Measuring International organisation and sourcing of business functions - Results from the second European survey

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The Dynamics of Virtual Work: the transformation of labour in a Digital Global Economy
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Today’s Presentation

- **Survey on International Organisation and Sourcing**
  - Background and design
  - Definitions
  - Survey results

- **Business Functions**
  - Definitions
  - Survey results

- **Micro Data Linking**
  - Background and design
  - Linking results

- **The Road ahead**
Measurement challenges

- Official statistical production systems mainly designed to measure domestic not transnational activities
- The dynamics of globalisation requires introduction of new concepts, e.g. business functions or international sourcing
- Measuring enterprise relations is a new focus for official statistics
- Changed framework conditions focusing on diminishing respondent burden on enterprises
The starting point 2006: Anecdotal evidence...
This is the 8.15 to Mumbai... It is carrying Indian commuters, on the way to do YOUR JOB
## Policy issues addressed

How many jobs are moved across borders? Which type of jobs and in which sectors?

Who are the receiving countries?

What are the overall employment impacts – in terms of job losses or gains?

Is there a risk of “hollowing out“ skill based activities?

What is the impact of international sourcing on the competitiveness of European firms?
The total or partial movement of business functions (core or support business functions) currently performed in-house or currently domestically sourced by the resident enterprise to either non-affiliated (external suppliers) or affiliated enterprises located abroad.
# International Sourcing dimensions

<table>
<thead>
<tr>
<th>ORGANIZATION/CONTROL</th>
<th>LOCATION</th>
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<tbody>
<tr>
<td></td>
<td>DOMESTIC</td>
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</table>
| **INTERNAL**: function within the enterprise or enterprise group | EU terminology: Domestic insourced  
US terminology: Domestic in-house  
- Function performed within the enterprise or enterprise group within the compiling country | EU terminology: International insourced  
US terminology: Offshore in-house  
Function performed within the enterprise group outside the compiling country (by affiliated enterprises) |
| **EXTERNAL**: function outside the enterprise or enterprise group | EU terminology: Domestic outsourced  
US terminology: Domestic outsourced  
Function performed outside the enterprise or enterprise group by non-affiliated enterprises and within the compiling country | EU terminology: International outsourced  
US terminology: Offshore outsourced  
Production outside the enterprise group and outside the compiling country (by non-affiliated enterprise, e.g., suppliers, service providers, contractors, etc.) |
# Modules in the IS/GVC survey 2012

<table>
<thead>
<tr>
<th>Topic</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>General information</td>
<td></td>
</tr>
<tr>
<td>Employment in domestic enterprises broken down by business functions</td>
<td></td>
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<tr>
<td>International sourcing and relocation of business functions 2009–2011</td>
<td></td>
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<tr>
<td>International organisation of activities in the enterprises’ foreign affiliates 2011</td>
<td></td>
</tr>
<tr>
<td>Activities contracted to supplying enterprises abroad 2009–2011</td>
<td></td>
</tr>
</tbody>
</table>
Participating countries 2012

Response rates (number of responding enterprises)

Per cent of sampled enterprises

<table>
<thead>
<tr>
<th>Country</th>
<th>Response Rate</th>
<th>Number of Responding Enterprises</th>
</tr>
</thead>
<tbody>
<tr>
<td>DK</td>
<td>100%</td>
<td>1244</td>
</tr>
<tr>
<td>RO</td>
<td>98%</td>
<td>3008</td>
</tr>
<tr>
<td>NO</td>
<td>97%</td>
<td>1431</td>
</tr>
<tr>
<td>LV</td>
<td>96%</td>
<td>600</td>
</tr>
<tr>
<td>SK</td>
<td>95%</td>
<td>1295</td>
</tr>
<tr>
<td>PT</td>
<td>95%</td>
<td>976</td>
</tr>
<tr>
<td>LT</td>
<td>94%</td>
<td>946</td>
</tr>
<tr>
<td>FI</td>
<td>93%</td>
<td>1198</td>
</tr>
<tr>
<td>EE</td>
<td>92%</td>
<td>514</td>
</tr>
<tr>
<td>FR</td>
<td>91%</td>
<td>6662</td>
</tr>
<tr>
<td>NL</td>
<td>91%</td>
<td>2182</td>
</tr>
<tr>
<td>SE</td>
<td>89%</td>
<td>1016</td>
</tr>
<tr>
<td>EI</td>
<td>88%</td>
<td>1259</td>
</tr>
<tr>
<td>BE</td>
<td>87%</td>
<td>2216</td>
</tr>
</tbody>
</table>
Enterprises sourcing internationally 2009-2011

(% of enterprises with 100+ employees)
Mainly manufacturing enterprises sourcing internationally

Enterprises sourcing internationally 2009-2011 by main sector. Share of total no. of enterprises with 100 or more employees

[Bar chart showing the percentage of enterprises sourcing internationally by main sector for different countries, with the x-axis labeled as countries and the y-axis labeled as percentage. The chart compares the share of enterprises in the manufacturing sector (blue) and other sectors (red).]
Job losses due to international sourcing
2009 - 2011

(% of number of persons employed in enterprises with 100+ employees)
Net job effect of international sourcing of minor scale in Denmark
Insourcing and outsourcing 2009-2011

(% of enterprises sourcing internationally*)

* Enterprises may be both insourcing and outsourcing.
Strategic decisions taken by the group head a very important reason for international sourcing 2009-2011

(% of enterprises sourcing internationally)
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What are Business Functions?

Unbundling of the total activity of enterprises into tasks constituting the necessary inputs for final outputs, including production and supporting tasks.

Aggregation of specific tasks performed within the enterprise to functions to a specific level of grouping of products (CPA).

The level is less aggregated than the activity (NACE) but more aggregated than products or tasks.

Business Functions can mainly be seen as a tool to capture services elements in the production processes.
Opening the black box of the enterprise by introducing Business Functions

• **Core business function**
  Production of final goods or services intended for the market/for third parties carried out by the enterprise and yielding income.

• **Support business functions**
  Support business functions (ancillary activities) are carried out in order to permit or facilitate production of goods or services intended for the market/for third parties by the enterprise.

  - Distribution and logistics
  - Marketing, sales and after sales services
  - ICT services
  - Administrative and management functions
  - Engineering and related technical services
  - Research & Development
  - Other support functions
Employment broken down by business function.

Enterprises with 100+ employees 2011

![Bar chart showing employment broken down by business function for enterprises with 100+ employees in 2011.](image-url)
Support functions sourced most frequently

(\% of enterprises sourcing internationally*, 2009-2011)

* Enterprises may source both core and support functions.
Type of Business Function influences choice of destination

Destination shares of Danish enterprises sourcing internationally*, 2009-2011. Selected functions

* Enterprises may source more than one function and to more than one destination.
Have we got the list of Business Functions right?

Business functions sourced internationally. Share of all functions sourced

<table>
<thead>
<tr>
<th></th>
<th>Core function</th>
<th>Distribution &amp; logistics support functions</th>
<th>Sales &amp; marketing support functions</th>
<th>ICT services support functions</th>
<th>Administrative support functions</th>
<th>R&amp;D, engineering support functions</th>
<th>Other support functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>All activities</td>
<td>28</td>
<td>10</td>
<td>11</td>
<td>21</td>
<td>18</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>All activities &gt; 1 instance of IS</td>
<td>29</td>
<td>10</td>
<td>11</td>
<td>18</td>
<td>18</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Top 20 activities with International Sourcing</td>
<td>35</td>
<td>11</td>
<td>9</td>
<td>15</td>
<td>15</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Top 10 activities with International Sourcing</td>
<td>34</td>
<td>9</td>
<td>7</td>
<td>17</td>
<td>16</td>
<td>11</td>
<td>5</td>
</tr>
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Reasons for Micro Data Linking

Need for breaking down the stove pipe approach to get a more holistic view

Increased demand for micro data linking from researchers and policy makers

Increasing value of existing, already collected data – without raising respondent burden

MDL the (only?) method to address the current most addressed research questions such as

- Question is not “what do countries trade?” but “what kind of enterprises trade?” (size, activity, ownership etc.)
- Firm heterogeneity: Enterprises are not homogeneous but heterogeneous
- Better understand Global Value Chains and the involvement of domestic enterprises in GVCs
Data sources used in the project

- **INTERNATIONAL ORGANIZATION AND OUTSOURCING SURVEY (GVC) 2009-2011**
  - BR variables 2008-2011
  - Unique enterprise ID
  - Unique enterprise group ID

- **INWARD FATS 2008-2011**
  - Unique enterprise ID

- **STRUCTURAL BUSINESS STATISTICS 2008-2011**
  - Unique enterprise ID

- **International Trade in Goods 2008-2011**
  - Unique enterprise ID

- **OUTWARD FATS 2008-2011**
  - Unique enterprise ID
  - Unique enterprise group ID

Dataset from MDL 2011 project;
*IS Survey, SBS, ITGS variables* 2000-2007
**Unique enterprise ID**
4 main research questions

- International sourcing has a **negative impact on domestic employment**

- International sourcing **implies higher personnel costs per employee domestically** (low-skilled jobs are being sourced internationally)

- International sourcing has a **positive impact on value added creation per employee**

- International sourcing has an **influence on foreign trade patterns**
Foreign owned enterprises source more frequently

![Bar chart showing the frequency of international sourcing by domestic and foreign owned enterprises across different countries. The chart indicates that foreign owned enterprises source more frequently than domestically owned enterprises.]
Sourcing enterprises showing increased productivity

Productivity (VAL/FTE) 2011 and international sourcing, manufacturing enterprises
Employment development by function sourced internationally
Denmark, 2000-2007

Median values of full-time equivalent number of employees
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Draft proposal for a standardised list of Business Functions

• **Core business function**
  - 1.1 Production of goods (for the market)
  - 1.2 Production of services (for the market)

• **Support business functions**
  - 2. Transport and distribution support functions
    - Transport services
    - Distribution, logistics and warehousing services
  - 3. Marketing, sales and after sales services
    - Customer contact (call) centres
    - Marketing, sales and after sales services
  - 4. ICT services
    - IT services
    - Software services
    - Network services
  - 5. Administrative and management functions
    - Administrative and back office functions, incl. HR, education and training services
  - 6. Engineering and related technical services and R&D
    - Engineering and related technical services
    - Research & Development
  - 7. Other support functions
    - Ancillary manufacturing services
    - Ancillary maintenance and repair services
Future planned European statistics

- Introducing Business Functions in the new framework regulation on business statistics
- Introducing a multi-annual survey on international sourcing in the new framework regulation on business statistics
- Emphasis on Micro Data Linking as a future tool for statistical production
- Integration of business and international trade statistics
- Establishing European statistics on multinationals
Thank you!

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