TURNOVER AND OUTPUT MEASUREMENT FOR R&D ACTIVITIES IN GERMANY

„25th Voorburg Meeting“
in Vienna 20th to 24th September 2010
Agenda

1. Definition of R&D activities
2. R&D activities in Structural Business Statistics
3. Market conditions
4. Evaluation of standard definitions and market condition
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R&D activities in Germany

- Main characteristic is further development
- WZ 2008: No further breakdown on the 5-digit-level
- Three types of institutions operate in R&D activities
  - Government and universities
  - Private non-profit institutions
  - Businesses
R&D conducted by businesses

**External R&D**
- R&D as main economic activity
- Research projects/studies not for own use
- Market service

**Internal R&D**
- Main economic activity different from R&D
- Predominately industrial sector
- Research projects/studies for own use
- Non-market service
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Method of data collection

- 15% sample survey covering a wide range of services industries
- Observation unit is „enterprise“
- Output is measured in terms of turnover
- Results are broken down by economic activity only
- Results are available since reference period 2001
SBS about R&D

- SBS captures the output of all enterprises whose main economic activity is R&D
- Sample size 36.9% of all R&D enterprises
- SBS results point the characteristics of R&D activities up
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Turnover in R&D activities

- R&D
- R&D on natural sciences and engineering
- R&D on social sciences and humanities

Reference year

Total turnover in billion euro

2003 2004 2005 2006 2007 2008 (preliminary)
## Importance of subsidies

<table>
<thead>
<tr>
<th>NACE Rev. 2</th>
<th>Total receipts in million euro (preliminary)</th>
<th>Thereof subsidies in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional, scientific and technical activities</td>
<td>202.8</td>
<td>0.9</td>
</tr>
<tr>
<td>Legal &amp; accounting activities</td>
<td>41.6</td>
<td>0.0</td>
</tr>
<tr>
<td>Activities of head offices; management consultancy activities</td>
<td>67.5</td>
<td>0.1</td>
</tr>
<tr>
<td>Architectural &amp; engineer-ing activities; technical testing &amp; analysis</td>
<td>49.7</td>
<td>0.1</td>
</tr>
<tr>
<td>Research &amp; development</td>
<td>9.5</td>
<td>18.2</td>
</tr>
<tr>
<td>Advertising &amp; market research</td>
<td>23.6</td>
<td>0.0</td>
</tr>
<tr>
<td>Other professional, scientific &amp; technical activities</td>
<td>10.9</td>
<td>0.1</td>
</tr>
</tbody>
</table>
## Output in relation to expenditures

<table>
<thead>
<tr>
<th>NACE Rev. 2</th>
<th>Total turnover in million euro (preliminary)</th>
<th>Share of expenditures of total turnover in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional, scientific and technical activities</td>
<td>190.2</td>
<td>82.7</td>
</tr>
<tr>
<td>Legal &amp; accounting activities</td>
<td>40.6</td>
<td>65.8</td>
</tr>
<tr>
<td>Activities of head offices; management consultancy activities</td>
<td>58.9</td>
<td>95.2</td>
</tr>
<tr>
<td>Architectural &amp; engineering activities; technical testing &amp; analysis</td>
<td>48.4</td>
<td>81.0</td>
</tr>
<tr>
<td>Research &amp; development</td>
<td>8.9</td>
<td>118.7</td>
</tr>
<tr>
<td>Advertising &amp; market research</td>
<td>22.9</td>
<td>78.8</td>
</tr>
<tr>
<td>Other professional, scientific &amp; technical activities</td>
<td>10.5</td>
<td>63.8</td>
</tr>
</tbody>
</table>
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Outside the scope of SBS

- Huge part of R&D is conducted by institutions not covered by SBS of services industries
  - Internal R&D
  - Government, private non-profit institutions not exercising an economic activity

- Measurement of output in terms of turnover is not straightforward
  - Only market services directly cause turnover
  - R&D without success
  - Basic research
THANK YOU
FOR YOUR ATTENTION

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