SPPI in Hungary
Scientific research and development services
R&D

Voorburg Group
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HUNGARIAN CENTRAL STATISTICAL OFFICE

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How to define R&D

Creative work undertaken on a systematic basis in order to increase the stock of knowledge to devise new applications.

R&D are characterised by the element of

- creation;
- novelty;
- adaptation of scientific methods;
- Creation of new knowledge
Observation system

How to develop the observation system?

1. **Industry approach** (economic units classified to the R&D sector, or

2. **Product approach** (economic units where R&D is carried out).
1. Industry approach

Classification (NACE Rev. 2)

72  **Scientific** research and development (R&D)
72.11 Research and experimental development on **biotechnology**
72.19 Other research and experimental development on **natural sciences and engineering**
72.20 Research and experimental development on **social sciences and humanities**
Main indicators

How big is this sector in Hungary?

Comparison with the total population indicators:

- GDP: > 0.3%
- Turnover: < 0.2%
- Number of enterprises: > 2000 (~ 0.4%)
- Number of employee: > 12000 (~ 0.4%)
## Industry structure

<table>
<thead>
<tr>
<th>Classification</th>
<th>Turnover</th>
<th>Number of employees</th>
<th>Number of units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nave Rev. 2</td>
<td>%</td>
<td>%</td>
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<tr>
<td>7211</td>
<td>12</td>
<td>7</td>
<td>8</td>
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<td>7219</td>
<td>72</td>
<td>72</td>
<td>58</td>
</tr>
<tr>
<td>7220</td>
<td>16</td>
<td>21</td>
<td>34</td>
</tr>
<tr>
<td>Total:</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>
R&D industry

Is dominated by

- **small enterprises** (share of units with less than 10 employees > 93%, turnover > 20%);
- very **dissimilar services**;
- High level of **segmentation**;
- **Excluding units** classified in other sectors (e.g. government and education sector).
2. Product approach

- To cover all units irrespective of their organizational form (where R&D is carried out).
- enterprises;
- government organizations;
- research institutes;
- universities;
- clinics
Type of activity

- Basic research
- Applied research
- Experimental development

Annual survey in HCSO
Main indicators, 2008

2800 R&D units were observed
- universities 52%
- businesses 41%
- government 7%

Financial sources
- Businesses 48.3%
- Government 41.8%
- Funds from abroad 9.3%
- Non profit 0.6%

In 2008 the enterprises financed the largest part (before leading role of the government sector)
Staff of a R&D project

- Researchers and engineers - creation of new knowledge
- Technicians - technical tasks (under the supervision of researchers)
- Other supporting staff – craftsmen and secretarial staff
The main price determining characteristics

- type of products;
- type of project (domestic: business / government, international);
- type of client;
- Qualification of the staff members;
- technology used;
Basic pricing method used

- **Prising method based on working time** (e.g. charge out rates) for:
  - professor;
  - team leader;
  - researcher;
  - PhD;
  - Assistant

  The prices should reflect an **average** for the reference period.
Product list

- **Product list** defined specifically for the R&D SPPI - developed with respondents;

- **Specific product / transaction** agreed with each individual observation unit.
Pilot project

- European Transition Facility program to involve sources from outside (2006 February – 2007 May, methodology and pilot survey)
- **SPPI observation**: pilot project Q2 and Q3/2006
- **The supply of data**: voluntary,
- **Price collection**: by post, e-mail and personal visit
Questionnaire

- **Name** of the service (column a);
- **Code of the representative services** (column b); contains of the CPA (max. 6 characters) and another 4 number for the unique identification of the services;
- **Measure** (column c, e. g. FT/ hour, Ft/day);
- **Prices of the previous and current quarter** (column e and f);
- **Turnover data from the previous year** (at least for 4 and 6 level deep of CPA) (column g);
Questions

- Sampling based on **Business Register (BR)**, or **R&S**, or combined?
- **Statistical unit:** ?
- **Selection of units:** ? (by cut-off with random or subjective sampling being completed)
- **What type of prices should be collected?** (real transaction price does not exist!)
Thank you for attention!

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