ACCOUNTING FOR FIRM HETEROGENEITY IN GVCs

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OECD
BETTER POLICIES FOR BETTER LIVES

Motivations and presentation outline

Motivations

- Generate insights on the Trade and Investment nexus -> Current TiVA only provides a view of trade and production.
- Develop more granular insights on the nature of GVCs.
  - Role of SMEs
  - Role of MNEs
- Improve the quality of TiVA estimates by better measurement of heterogeneity.
- To mainstream granularity in official statistics -> Extended Supply Use Tables

Presentation outline

- Methodology
- Findings
- Robustness check
- On-going work programme
- Extended Supply-Use Tables

Methodology for OECD estimates

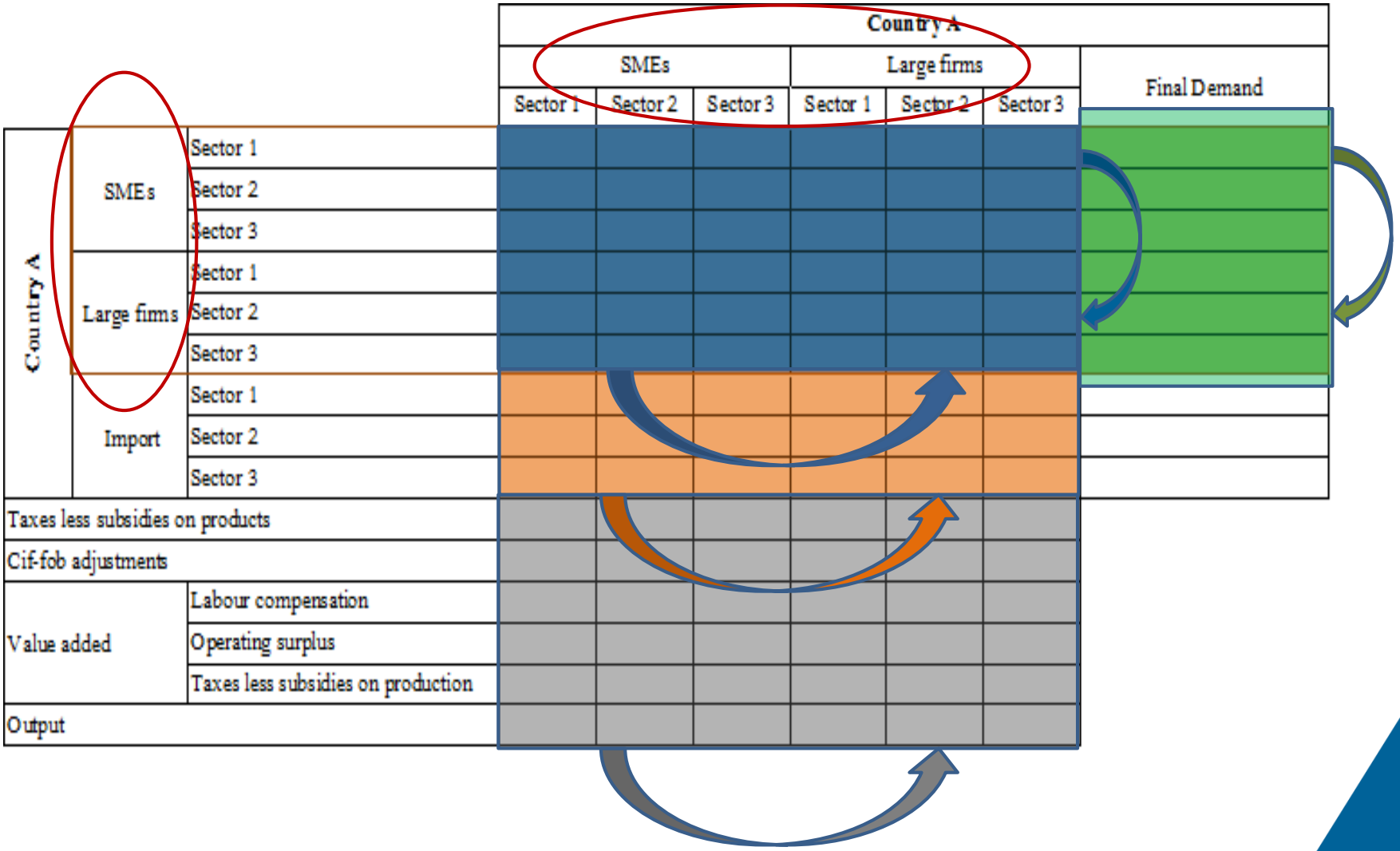
In response to the motivation:

- Relax **homogenous assumptions** &"breakdown" TiVA by firm heterogeneity
  - Correcting for 'under-estimation' of key indicators -> **import content of exports**
- Unveiling **how different types of firms are engaged in trade** in a coherent National Account framework

Methodology

- Integrating macro databases, such as FATS/AMNE, SDBS & TEC, to derive **imports, exports, gross output and value added** by size and by ownership
- Extend **input-output table** by firm type
- **Proportionality assumptions**: no substitution in imports, no use preference & no supplier bias

Visualising the methodology



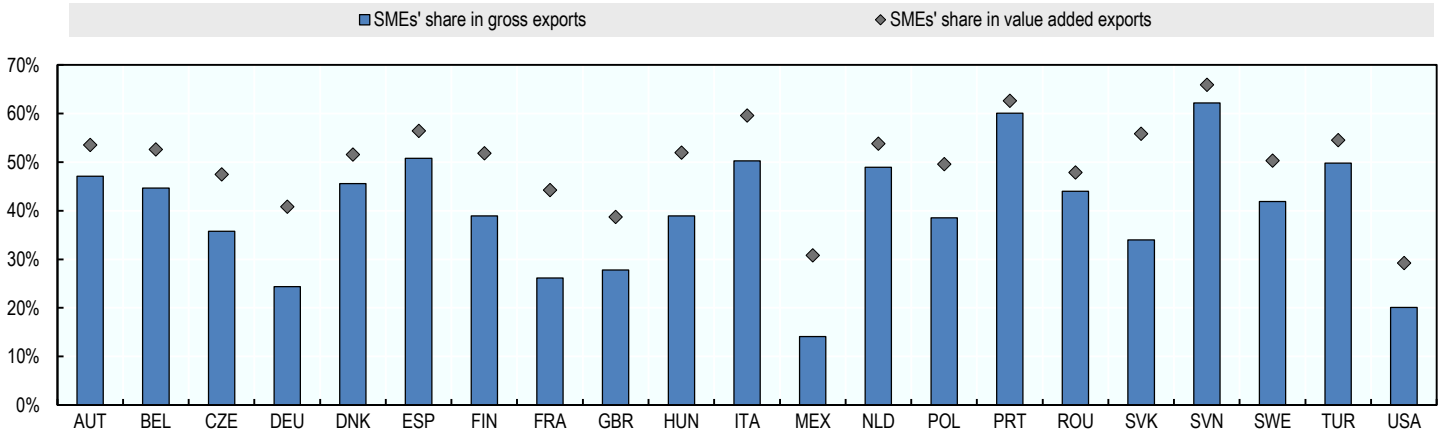
Methodological challenges

- Trade agent problem: official statistics on exporter status reflect DIRECT imports/exports; but 'DIRECT' in business data refers to exports and imports via wholesale intermediaries.
- Missing data in TEC, SDBS and AMNEs due to ***confidentiality***
- Services Trade by Enterprise Characteristics under development
- Match ISIC4 to ISIC3 at the 2-digit level
- Data differences between structural business statistics and SNA
- Time Series stability in business statistics

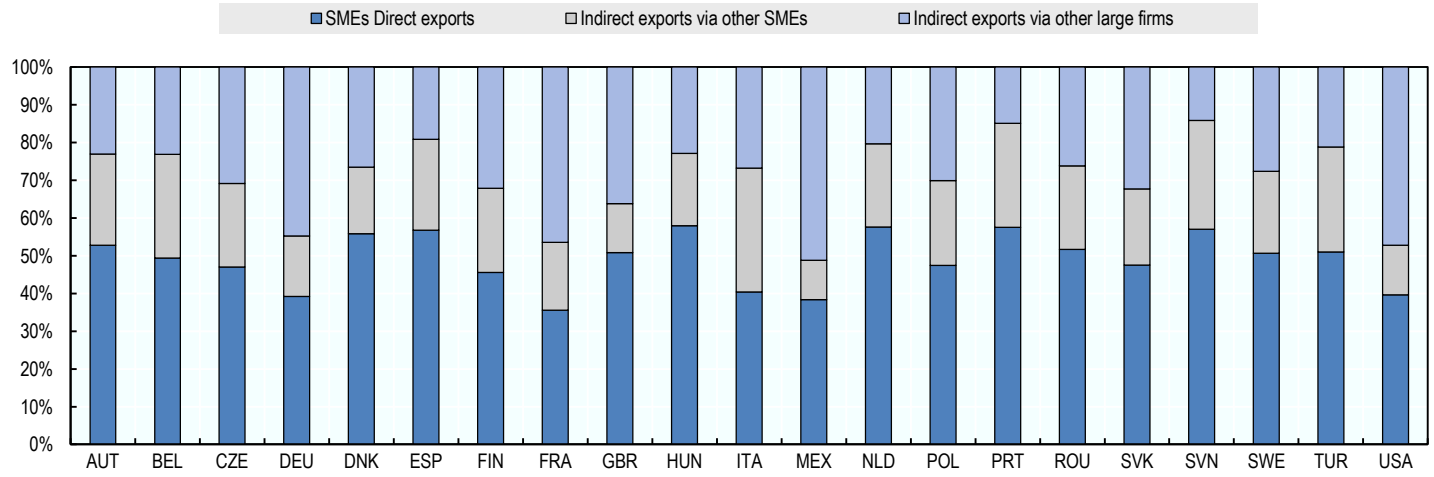
FINDINGS

SMEs are significantly exposed to trade, as upstream suppliers to larger firms

SME's share in gross exports and value added exports



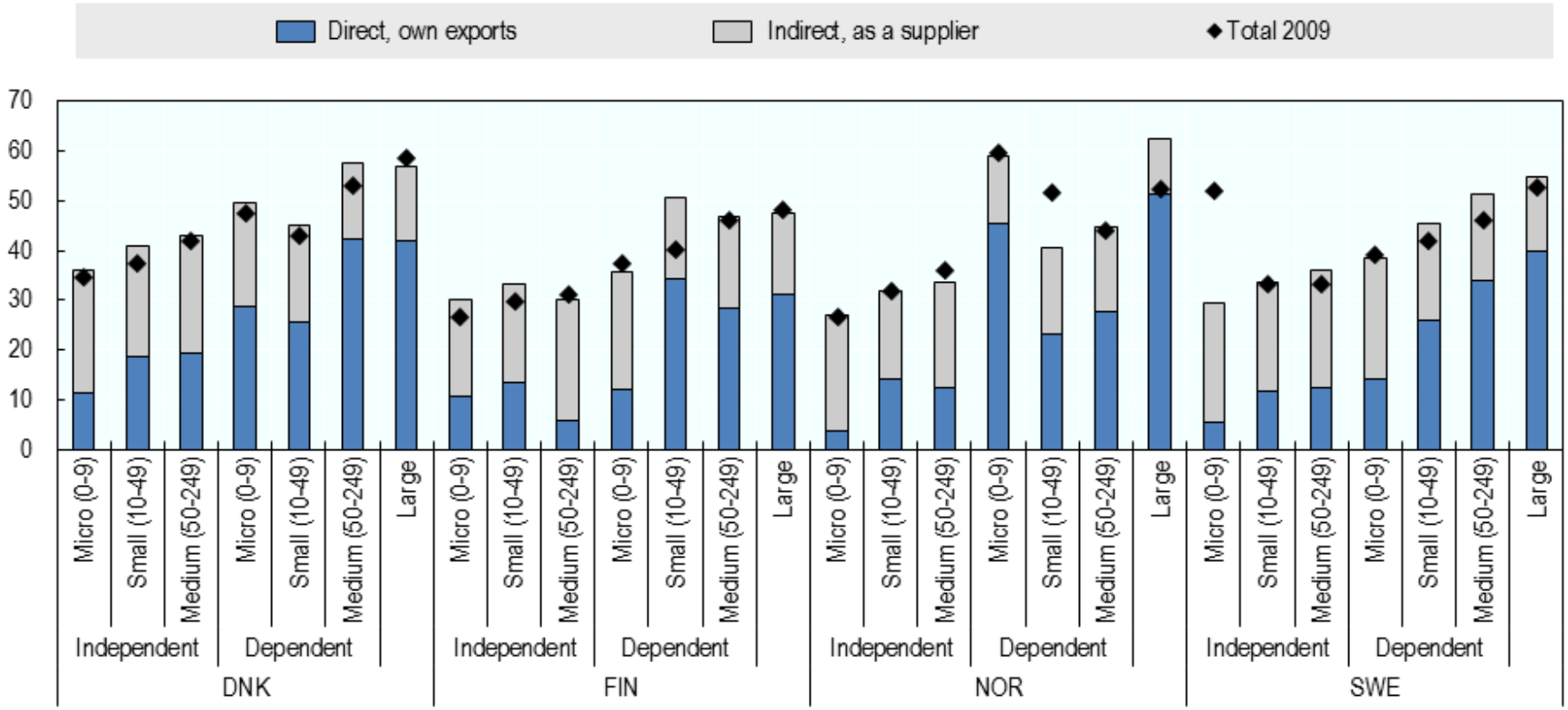
SMEs' value added export channels



Year: 2014

..especially independent SMEs

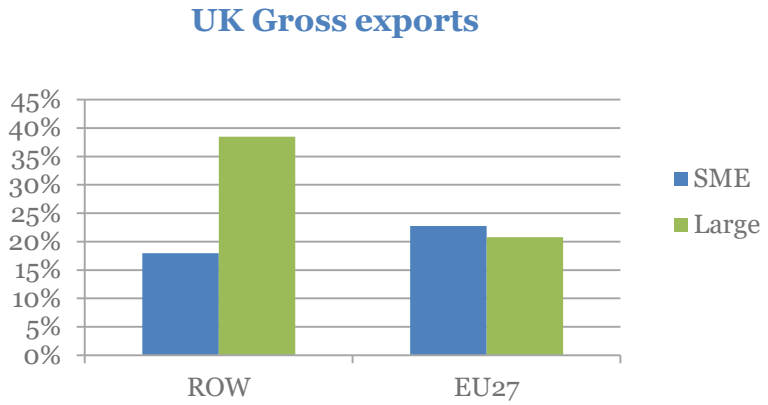
Direct and indirect exporting activity of SMEs in Nordic countries, % of total 2013



Source: Nordic Countries in Global Value Chains (2017), OECD-Statistics Denmark.

Revealing important insights

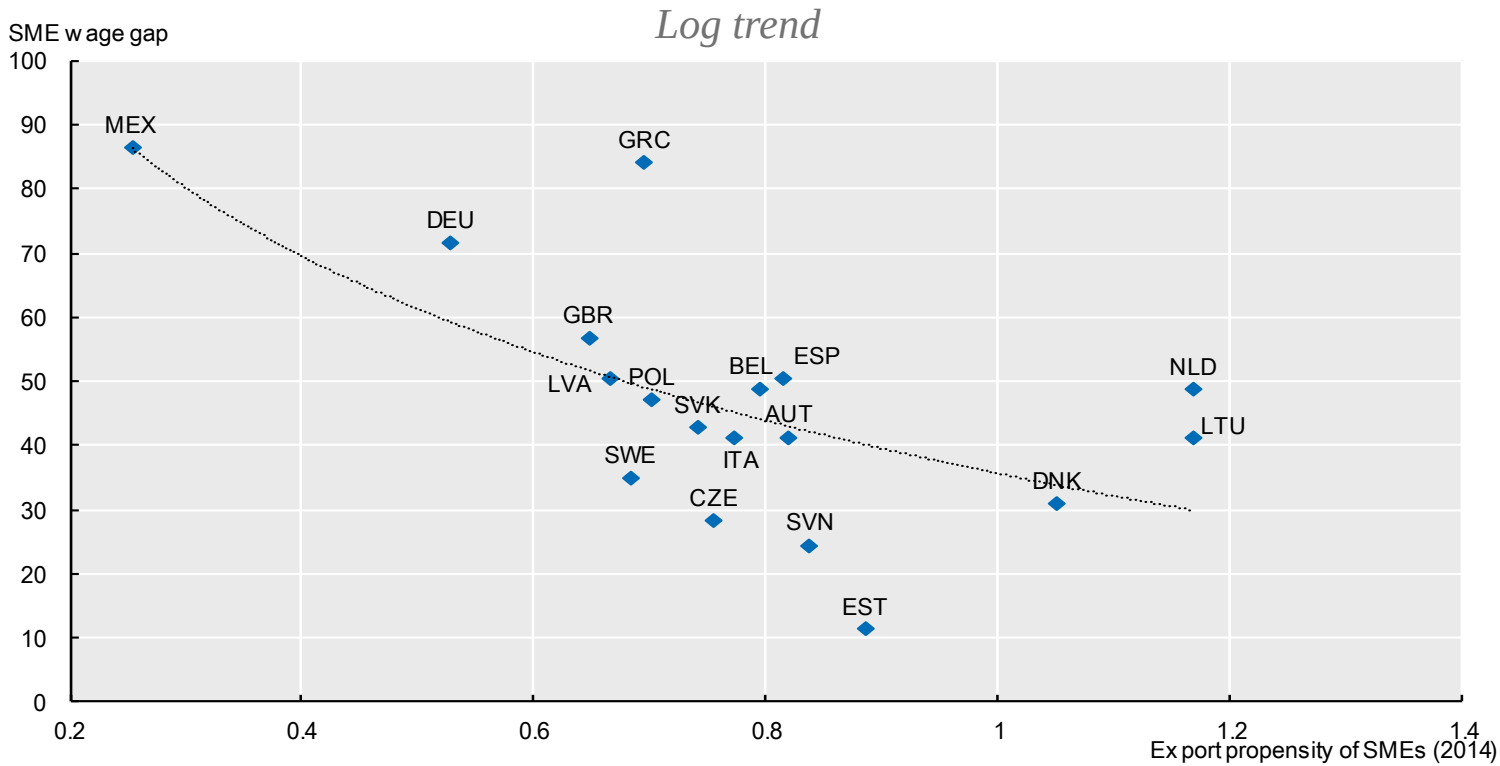
- Barriers to trade have a disproportionate impact on SMEs -> who typically export close to home



- SMEs account for nearly two-third of UK value-added trade with EU27

Trade can reduce wage-gaps with larger firms

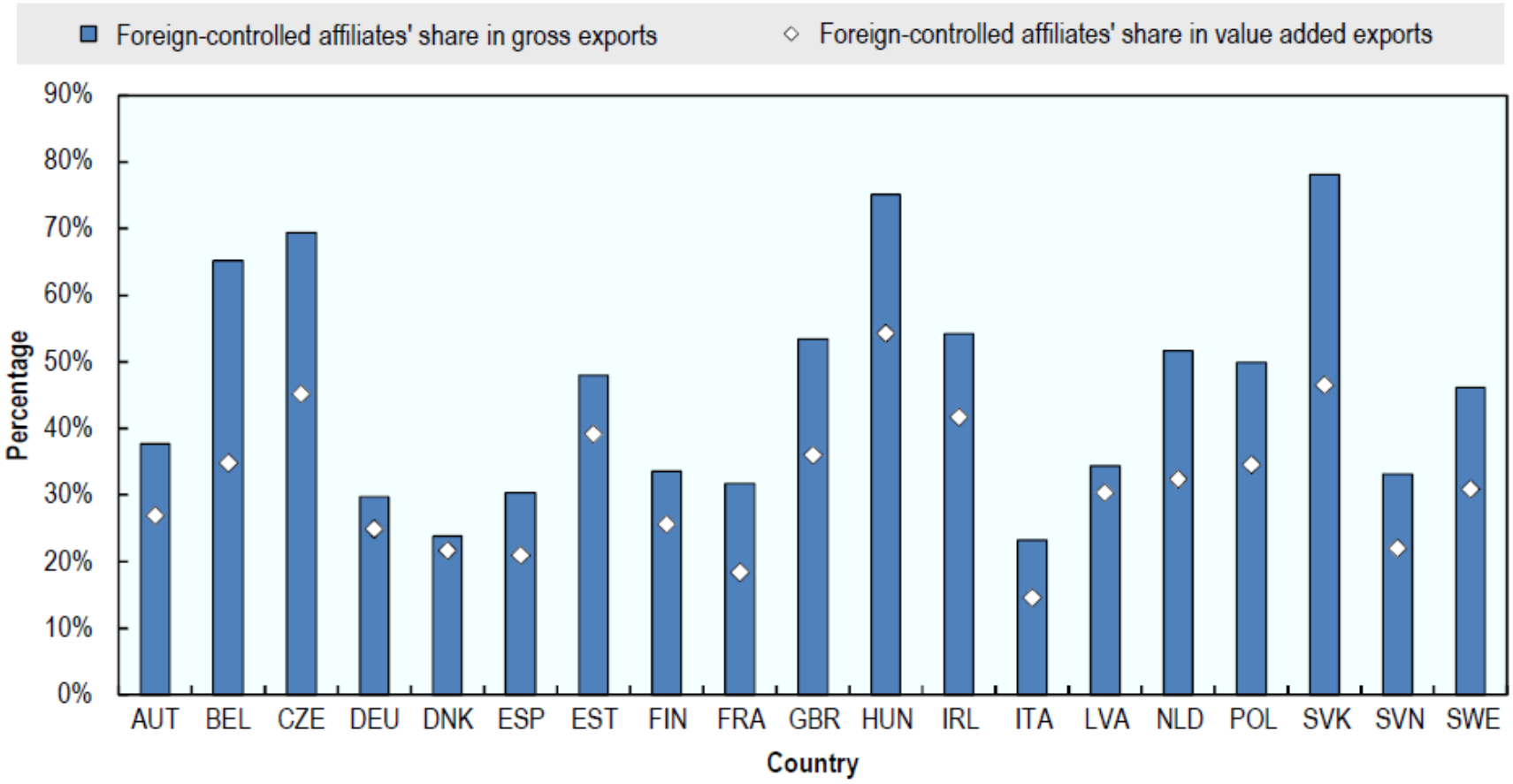
Manufacturing wage gaps and SME trade, 2014



Note: SME wage gaps are measured as the difference between average salaries per employee in large firms and SMEs as a ratio of average salaries in SMEs. Export propensity of SMEs is measured as the share of exports by SMEs divided by the share of output by SMEs.

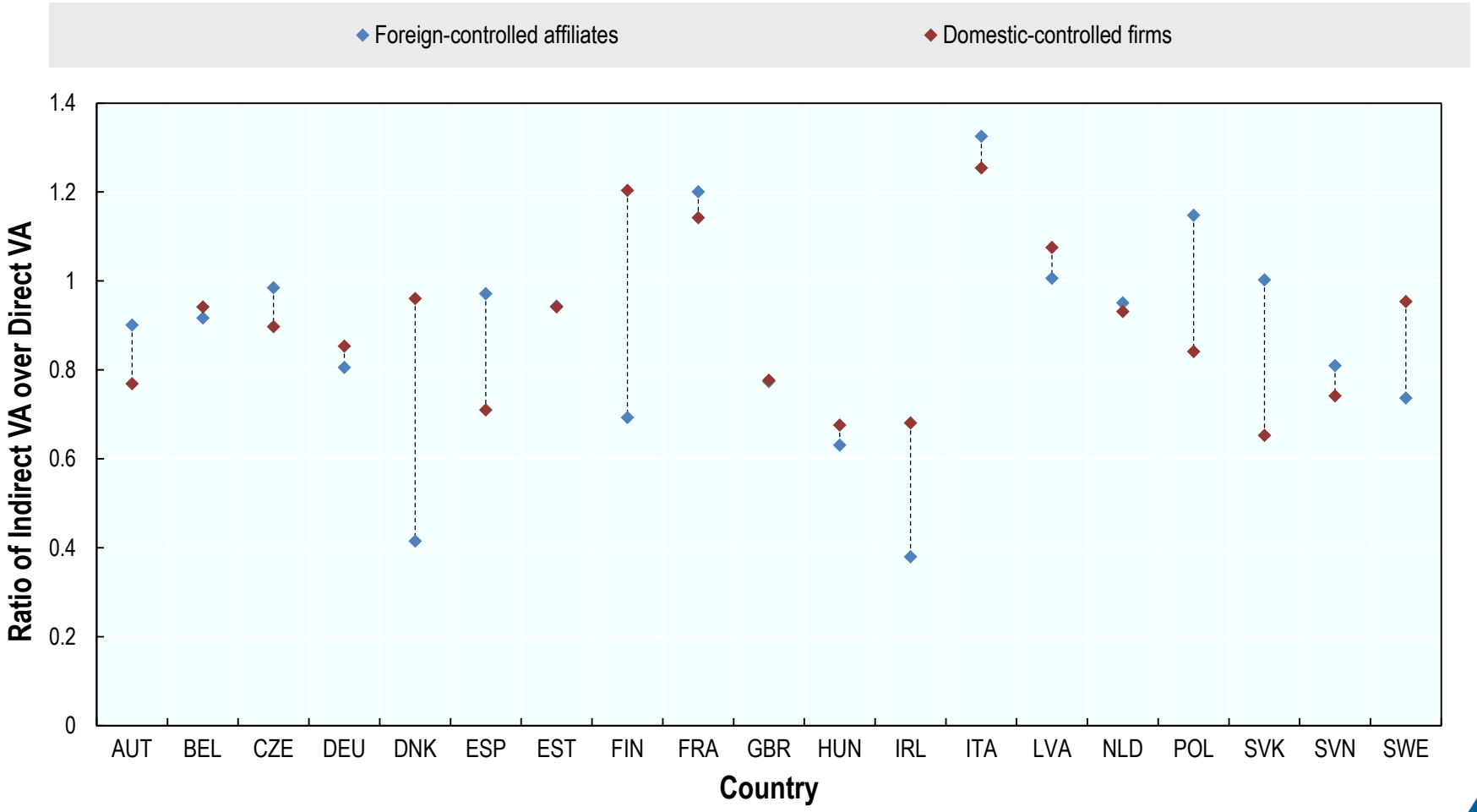
Source: Based on OECD Structural and Demographic Business Statistics and Trade by Enterprise Characteristics databases.

MNEs in GVCs: lower than traditional trade data suggests



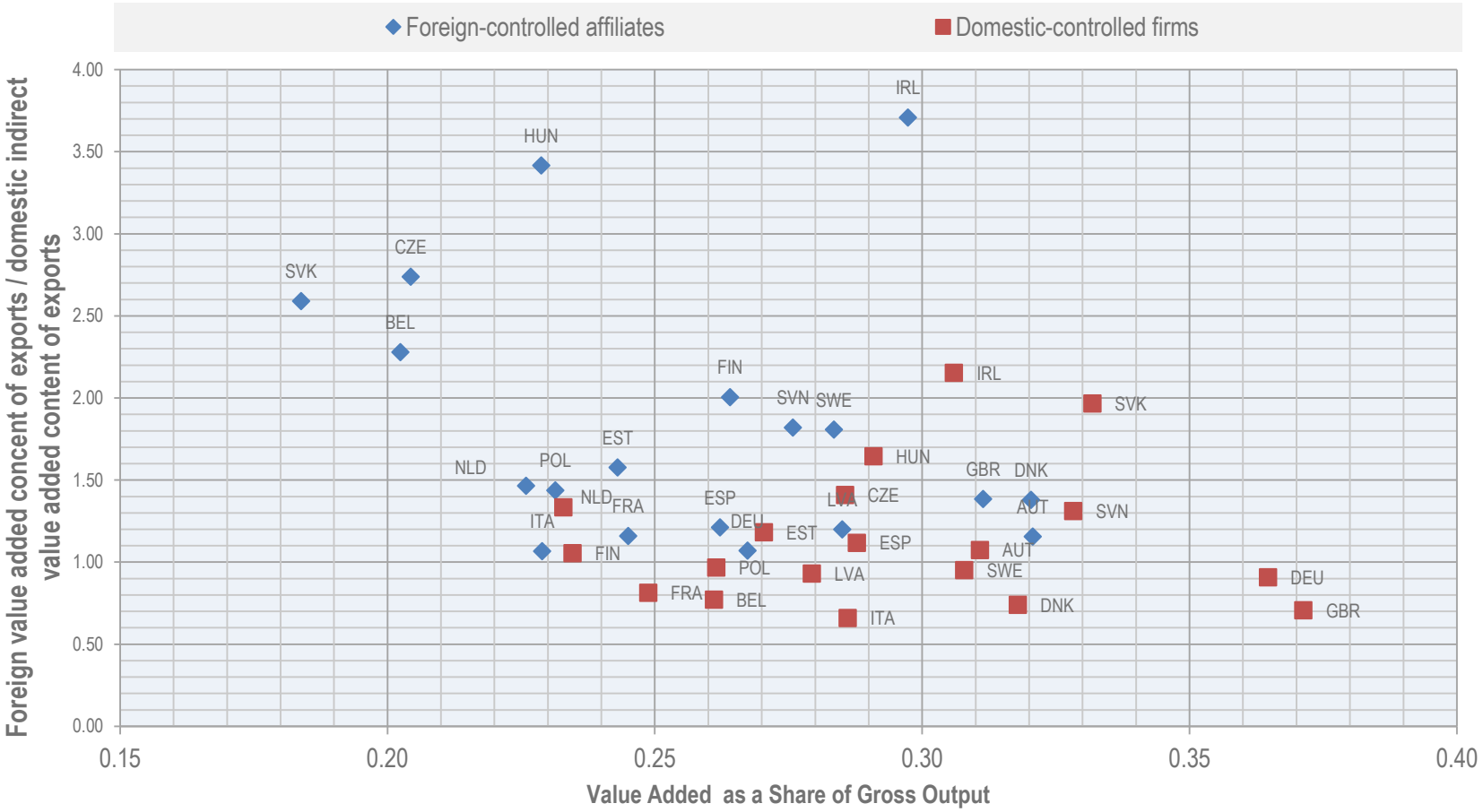
Year: 2014

Mixed picture in backward linkages: MNEs industry composition effects



Year: 2014

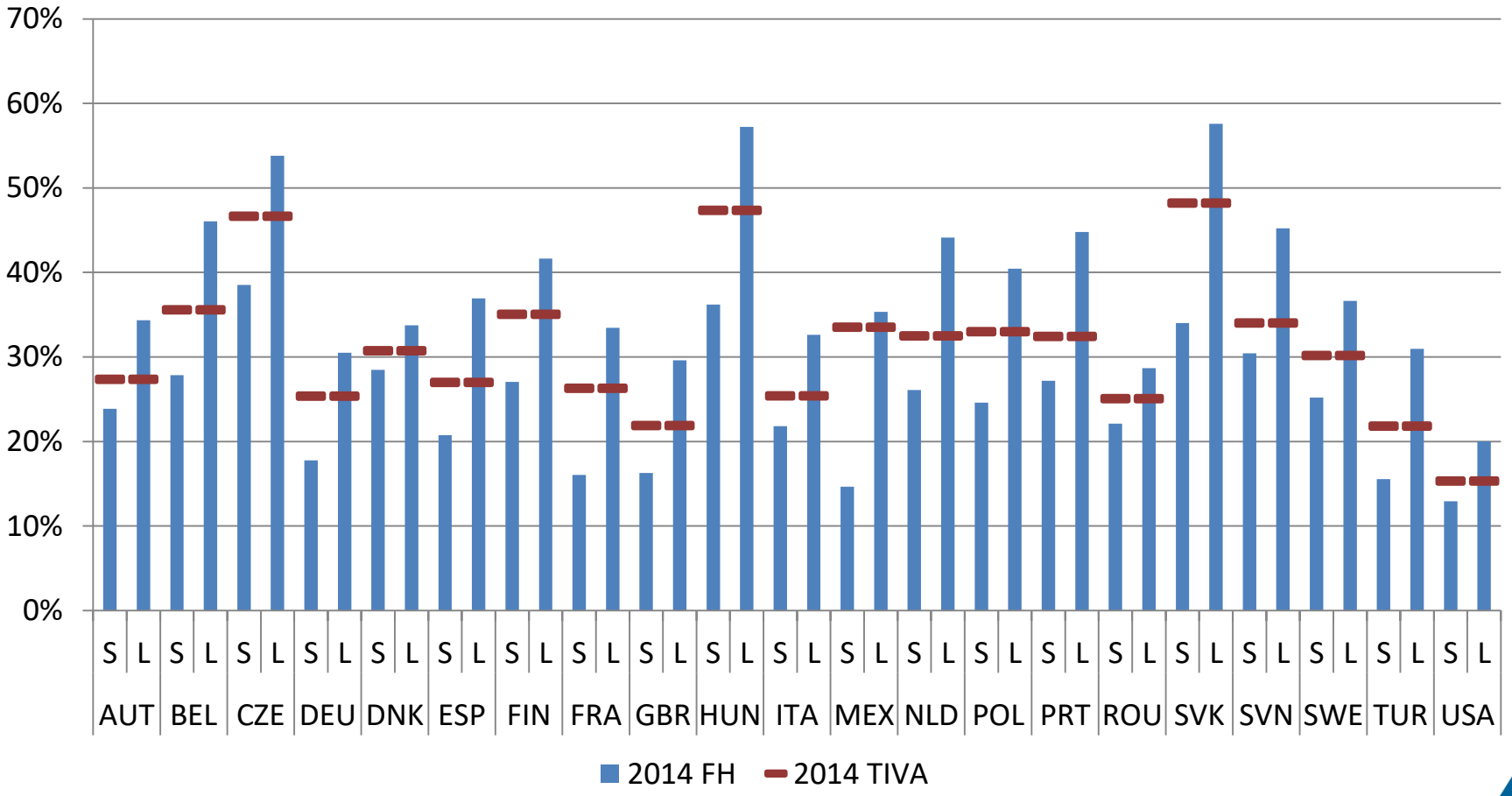
Integration strategies differ for MNEs and domestic firms



Manufacturing sector, 2014

Improving TiVA indicators

Foreign value added content of exports by firm heterogeneity vs TiVA


70%
60%
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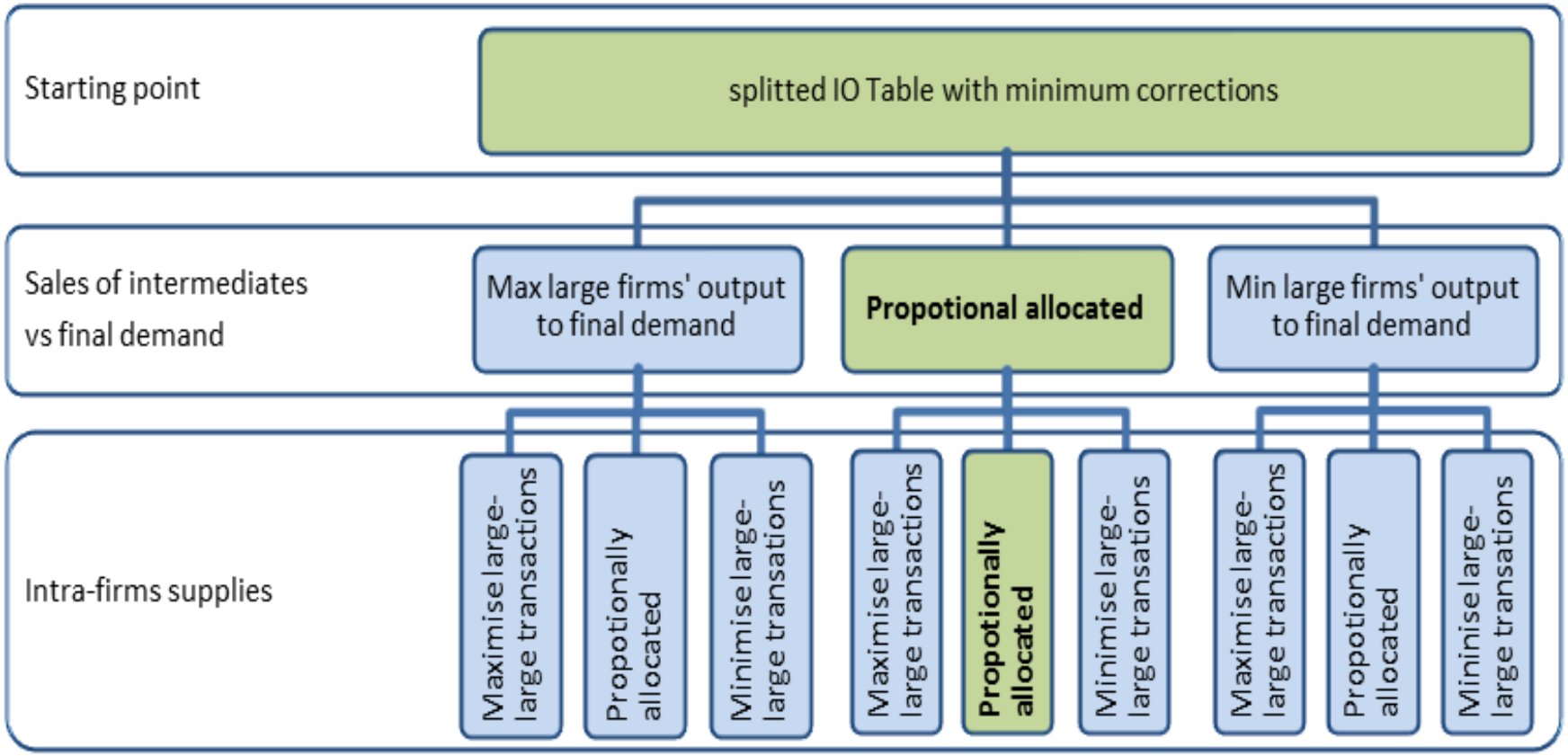
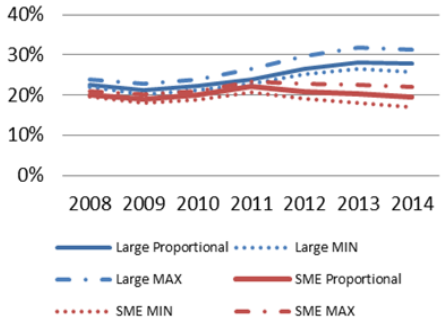
Robustness check: typologies beyond proportionality assumptions

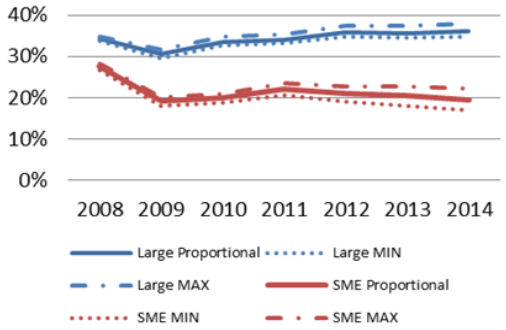


Robustness check: the variation for foreign value added share of exports is small

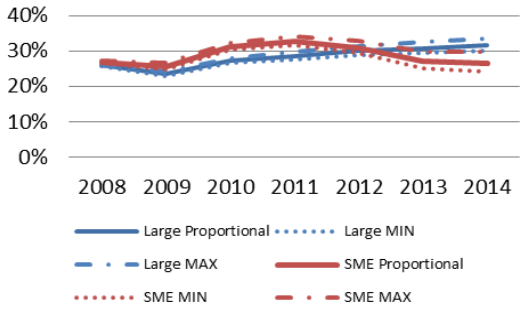
France Food Beverages



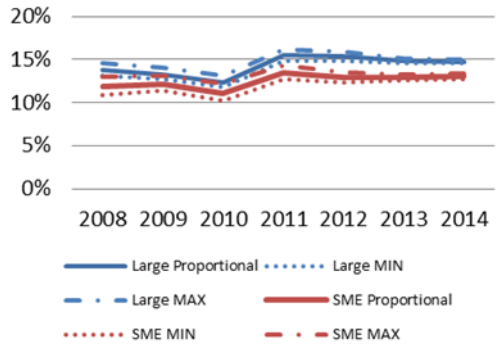
France Chemicals



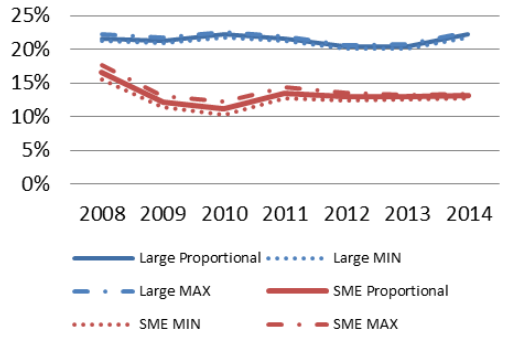
France Computers



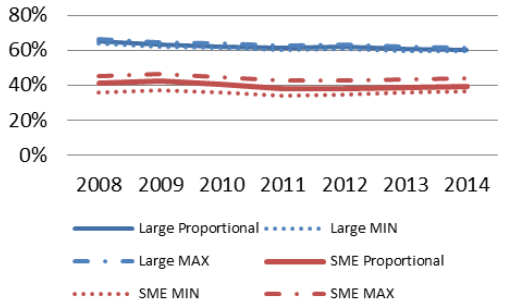
Mexico Food Beverages



Mexico Chemicals



Mexico Computers



SME Highlights

- SME exports double from a value-added perspective
- Two-thirds of the *indirect* exports of SMEs are channelled to foreign markets via large enterprises, and even larger for independent SMEs
- Trade patterns are much more localised

Mainstreaming granularity in official statistics

- OECD Expert Group on Extended SUTs
  - Moving *beyond* assumptions: towards developing statistics from the firm-level up.
    - Requiring **significantly less assumptions** than OECD estimates
  - Country capacity building programmes to provide more granular insights, notably on wage and employment impacts and distortionary impacts (e.g. of FTZs on smaller domestic upstream suppliers).
    - Nordic Council
    - Finland
    - Morocco

How can you help?

- Support national efforts to develop granularity in their official statistics
  - Extended SUTS

- Work with the OECD to develop national estimates

Interested in our work

- Nordic Countries in Global Value Chains (2017)

  https://www.dst.dk/Site/Dst/Udgivelser/GetPubFile.aspx?id=28140&sid=nordglobchains

- Accounting for firm heterogeneity in global value chains: The role of Small and Medium sized Enterprises, WPTGS (2018) paper

  http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=STD/CSSP/WPTGS(2018)5&docLanguage=En

- Extended Supply-Use Tables

  https://www.oecd.org/sti/ind/tiva/eSUTs_TOR.pdf

  http://papers.nber.org/conf_papers/f100626.pdf