STATISTICAL UNITS IN THE SYSTEM OF NATIONAL ACCOUNTS

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Introduction (1/2)

- SNA 2008 distinguishes two different types of statistical units:
  - Establishment in supply and use tables
  - Institutional units in institutional sector accounts
- Call for (re)considering statistical units, also call for possibly reconsidering classifications by industry
- Going beyond the present standards of the 2008 SNA
- Establishment of a Task Force on Statistical Units, looking at it from a more fundamental point of view

Introduction (2/2)

SNA 2008, para. A4.21*: "At the present there are two reasons to have the concept of establishment within the SNA. The first of these is to provide a **link to source information** when this is collected on an establishment basis. In cases where basic information is collected on an enterprise basis, this reason disappears. The second reason is for use in input-output tables. Historically, the rationale was to have a unit that related as far as possible to only one activity in only one location so that the **link to the physical processes of production** was as clear as possible. With the change of emphasis from the physical view of input-output to an economic view, and from product-by-product matrices to industry-by-industry ones, **it is less clear that it is essential to retain the concept of establishment in the SNA**".*

Why are establishments the preferred unit in the SNA 2008?

- The premise in the SNA is that the establishment is the *ideal* unit
  - Establishment are the units with the greatest homogeneity in terms of output, which are also statistically observable
  - Thus also being the units designed to provide data that are more suitable for analyses of production
- However, when this preference was developed:
  - More likely to be the only site for the entire enterprise
  - More likely to keep their records in such a way that data could be collected
  - Deemed the best way to maintain the link between inputs and outputs at a detailed industrial level as well as having a geographical link to produce regional statistics

Data needed for description of production process

- The items included in the production account and the generation of income account:

  - Must be feasible to calculate output, intermediate consumption and thus value added and also compensation of employees, taxes on production and imports, subsidies and the operating surplus or mixed income

- Statistics of numbers of employees, types of employees and hours worked

- Changes in inventories and gross fixed capital formation, including stocks of non-financial assets used in production

Feasibility of data at the establishment level: theoretical considerations

In the case of multi-establishment enterprises:

- Establishments may not be the appropriate unit because not the decision unit

- Essential inputs cannot be allocated uniquely to establishments
  - Capital services related to intellectual property products (e.g., R&D, software, and databases)
  - Business services (corporate and/or ancillary services provided or purchased at a centralised level of the enterprise)

- Not possible to appropriately account for the operating surplus at the establishment level (absence of market prices and issues related to inter-establishment transactions)

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Feasibility of data at the establishment level: practical considerations

Changes in collection of source data:

- Pressure to decrease respondent burden

- More and more use of administrative data

  - Administrative records typically do not relate to establishments but to enterprises or legal units

- More general shift from surveying at establishment level to surveying at enterprise level

  - Increasingly difficult for enterprises to provide data at establishment level

- Quality concerns about data collected at establishment level, because not readily available

Issues to consider: regional accounts

- Multi-regional enterprises create problems with allocating economic activities to regions => need for data at local level (i.e. establishments)

- However, the main issues related to the compilation of data by industry at the establishment level are also relevant for regional accounts: allocation of capital services, corporate services, operating surplus, etc.

- Does establishment level data actually add to the quality of regional data, over and above data on employment and compensation of employees?

- What is actually needed: only certain indicators like value added and employment, or a full-fledged regional supply-use table?

Issues to consider: homogeneity

- SNA's preference reflected the view that establishments classified to the same industrial classification shared similar characteristics, and were considered relatively 'homogeneous'

- Underlying assumption seems to have weakened:
  - Growing share of output generated by foreign affiliates, outsourcing, new types of producers
  - Under current industrial classification, contractors are classified to the same category as units producing for their own account, foreign controlled and domestically controlled units are grouped together
  - Much more rapidly changing products, production functions and organisational arrangements, thus putting into question consistency over time

Issues to consider: change of emphasis in production process

- Less clear whether establishments need to be the preferred unit
  - More emphasis on "economic" view, instead of "physical" production processes
  - From a purely statistical point of view, SUT are perfectly equipped to deal with heterogeneity
- Other, more "economic" breakdowns may be more preferable for today's economy, e.g. based on ownership criteria (public corporations, foreign controlled corporations, other private enterprises), or types of producers (e.g. distinguishing contractors from other enterprises)

Issues to consider: integrated analysis

- Increasingly important to link the "real" economy and the "financial" economy (e.g. financial crisis, impact of holding gains, trade in value added)

- Using the same statistical unit in the SUT and institutional sector accounts would allow for better integration, and combined monitoring and analysis of production, income, and finance

- This would disqualify establishment, as most of the information needed to compile institutional sector accounts is not available at the establishment level

Issues to consider: linking data

- Increasing demands for detailed analysis in which, for example, production statistics need to be linked to statistics on enterprise characteristics, foreign (affiliate) trade, employment, etc.

- Use of establishment makes it difficult to properly link the data as these phenomena are typically only available at the enterprise level

- More generally: potential for micro-macro linking

Issues to consider: efficiency and flexibility

- Removing the preference for establishments
  - Provides a better link to corporates' own business accounting frameworks
  - Reduce reporting burden for respondents
  - Reduce statistical burden for national statistical offices
  - Creates more opportunities for linking data, thus increasing flexibility of statistical system
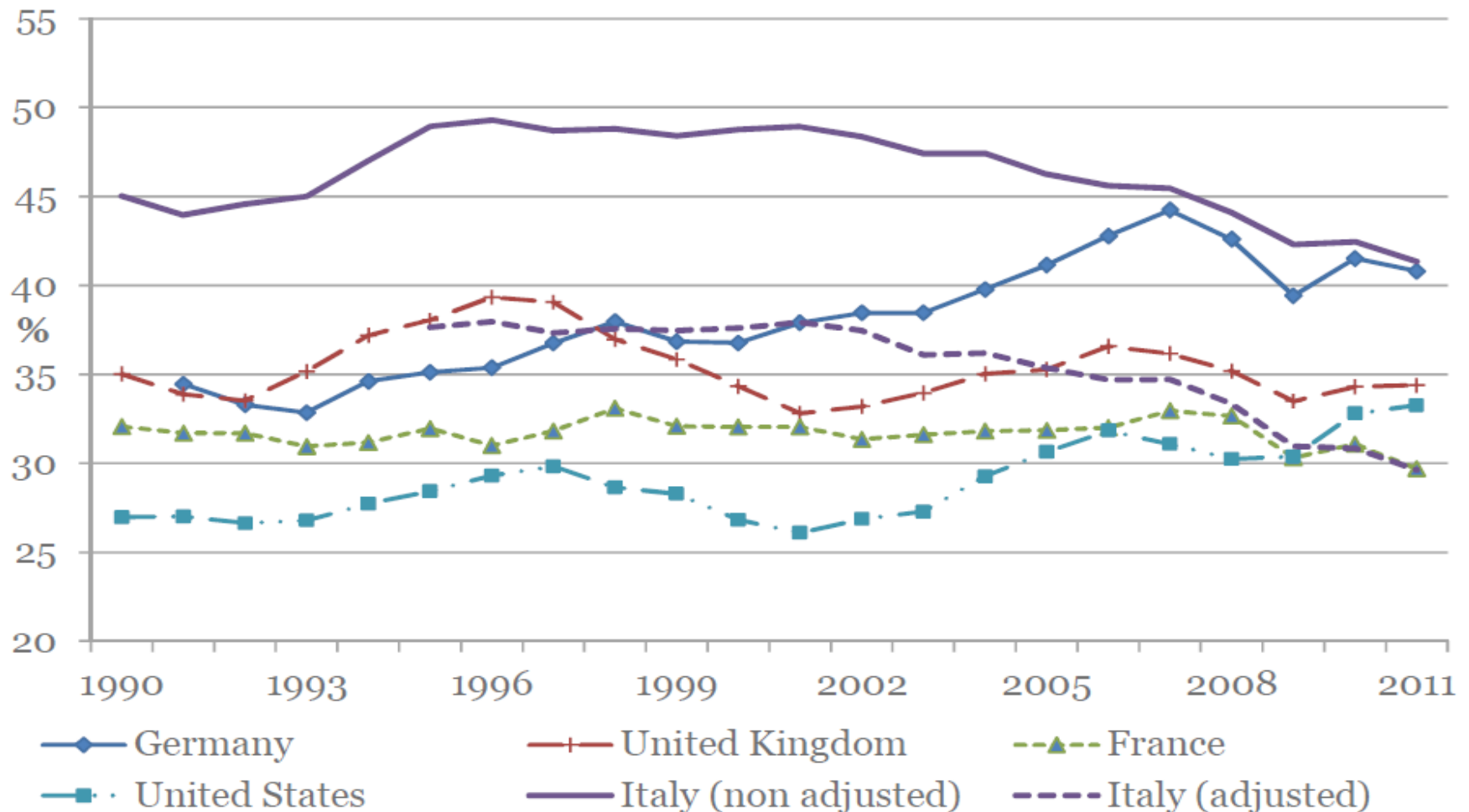
Institutional units: description of income and finance

- International comparability issues

- Apparent differences in interpretation of present guidelines, sometimes related to availability of source data, but also for other reasons

- Two examples related to institutional units:

  - Delineation of quasi-corporations, impact on operating surplus of non-financial corporations

  - Delineation of institutional units, impact on e.g. gross debt as % of GDP
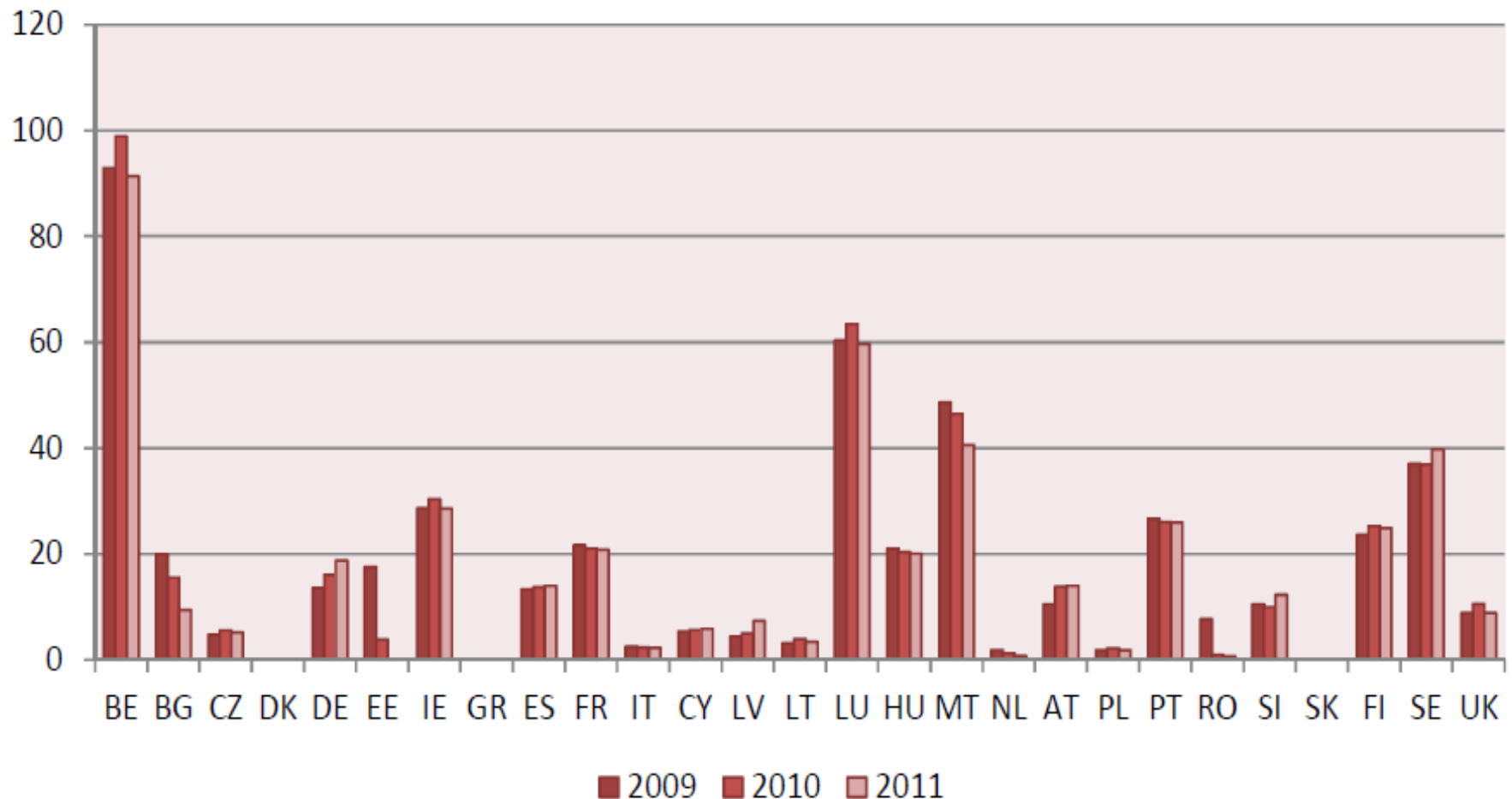
Delineation of quasi-corporations

Graph 1. Operating surplus as % of value added at factor costs, non-financial corporations

What is the appropriate statistical unit?

Graph 2. Consolidation effect for liabilities in loans of non-financial corporations, in % of GDP

International Task Force

- Terms of Reference for the establishment of an International Task Force on Statistical Units has been agreed, with the following main objectives:
  - To (re)consider the current 2008 SNA recommendations, and if need for change, to come up with concrete and implementable proposals
  - To come with concrete suggestions, e.g. regarding the criteria for distinguishing separate units, to arrive at internationally comparable implementation
  - To come with concrete proposals for classifications by industry and institutional sector
  - To asses the potential quantitative impact of proposals
- Task Force still needs to be established

Thank you for your attention!