



Micro data linking project in European business statistics

European Commission – Eurostat
Directorate G: Global business statistics

Outline of the presentation

- Why micro-data linking
- Eurostat MDL projects
- Pre-conditions and arrangements
- MDL project results and findings
- MDL next project
- Other MDL activities in Europe
 - FATS mirror
- Conclusions

Why Micro Data Linking (MDL)?

- Two divergent requests:
 - Users and policy requirements demand additional information on the structure and activities of enterprises.
 - No additional burden on respondent enterprises and budget constraints on national statistical institutes.
- MDL allows delivering new information, statistics and indicators by combining existing existing data sets but also when combined with possible new data collections.

Eurostat MDL projects

- In 2010 Eurostat launched a MDL project to link data from the International Sourcing (IS) survey with Structural Business (SBS) and International Trade in Goods statistics (ITGS).
- This was succeeded by a follow-up exercise launched in late 2012 which broadened the scope of the 2010 exercise, including inward foreign affiliate statistics (IFATS).
- This data linking allowed to profile enterprises engaged in international sourcing in relation to their employment development, their value added, their control structure, etc.

MDL project: two pre-conditions

- There has to be a large enough intersection of responding units.
 - The IS sample was a subset of the SBS population.
- There has to be a unique identifier or, at least, a very reliable matching approach.
 - The IS and the SBS use national business registers (NBR) as a frame for their population.
 - ITGS is not directly based on NBRs. Therefore, VAT numbers were used to link ITGS data to the NBR and thereby to IS/SBS.

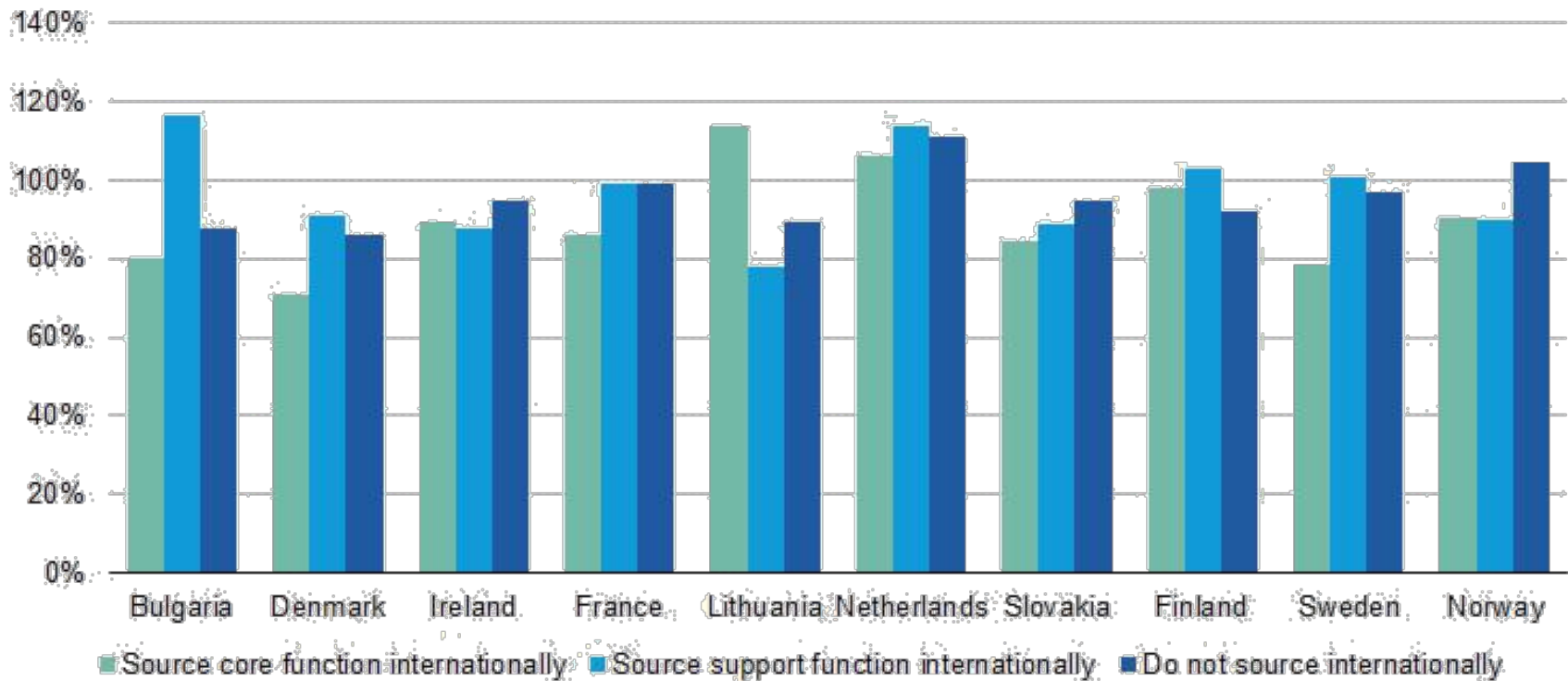
MDL project: some arrangements

- Prior agreement on the variables to be used and on the aggregates to be produced.
- In order to get a harmonized output, precise data requirements and standardised guidelines were provided.
- IT support was also provided for the building up of the national linked datasets
- Statistical confidentiality was respected: micro data files were stored locally at national statistical offices.

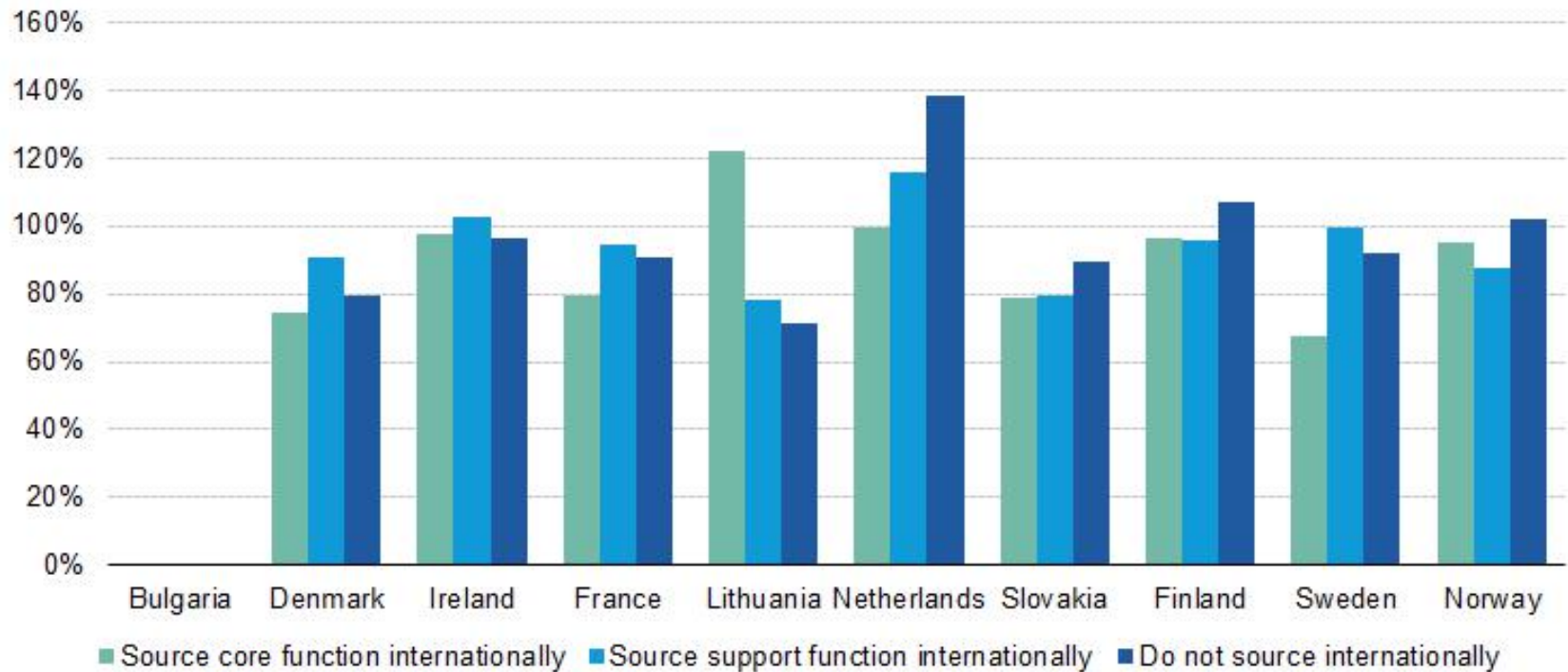
MDL project: some results

- Ten countries participated.
- In most countries employment grew less or fell more between 2008 and 2011 in enterprises sourcing internationally than in enterprises who did not.
- Foreign-controlled enterprises are much more active in international sourcing and international trade than domestically controlled enterprises.
- In all countries a majority of enterprises sourced internationally to only one region.
- In most countries export intensity grew less or fell more between 2008 and 2011 in enterprises sourcing internationally when compared with enterprises who did not.

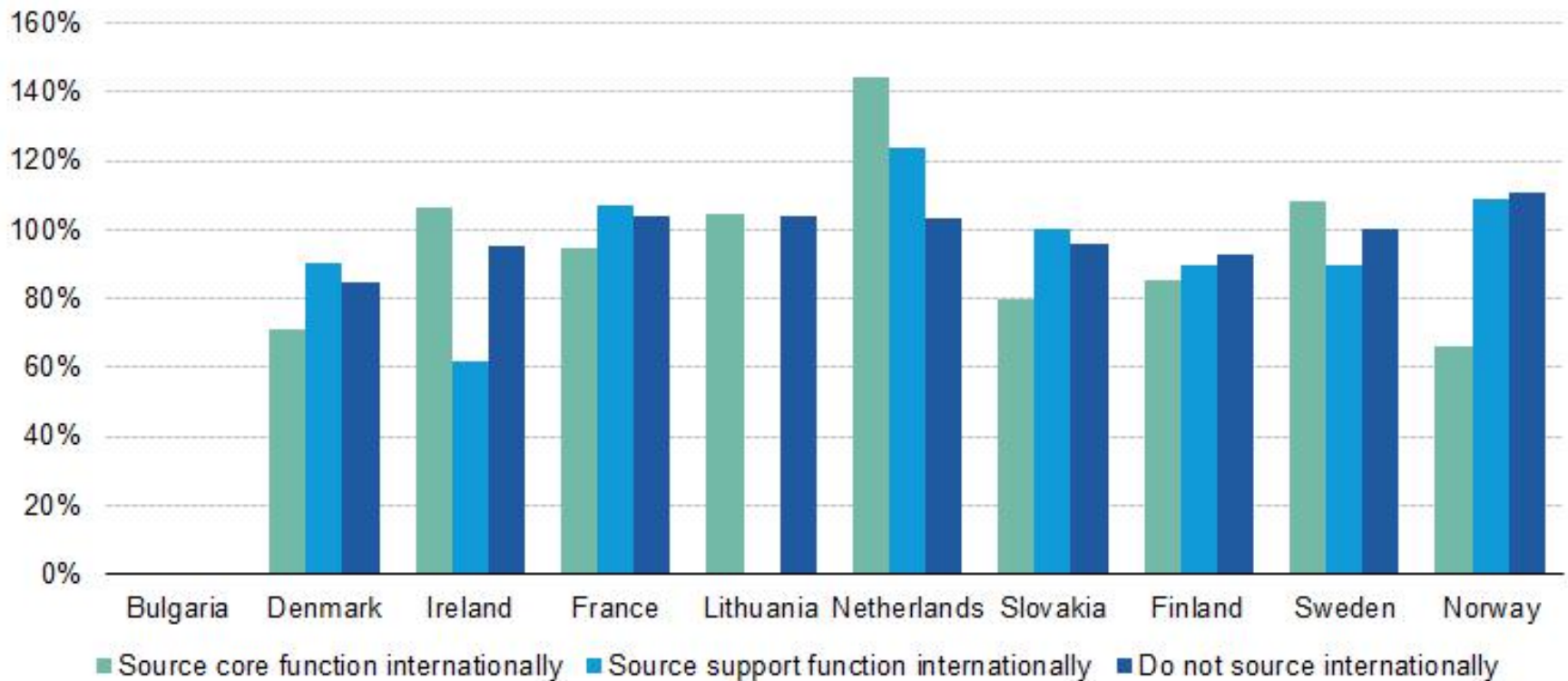
Employment (full-time equivalents), by sourcing status, 2011 (index 2008 = 100)



Employment in foreign controlled enterprises by sourcing status, 2011 (index 2008 = 100)



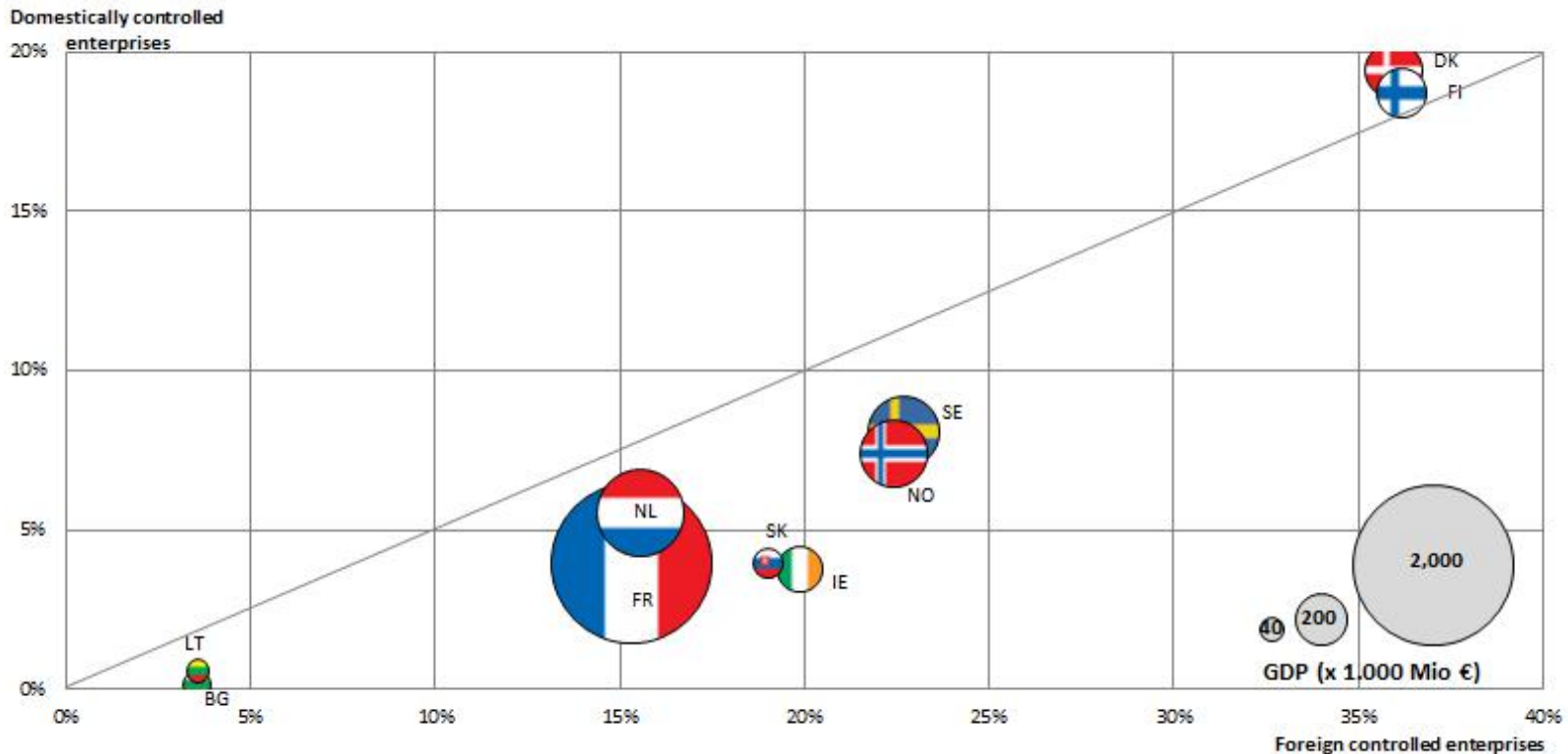
Employment in domestically controlled enterprises by sourcing status, 2011 (index 2008 = 100)



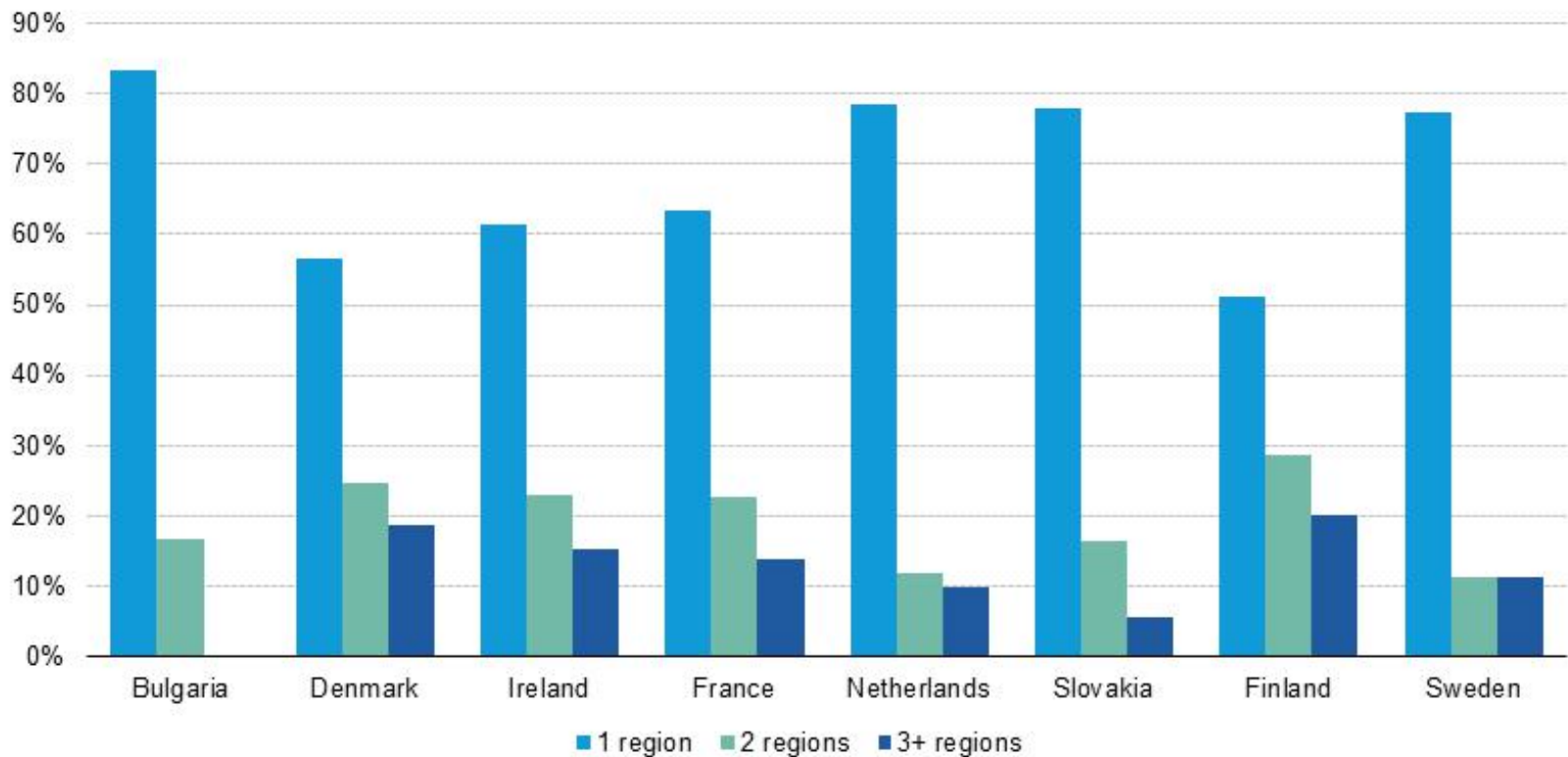


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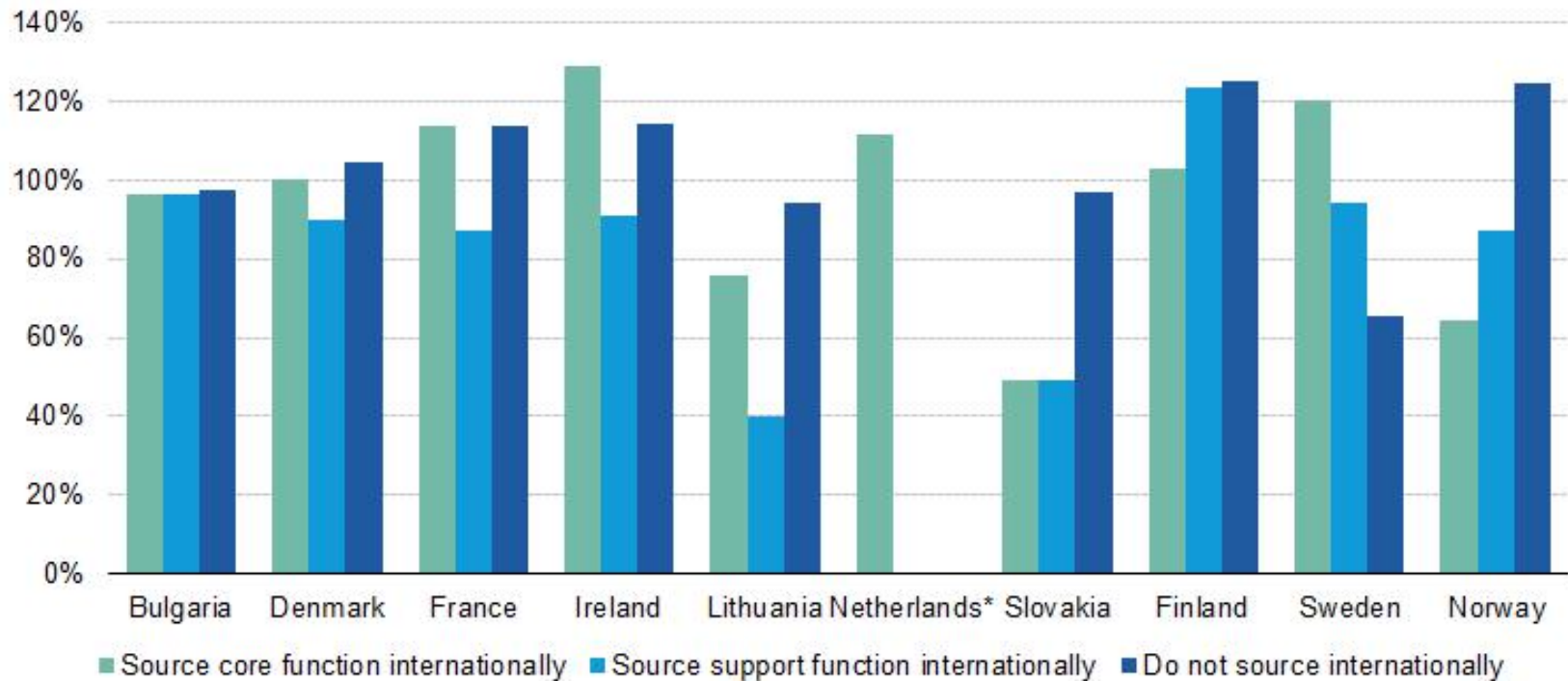
International sourcing by control



Number of regions to which manufacturing enterprises are sourcing internationally



Export of goods intensity, by international sourcing status, 2011 (index 2008 = 100)



MDL – next project

- New project on-going with 9 countries.
- More statistical domains involved:
 - ✓ Again IS, SBS and ITGS
 - ✓ International Trade in Services Statistics
 - ✓ Community Innovation Survey
 - ✓ ICT usage and e-Commerce in enterprises Survey
 - ✓ FATS (Inward and Outward)
 - ✓ Business Demography
 - ✓ National Business Registers.
- Results available in 2016.
- Final aim is to create data sets that could become part of regular production of business statistics

Other MDL activities in Europe

- Micro data on ICT Usage, where business registers were linked with SBS and ICT usage and e-commerce data.
- TEC (regular data collection) and STEC (under development).
- Data warehousing and MDL (methodological)
- Data linking of statistics on the activities of affiliates based abroad (OFATS) with statistics on foreign affiliates resident in the local economy (IFATS): mirror data for DK, FI and NO.

FATS mirror: basic figures

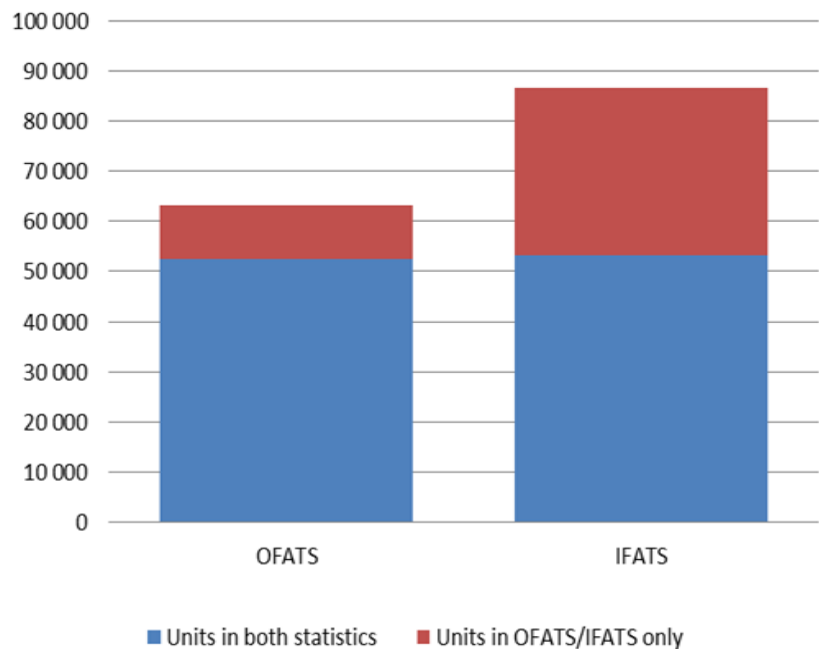
FATS mirror: looking at employment

Employed persons in the OFATS are always less than in the IFATS

The differences in employed persons are mainly due to missing affiliates (red parts of the bar)

Where both O/I FATS cover the same affiliates (the blue part) figures are fairly equal

Employees



MDL: some conclusions

- MDL has significant potential to provide new statistical evidence without increasing the burden on respondents.
- MDL gives new insights into the behaviour and activities of enterprises
- MDL is an additional way of ensuring data quality and consistency between related datasets.
- Cooperation between national statistical offices to undertake an MDL coordinated approach is a cost-effective way and ensures harmonised, comparable results across countries.
- MDL has further potentials, e.g. design of new surveys: the survey questionnaire can be limited to questions for which data is not available from existing sources.



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Thank you for your attention!