UK Regions in Global Value Chains

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Purpose

This paper:

Quantitative evidence (for 2000-2010) about

(1) the importance of GVCs for UK *regional* economies,

(2) *regional* GVC competitiveness and

(3) *regional* risks due to Brexit in a world of GVCs

Measurement: *macro*-approach feasible thanks to global input-output tables (World Input-Output Database, OECD Trade in Value Added Initiative)

Macro-Approach to GVC Measurement

GVC: "All activities required to produce a final *manufactured* product" (Timmer et al., 2013 *EconPol*; 2014 *JEPersp*; Los et al., 2015 *JRegSci*)

Important: GVCs *do* include activity in primary industries and business services (as far as used directly and indirectly to produce manufactured products)

Employment data: Levell (2018, for ESCoE), based on ONS Business Structure Database)

Needed: Global input-output tables with (inter)regional detail (see next slide)

EUREGIO: WIOD, but EU-countries regionally disaggregated at NUTS2 level. (Thissen et al., 2018, Tinbergen Institute DP)

GVC Income Matrix

See Timmer et al. (2015, *RevIntEc*)

			Final products of a global value chain, identified by country-industry of completion							
			Country 1			…	Country M			**Value added**
			Industry 1	…	Industry N		Industry 1	…	Industry N	
Value added from country-industries participating in global value chains	Country 1	Industry 1								
		…								
		Industry N								
	…	…								
	Country M	Industry 1								
		…								
		Industry N								
Total final output value										**World GDP**

GVC Income: sum of VA contributions to value of final manufactures

Final output value: sum of value added contributions in GVC

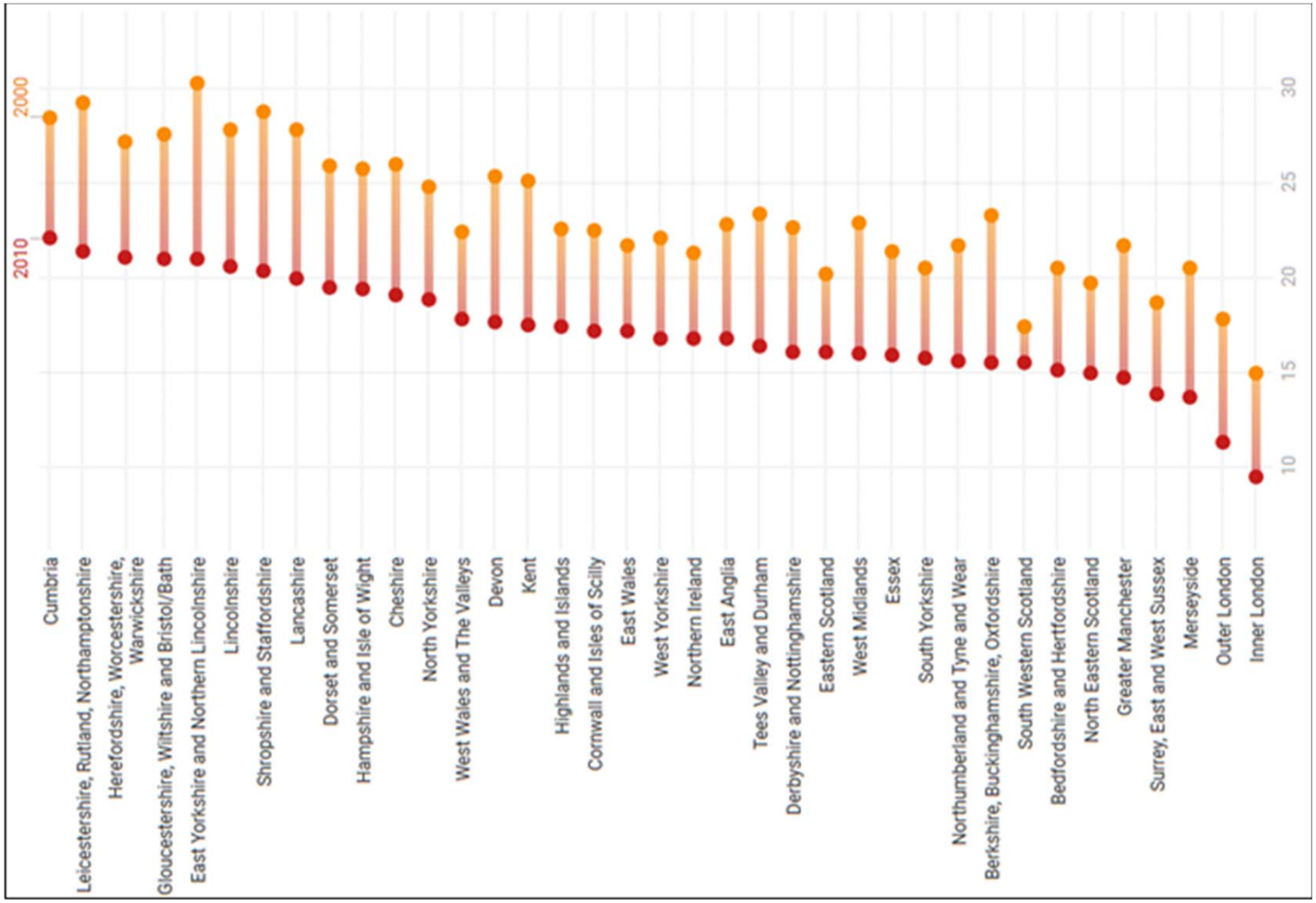
Only part of GDP is GVC Income!

The Importance of GVCs for UK Regions

10/09/2019

Indicator: *Shares of regional GDP generated by GVC participation*

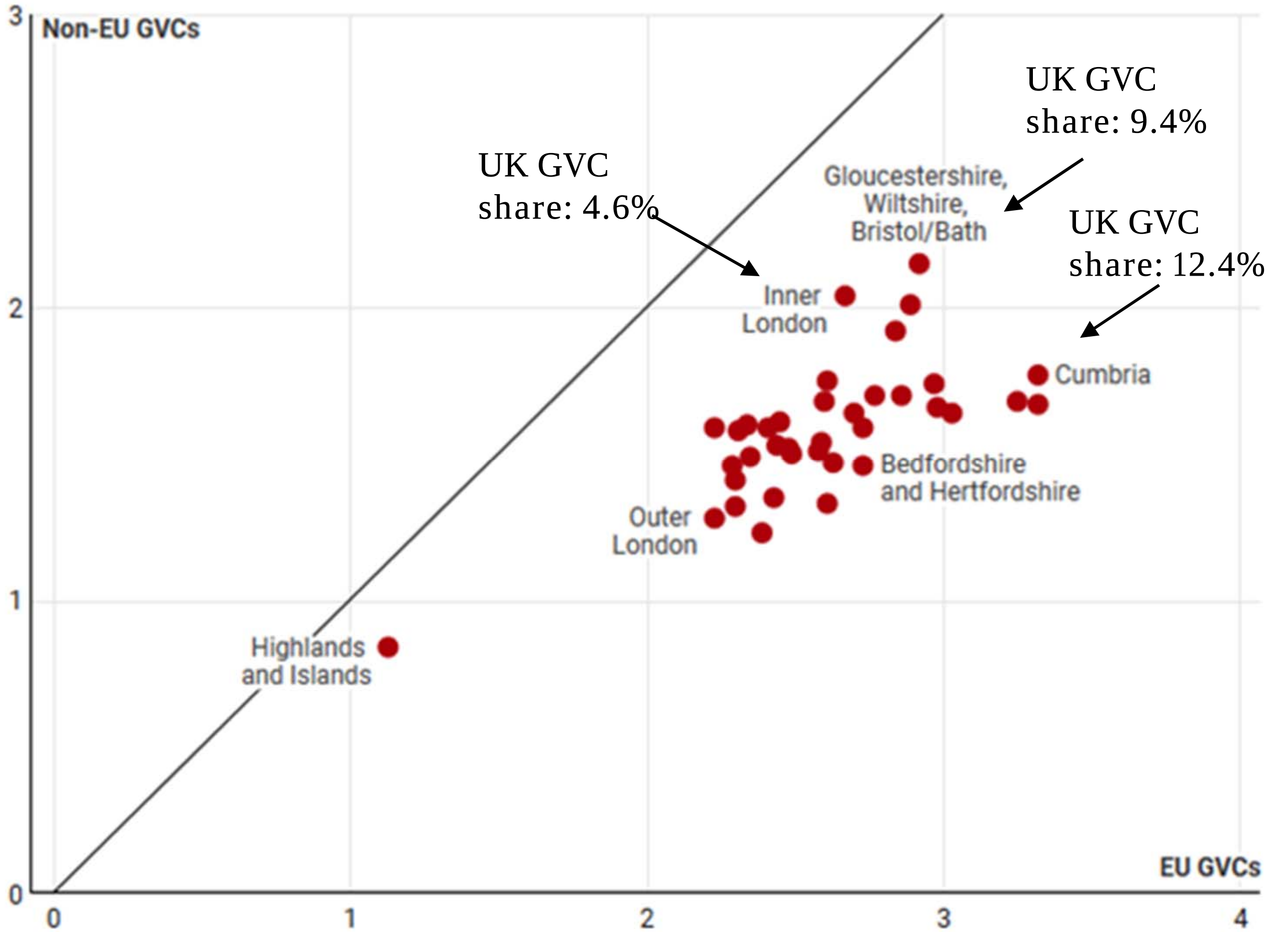
- Shares have declined in all regions (cf. IJtsma et al., 2018, *FiscStud*)
- London considerably less dependent on GVCs



Importance of UK GVCs, EU GVCs and non-EU GVCs

Indicator: Shares (%) of regional *jobs* generated by GVC participation, by “location-of-completion”, 2010 (see Los et al., 2015, *JRegSci*).

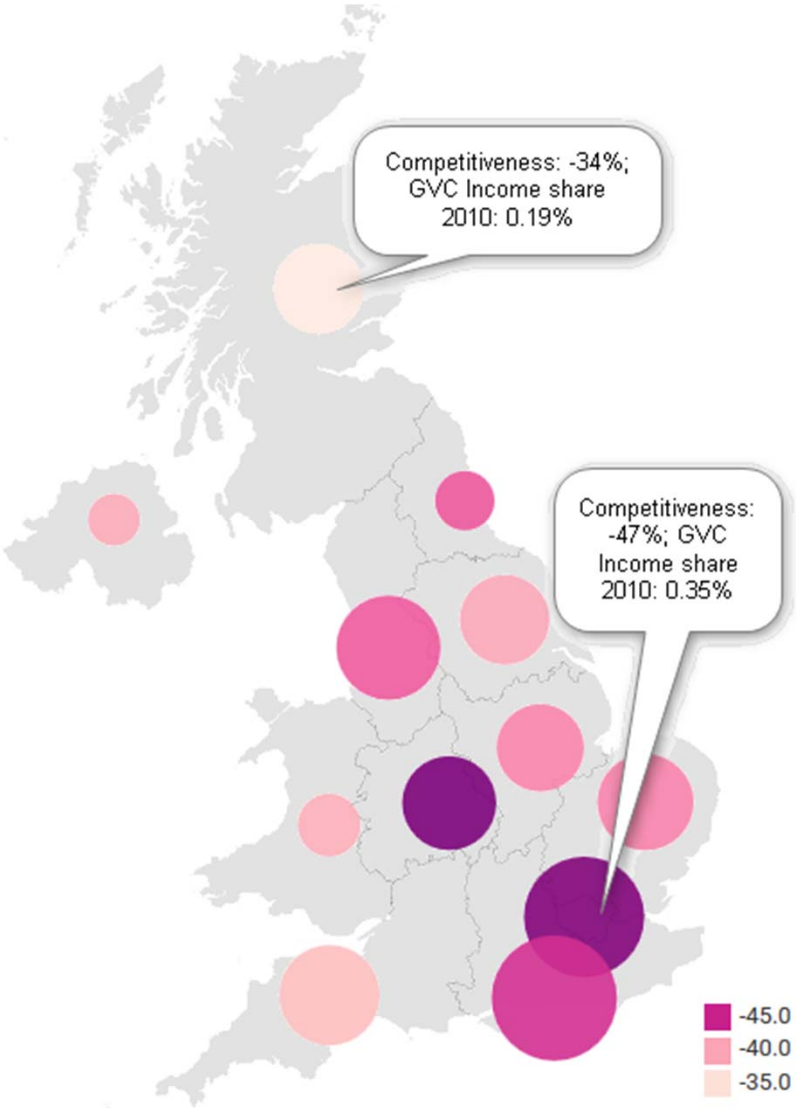
- EU-GVCs more important than non-EU GVCs (for all regions)
- UK GVCs are much more important for jobs in UK regions than non-UK GVCs (Inner London is an exception)



Revealed GVC Competitiveness

Indicator: Change in share (%) of regional GVC income in *global value* of manufactured products (2000-2010) (cf. Timmer et al., 2013, *EP*)

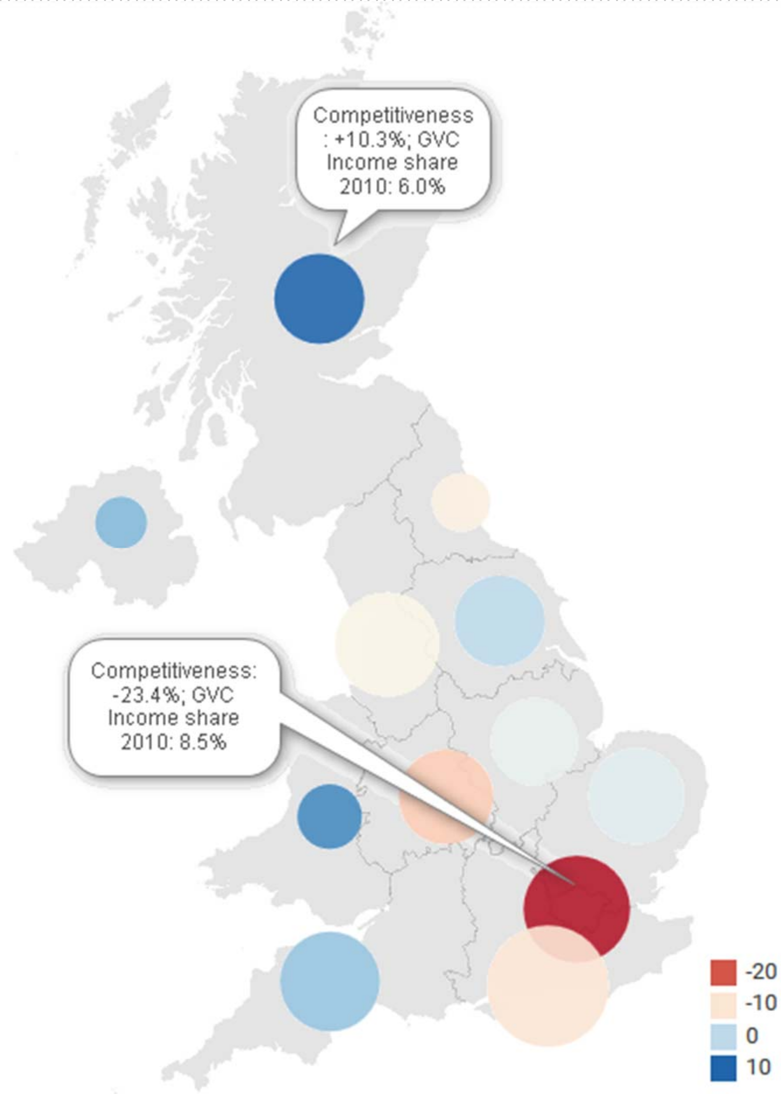
- Nationwide, competitiveness indicator dropped from 4.3% to 2.4% (-43%)
- All UK regions experienced substantial reductions in competitiveness (-34% to -47%, NUTS1).
- NUTS2: Relatively well-performing Cornwall (-29%), NE-Scotland, SW-Scotland and S-Yorkshire (-34%). Worst performance: Berkshire (-50%), West Midlands (-51%), Outer London (-55%).



Revealed Competitiveness in UK GVCs

Indicator: Change in share (%) of regional GVC income in value of *UK*'s manufactured products (2000-2010)

- Nationwide, competitiveness indicator dropped from 78.5% to 73.4% (-6.5%)
- Some NUTS1 regions experienced substantial competitiveness reductions (London -23%), others gained (Scotland +10%, Wales +7%).
- NUTS2: Relatively well-performing Cornwall (+17%), NE-Scotland, SW-Scotland, W-Wales and Cumbria (+9%). Worst performance: Inner London (-19%), West Midlands (-19%), Outer London (-30%).



Concluding Remarks (Results)

- Regional shares of value added and employment contributing to GVCs have declined. Substantial regional differences: some regions >20%, London 9-12%
- UK GVCs clearly more important than foreign GVCs (Inner London an exception) for jobs. EU GVCs more important than non-EU GVCs.
- In worldwide network of GVCs, all UK regions lost competitiveness. London and West Midlands were the most notable problematic regions

Concluding Remarks (Data)

- Industry detail is limited (14 industries). Due to search for "lowest common denominator" across EU-countries. For UK in specific, more detailed data could be constructed (but data on links to non-UK regions should be sacrificed and be replaced by UK region to country links);
- Inter-regional trade difficult to measure. For goods: transportation survey data, accounting for "hubs" to arrive at "true" origins and destinations. For services: Rough approximation based on business class travel. Better alternatives available?
- Bilateral trade in services data even problematic at country level;
- Some people feel that data on trade in gross value terms should be *replaced* by trade in value added data. Wrong: gross trade figures essential ingredient into construction process of trade in value added data! See OECD Trade in Value Added and Eurostat's Figaro projects.

Export-Related Risks of Brexit

10/09/2019

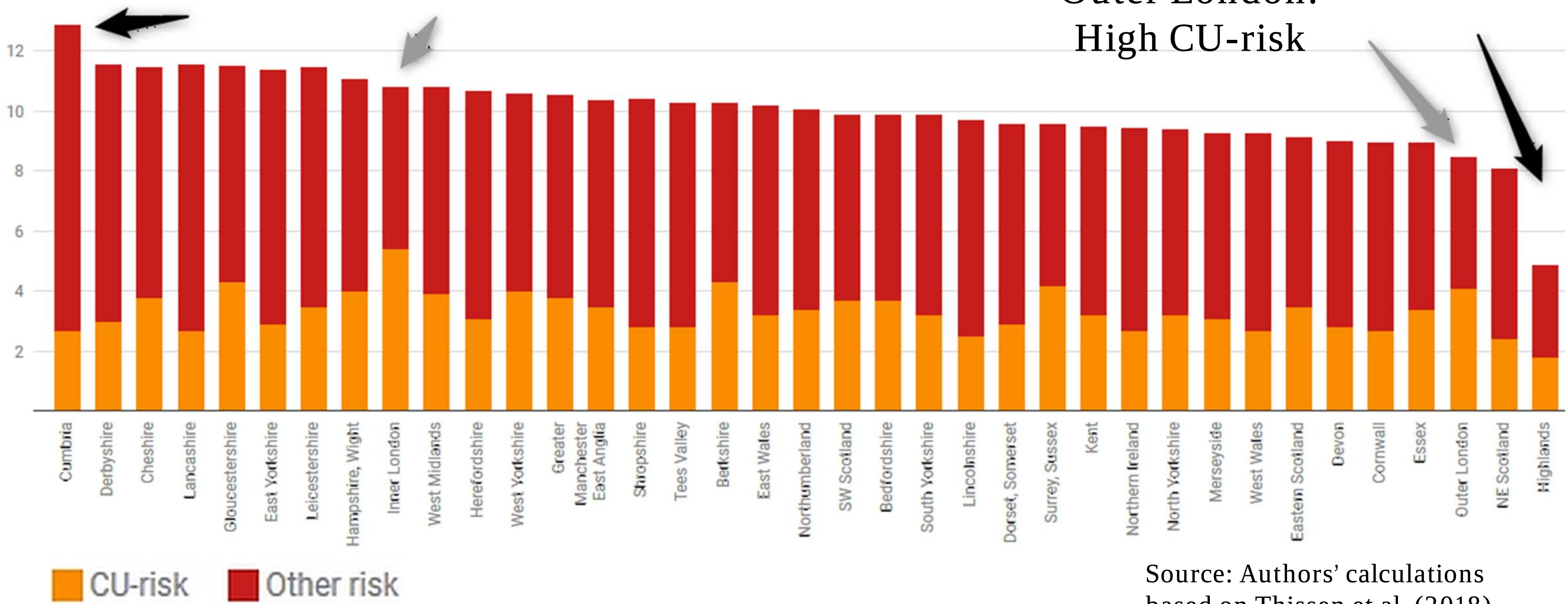
Indicator: Proportions of regional jobs at risk due to Brexit (%)

Cumbria: 13%

Inner London:
Highest CU-risk

Highlands & Islands: 5%

Outer London:
High CU-risk



Source: Authors' calculations based on Thissen et al. (2018)