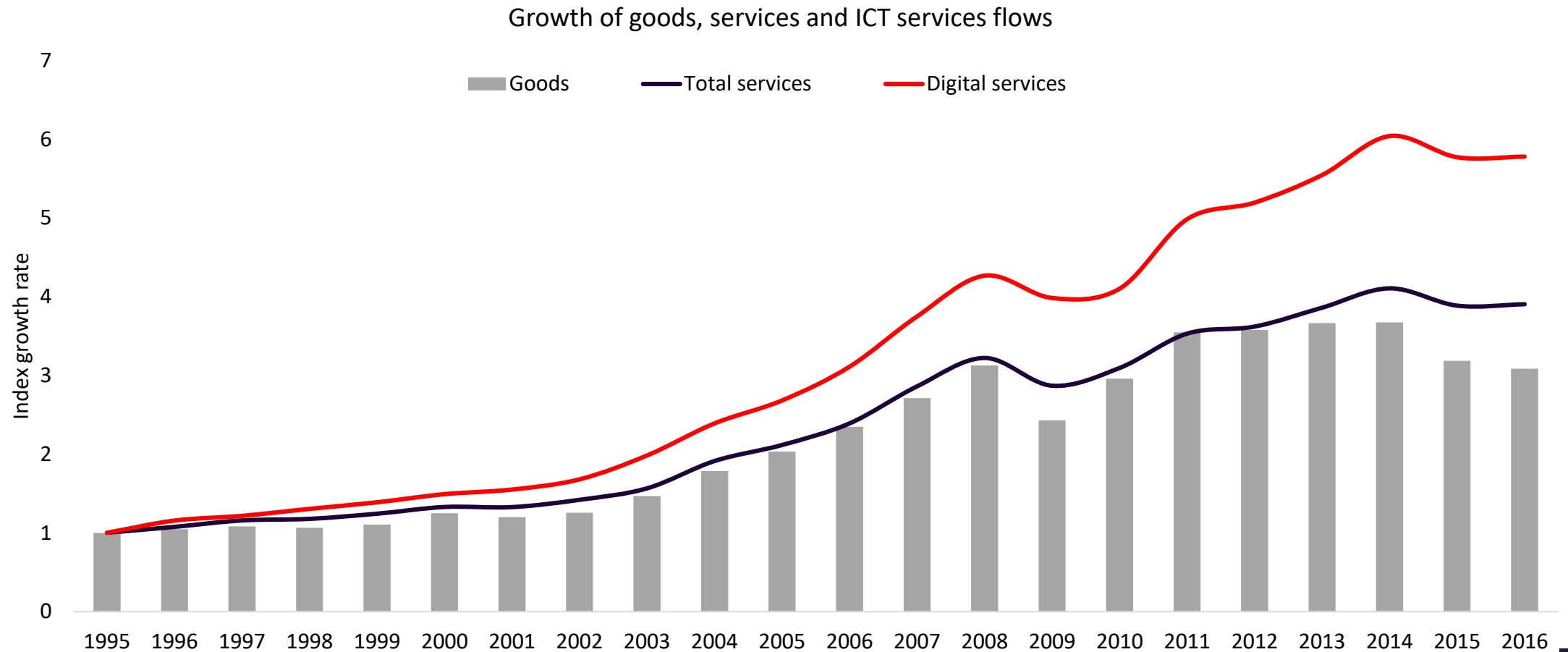
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Concept

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

Services over the internet



Digital Trade Restrictiveness Index

The screenshot displays the ECIPE website's DTE Report page. The browser address bar shows the URL <https://ecipe.org/dte-report/>. The website header includes the ECIPE logo, navigation menus for 'ABOUT US', 'PROGRAMS', 'RESEARCH', 'EVENTS', 'MEDIA', and 'BLOG', and a search bar labeled 'Custom Search'. Below the header, the 'DTE' section is highlighted, with sub-links for 'DATABASE', 'DTE REPORT', and 'PUBLICATIONS'. A central text block states: *compare with each other. The index is based on the Digital Trade Estimates (DTE), a database that ECIPE has developed and that is freely available for anyone to use.*

The main content area features a large image of the report cover titled 'Digital Trade Restrictiveness Index' by Martina Francesca Ferracane, Hosuk Lee-Makiyama, and Erik van der Marel. The cover also includes the ECIPE and DTE logos. To the right of the cover, there are sorting options ('Recent' and 'Title') and a 'BROWSE' button. Below these, there are two sections: 'DTRI Executive Summary' with a link to read an executive summary, and 'Full DTRI' with a link to the full report. A small bar chart is visible under the 'Full DTRI' section.

At the bottom of the page, there is a 'SHARE THIS PAGE' section with social media icons for Facebook, Twitter, and LinkedIn, and a 'NEWSLETTER SIGNUP' button. The Windows taskbar at the very bottom shows various open applications and the system clock indicating 18:06 on 18/10/2019.



The role of data in globalization

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

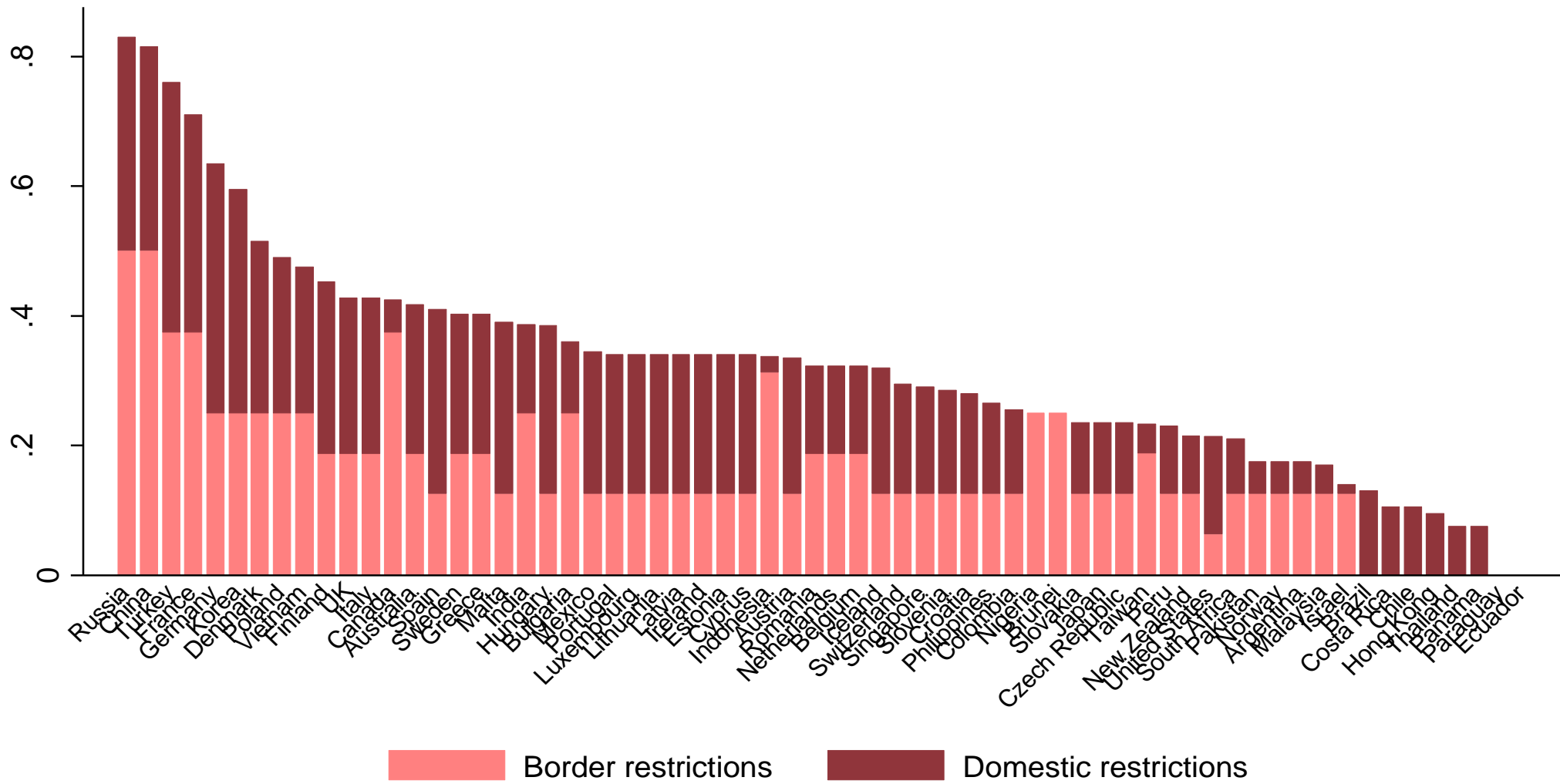
What “trade” policies are problematic?

	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			X		
IPR measures					
Intermediate liability	X		X	X	
Ancillary copyrights	X		X	X	

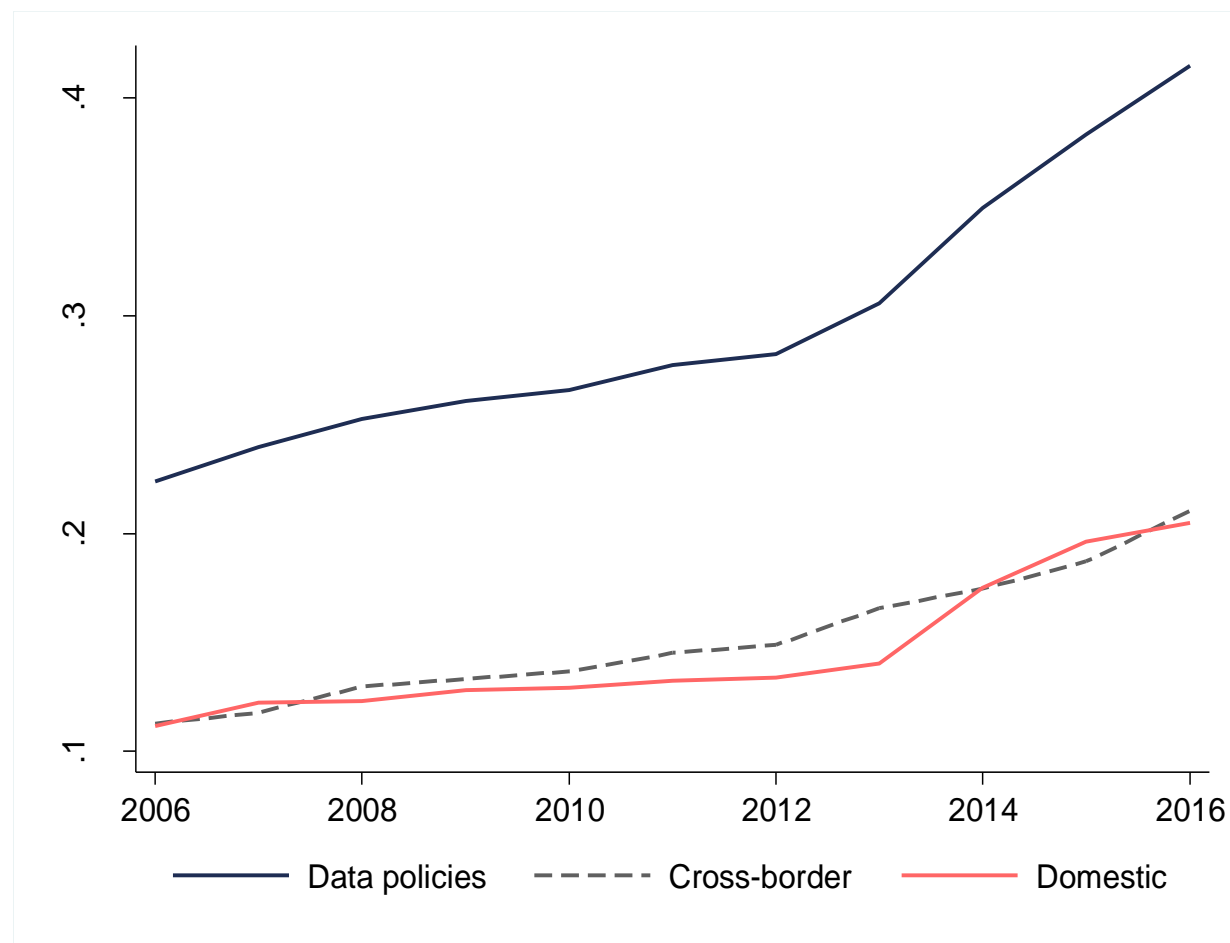
USITC (2017)



Restrictions in data



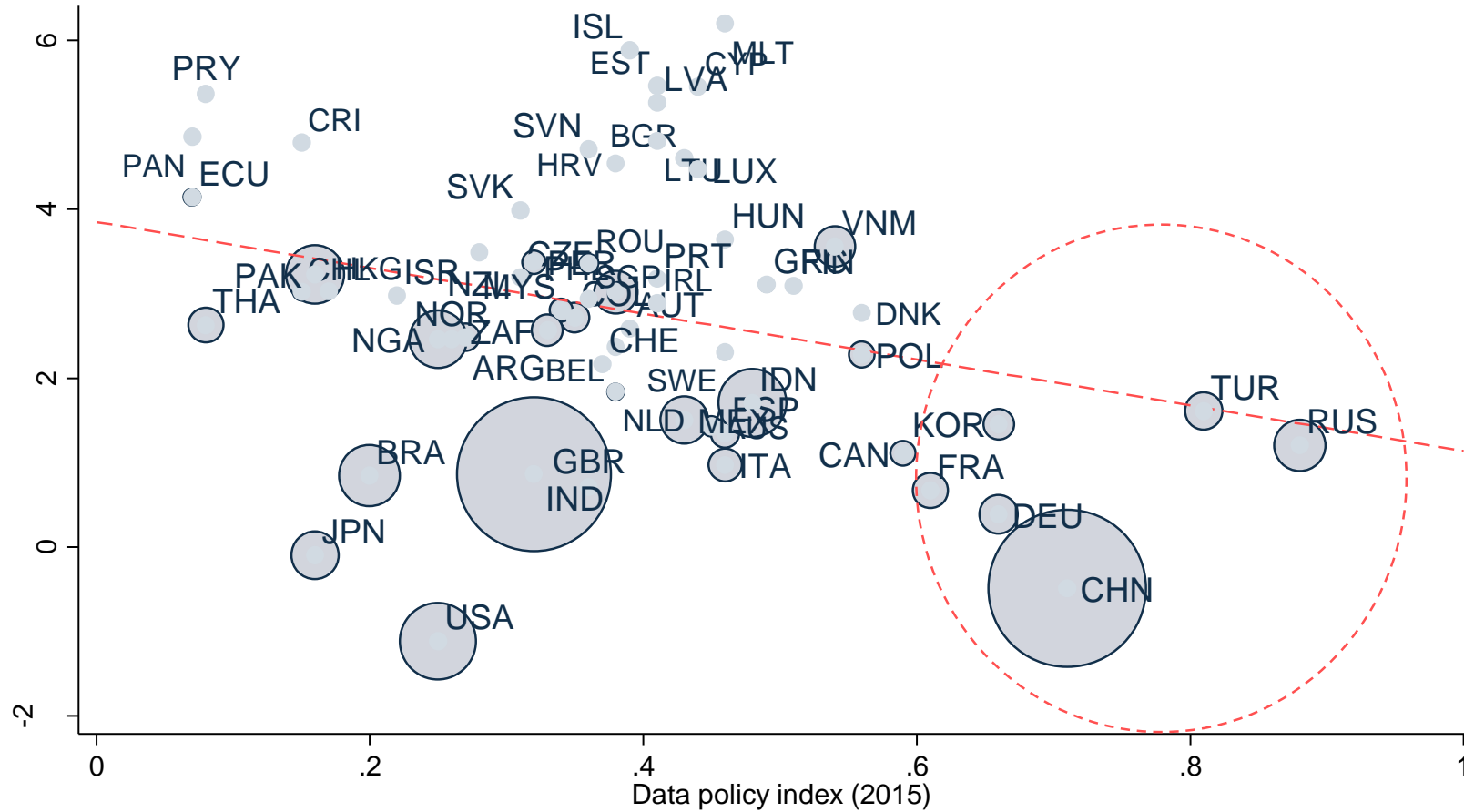
“Global” trend in data policies



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

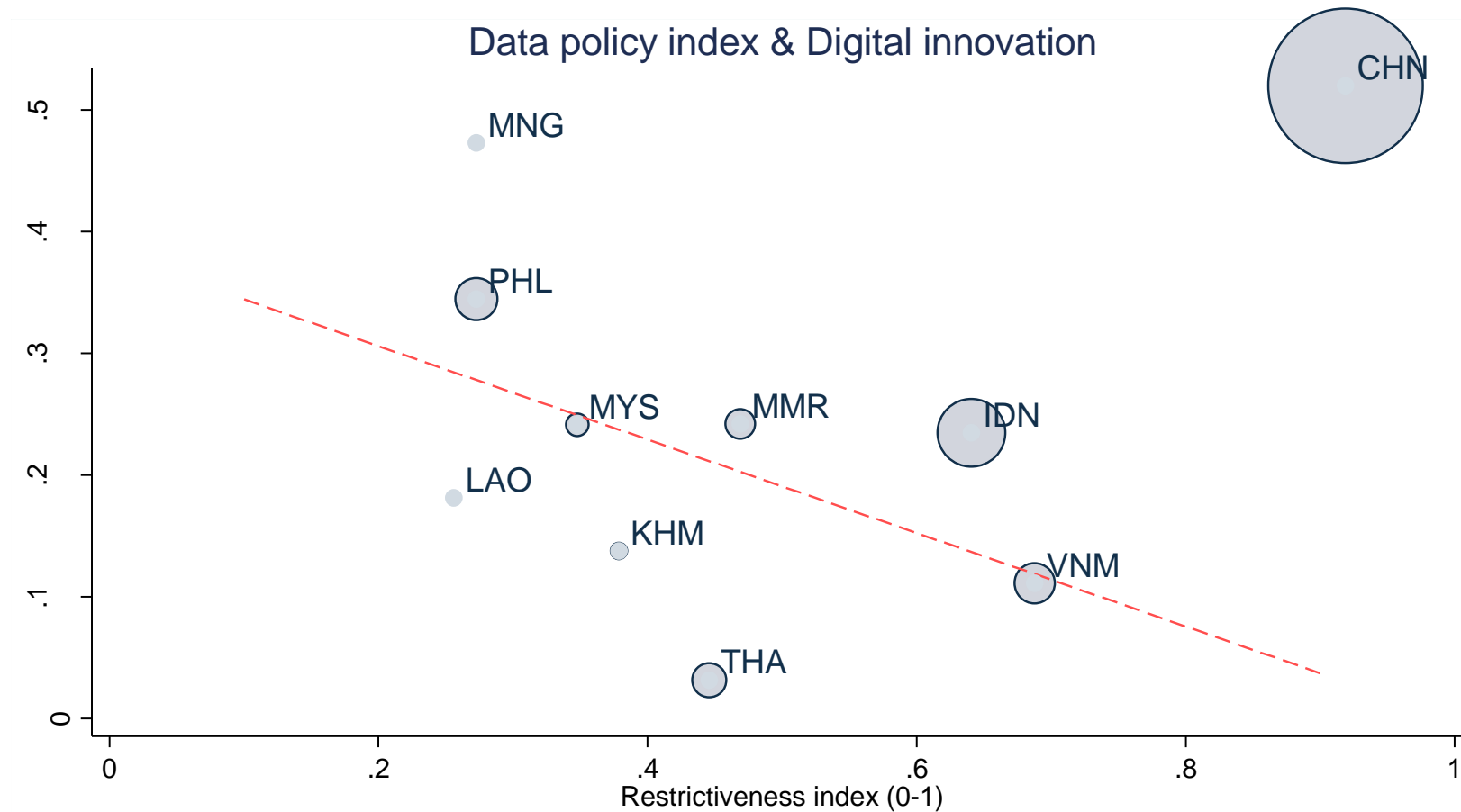
On productivity

	(1)	(2)	(3)	(4)
	TFP	TFP	TFP	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