



GVCS, KNOWLEDGE FLOWS AND PRODUCTIVITY

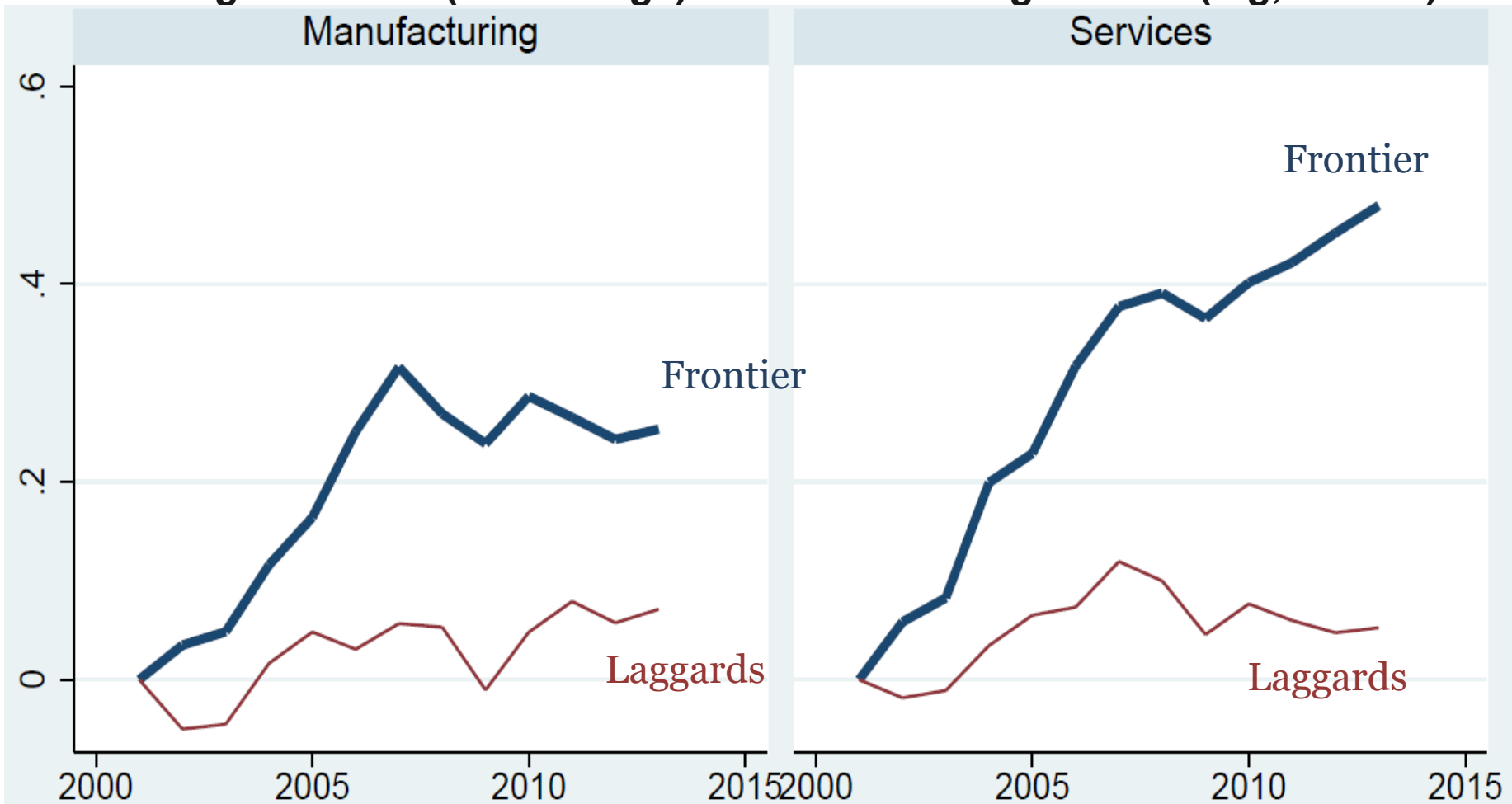
Productivity and Inclusive Growth
December 5th and 6th, 2016
Santiago Chile



Divergence of MFPR

(sample of 24 OECD economies)

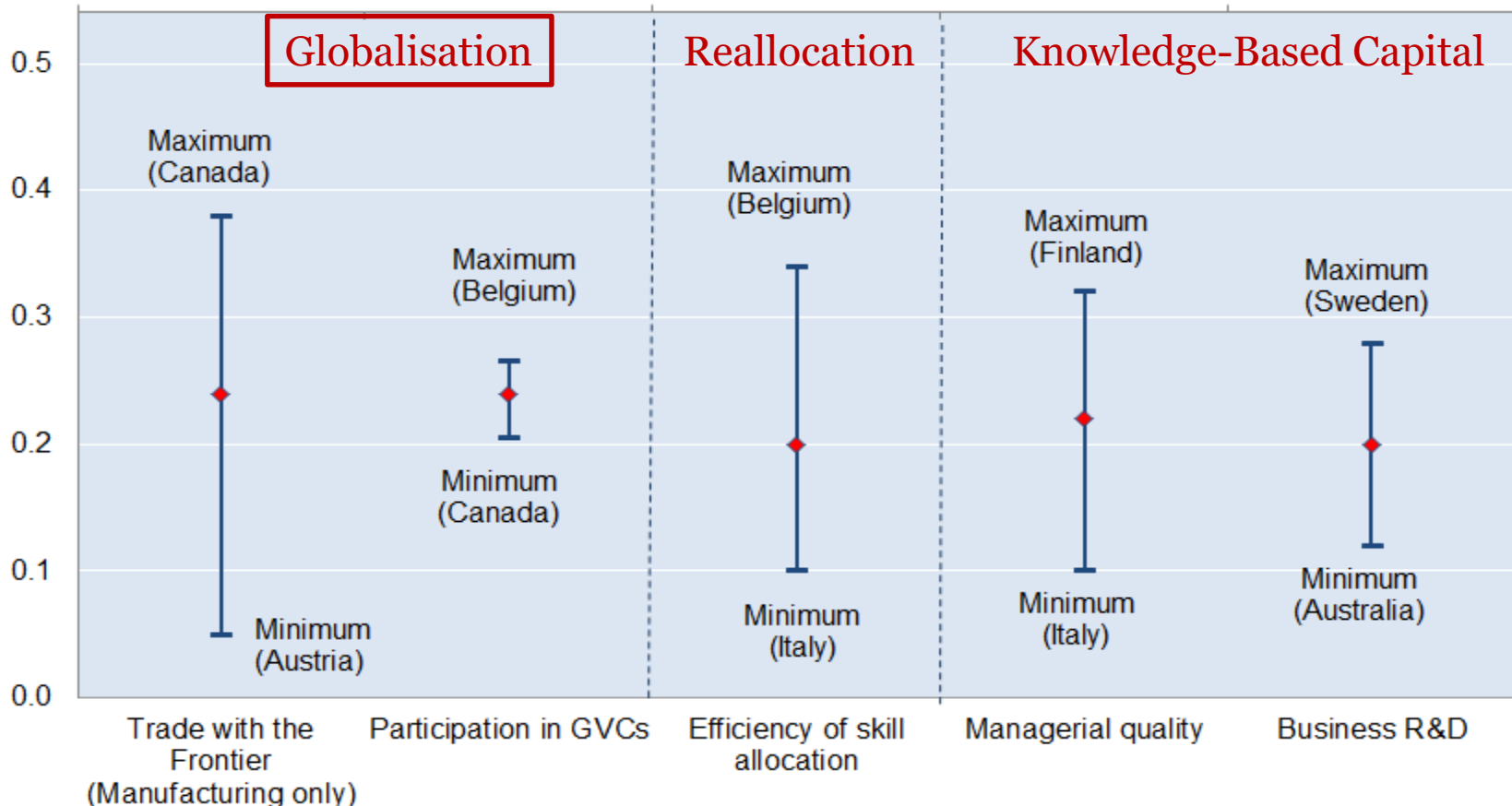
Average of MFPR (Wooldridge) across each 2-digit sector (log, 2001=0)





Reviving the diffusion machine: structural factors shape diffusion

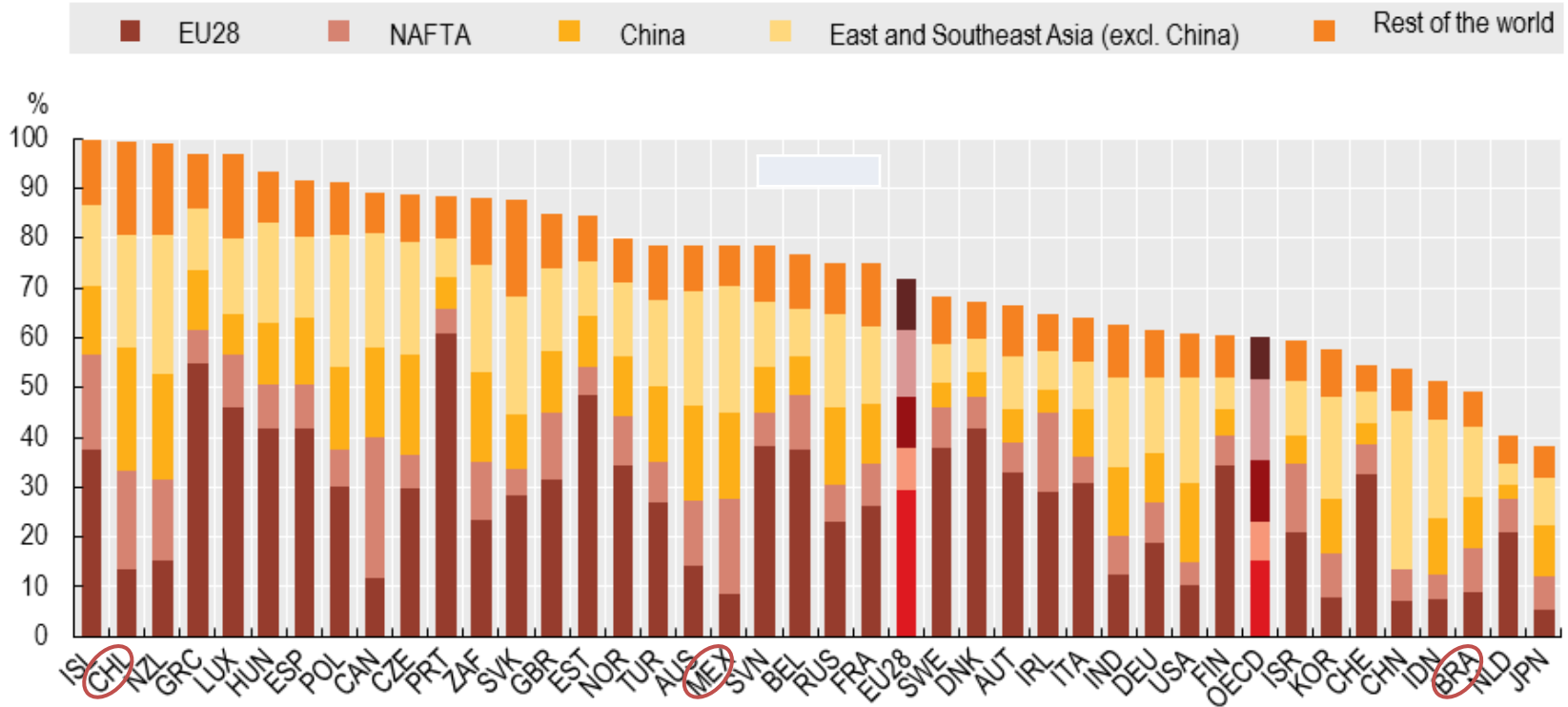
Estimated frontier spillover (% pa) associated with a 2% point increase in MFP growth at the global productivity frontier



Source: Saia, A., D. Andrews and S. Albrizio (2015), “Public Policy and Spillovers From the Global Productivity Frontier: Industry Level Evidence”, *OECD Economics Department Working Papers*, No. 1238.



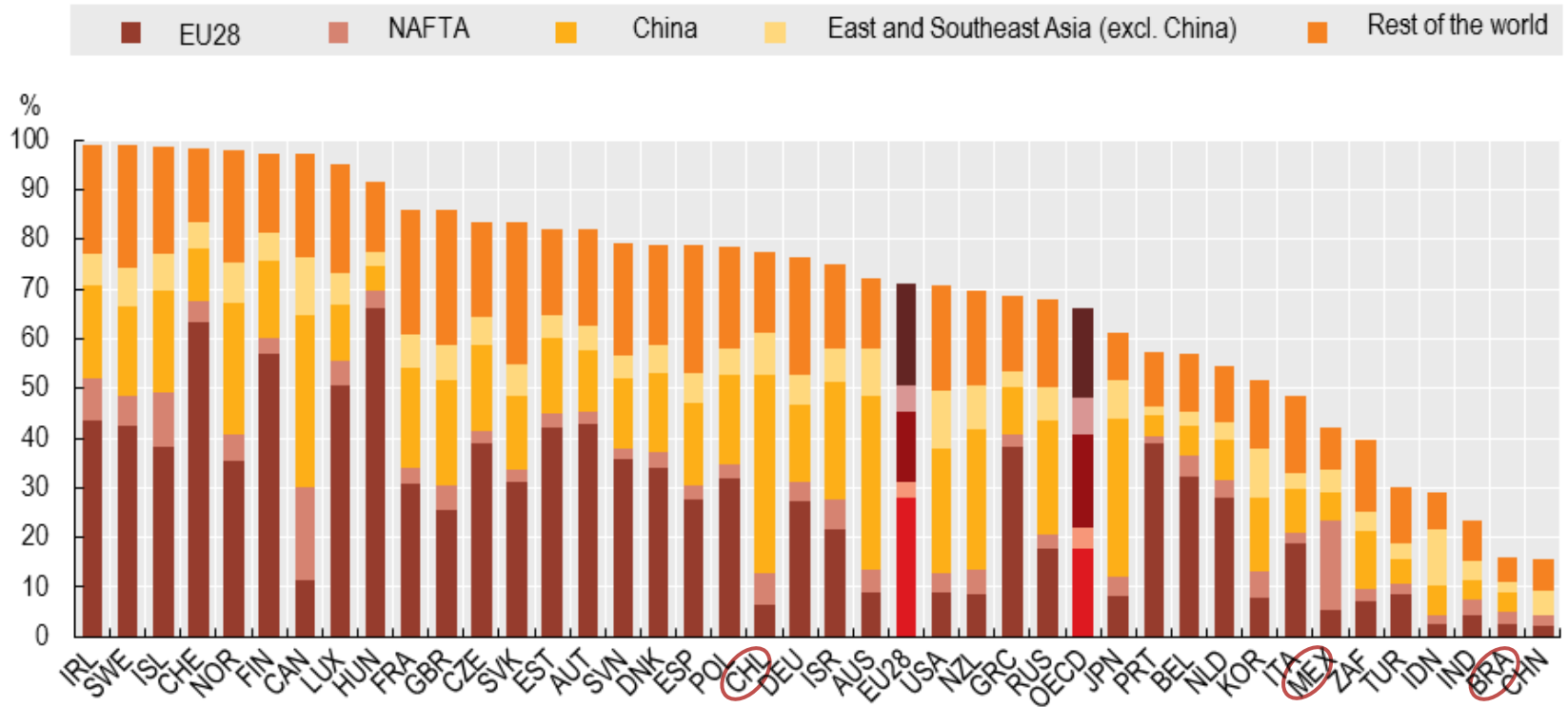
Foreign value added embodied in domestic demand for computer, electronic and optical equipment



Source: OECD ICIO/TiVA database (2015)



Foreign value added embodied in domestic demand for textiles and apparel

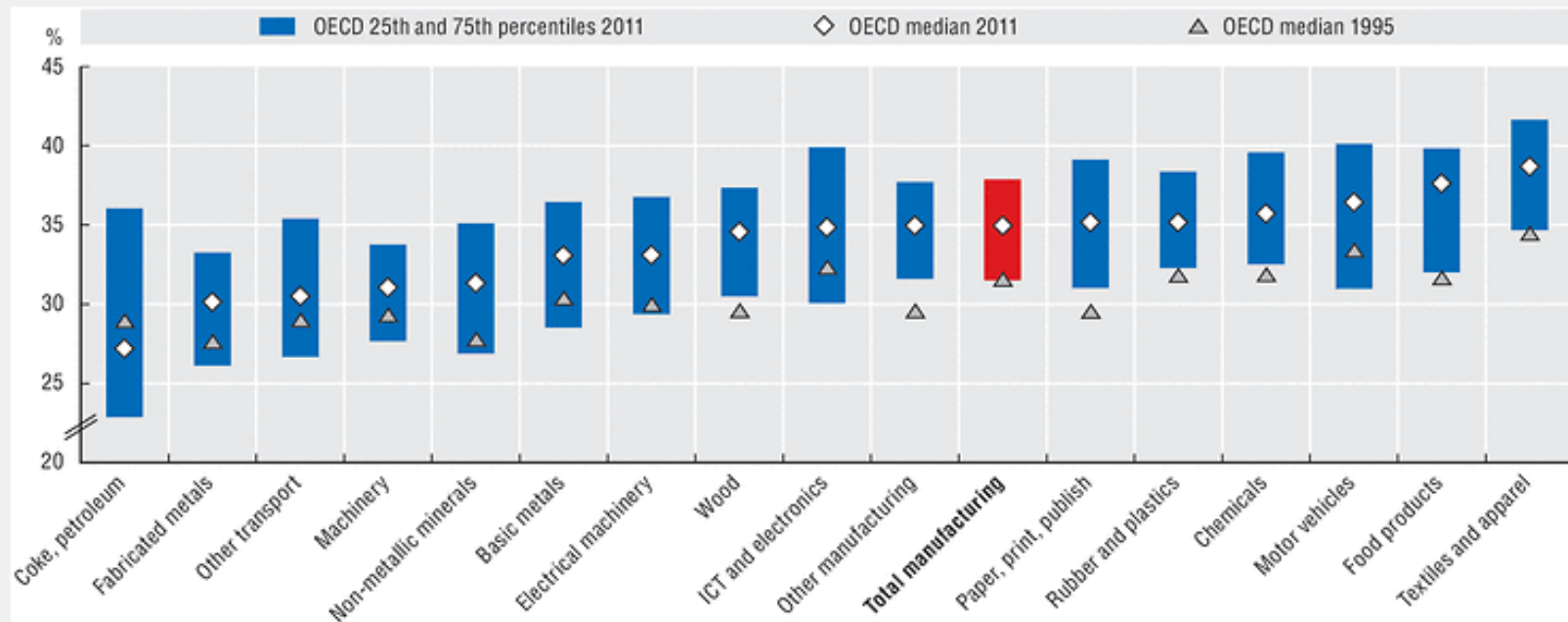


Source: OECD ICIO/TiVA database (2015)



Business Sector Services Value Added Embodied in OECD Manufacturing Exports

Range of values as a percentage of gross exports



Source: OECD, Trade in Value Added (TiVA) Database, <http://oe.cd/tiva>, June 2015. StatLink contains more data. See chapter notes.

Statlink  <http://dx.doi.org/10.1787/888933273134>

Source: OECD ICIO/TiVA database (2015)

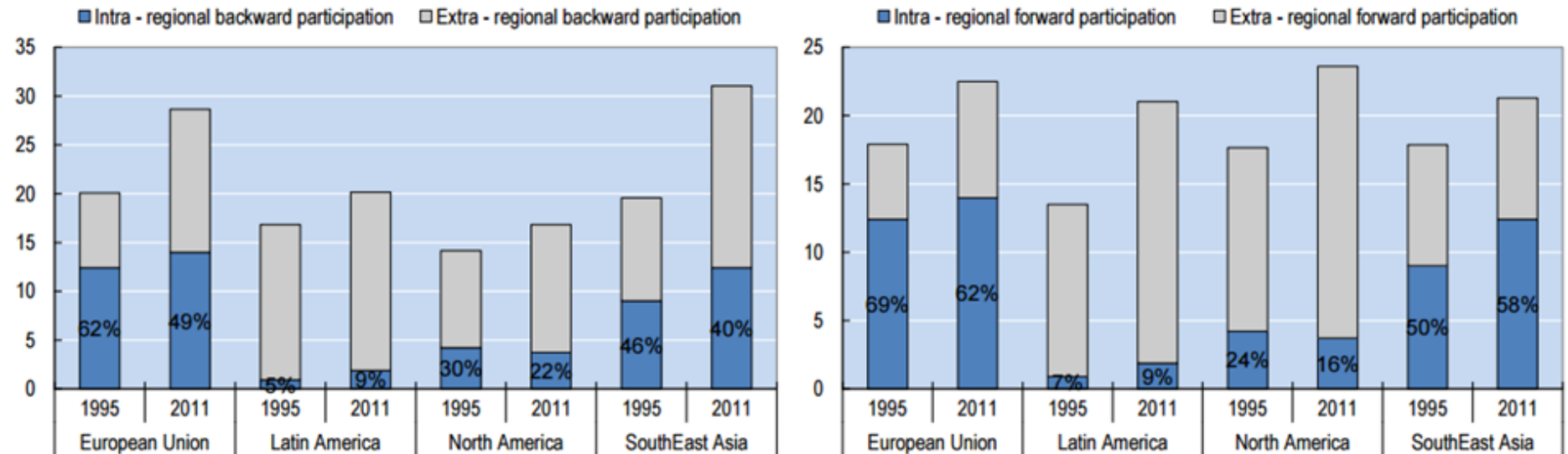


Limited participation in Regional Value Chains in Latin America

Intra and extra-regional participation in GVCs

Panel A. Backward GVC participation

Panel B. Forward GVC participation

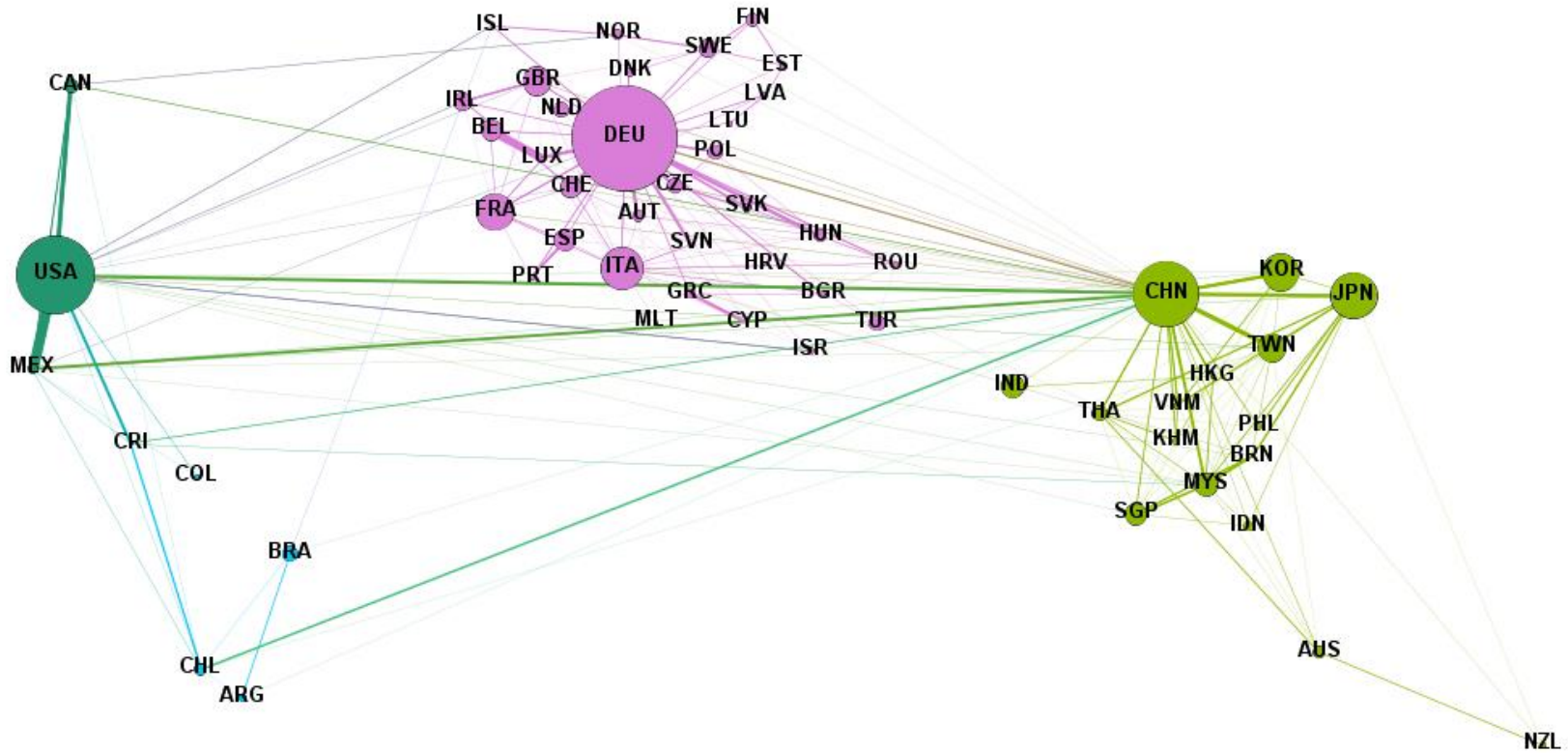


Note: Shading identifies the share of linkage which is from the region.

Source: Cadestin et al. (2016), OECD Trade Policy Papers, No. 192



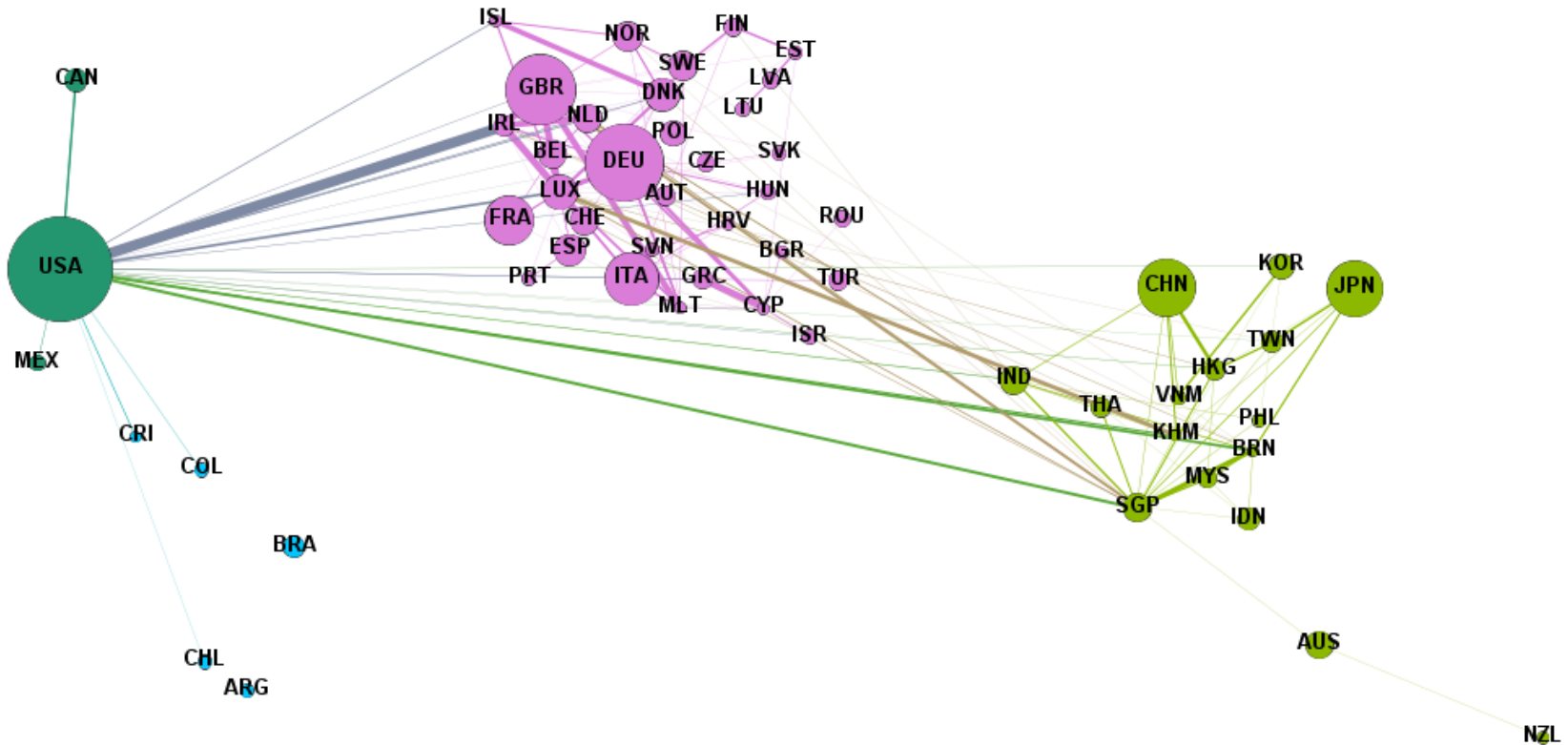
Manufacturing linkages are mainly with key hubs in USA and CN



Notes: Node size denotes total centrality (forward and backward) of manufacturing sectors within global production networks, Edges reflect direct manufacturing input flows. For clarity only the largest input flows are reflected, those exceeding 15% of total inputs used in the importing or exporting country. Source: Author's calculations using 2011 data from OECD TiVA 2015 edition



Services linkages are more limited and also mainly with key hubs in USA



Notes: Node size denotes total centrality (forward and backward) of business-sector service sectors within global production networks, Edges reflect direct business-sector service input flows. For clarity only the largest input flows are depicted, those exceeding 10% of total inputs used in the importing or exporting country.

Source: Author's calculations using 2011 data from OECD TiVA 2015 edition



Intensity of “International Co-invention” (1)

Mining and quarrying (ISIC 10 to 14)

2000-05



2006-11



Notes: Co-invention is calculated by adding the sum of co-invention shares between country-pairs divided by the sum of domestic inventions in these respected countries for industry j at time t. Based on extractions from PATSTAT



Intensity of International Co-invention (2)

Electrical and Optical Equipment (ISIC 30-33)

2000-05



2006-11



Notes: Co-invention is calculated by adding the sum of co-invention shares between country-pairs divided by the sum of domestic inventions in these respected countries for industry j at time t . Based on extractions from PATSTAT



Intensity of International Co-invention (3)

Textiles, textile products, leather and footwear (ISIC 17 to 19)

2000-05



2006-11



Notes: Co-invention is calculated by adding the sum of co-invention shares between country-pairs divided by the sum of domestic inventions in these respected countries for industry j at time t. Based on extractions from PATSTAT



On-going work of relevance

- Linking TiVA with other relevant data – i.e. R&D, MNE Activity,
- GVC Participation and Risks (e.g. product recall database)
- GVCs and centrality – Using network analysis to understand propagation (and mitigation) of shocks
- Using citation data to better understand non-market knowledge flows
- The role of international research cooperation in accessing the frontier (and public-private