Regional innovation system in the South Moravian Region
Introduction

- Innovations – key factor of the socio-economic development
- Transfer competences to regional level
- Concepts of national and regional innovation systems
- One-size-fits-all?
…the approach to an evaluation of regional innovation systems needs to be differentiated with respect to their structure which is affected by previous development, institutional framework and real economic potentials.

Case study:
- the South Moravian Region, Czech Republic
Key parameters

- specialized institutions supporting system management,
- regional innovation strategy,
- higher education,
- research and development,
- economic environment,
- public support for innovations,
- innovation infrastructure.
Introduction of the South Moravian Region (1)
Introduction of the South Moravian Region (2)

- Population: 1 140 000 inhabitants
- Dominant and strong capital: Brno (380,000 inhabitants, 2nd biggest city in the CR)
- The second largest town: Znojmo (only 34,000 inhabitants)
- Density of population: 157 inhabitants/km²
- Number of municipalities: 673
- Number of towns and cities: 49
- Districts: 7
- Industry: machinery, ICT, biotechnology, electrotechnical, viniculture
Specialized institutions

- **The South Moravian Innovation Centre**
  - Established by four universities, the City of Brno and the SM Region
  - Special agency for support of innovations and providing of innovation infrastructure
  - preparation and creation of the Regional Innovation Strategy (RIS)
  - responsible for management and implementation of the strategy
  - leader in support of innovations in the Czech Republic, tools used in the CR for the first time
  - Several international awards, e.g.
    - The Best Science Based Incubator (3rd place, New Zealand)
    - The European Enterprise Promotion Awards (representative of the CR)

- **South Moravian Centre for International Mobility**
  - support to the incoming of experienced researchers, young researchers and international students to the region
Regional Innovations Strategy of the South Moravian Region

- **(4th version – preparation)**

**Aiming:**
- 4 sectors: machinery industry, electrotechnology, ICT, life sciences

**Priorities:**
- **Technology transfer** (e.g. Technology Accelerator Fund – Pre-seed fund; Innovation vouchers)
- **Consultancy and services for SMEs** (e.g. Business incubators and science parks, seed fund, microloans, consultancy services)
- **Human Resources** (e.g. Science-technology museum, talented students, cooperation of schools and firms)
- **Internationalization** (e.g. attracting of foreign researches)
Higher education in the South Moravian Region

<table>
<thead>
<tr>
<th>Universities</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculties</td>
<td>27</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>University</th>
<th>Masaryk U.</th>
<th>Mendel U.</th>
<th>Veter. and Pharm.I U.</th>
<th>Technology U.</th>
<th>U. of Defence</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master</td>
<td>16 188</td>
<td>2 605</td>
<td>2 347</td>
<td>6 637</td>
<td>336</td>
<td>28 113</td>
</tr>
<tr>
<td>Doctoral</td>
<td>3 420</td>
<td>519</td>
<td>282</td>
<td>1 919</td>
<td>48</td>
<td>6 188</td>
</tr>
</tbody>
</table>
### Research institutions

<table>
<thead>
<tr>
<th>R&amp;D workplaces</th>
<th>420</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human resources HC</td>
<td>8386</td>
</tr>
<tr>
<td>Human resources FTE</td>
<td>5446</td>
</tr>
<tr>
<td>HC – technical branches</td>
<td>40 %</td>
</tr>
</tbody>
</table>

Number of R&D workplaces per 100,000 inhabitants in Czech regions

R&D personnel per 100,000 inhabitants by region

- FTE (Full time equivalent)
- HC (Head count)
## Expenditures on R&D

<table>
<thead>
<tr>
<th>2010</th>
<th>South Moravian Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expenditures</td>
<td>8.4 mld. CZK (=336 mil. EUR)</td>
</tr>
</tbody>
</table>

**Diagram:**
- **Enterprise sector:** 61.5%
- **Government sector:** 46.1%
- **Others sources:** 11.6%

**Pie charts:**
- Natural sciences: 20.4%
- Technical sciences: 19.3%
- Medical sciences: 6.5%
- Agricultural sciences: 3.7%
- Social sciences: 6.5%
- Human sciences: 5.9%
Economic environment

**Employment**

- Agriculture: 49.4%
- Manufacturing industry: 25.9%
- Civil engineering: 11.9%
- Trade: 9.8%
- Services: 2.9%

**Share of innovative enterprises and enterprises with technological innovation**
Public support for innovations

- Source: European Regional Development Fund (85 %) + state budget (15 %)
- Eligible territory: Czech Republic, except Prague
- Programming period: 2007 – 2013
- 2 operational programmes aimed at innovations:
  - Operational program Research and Development for Innovations (OP RDI)
  - Operational program Enterprise and Innovations (OPEI)
Aim: to support R&D infrastructure
- building and equipment of research workplaces and increasing of tertiary education capacity
- Priority axis 1: European centres of excellence
- Priority axis 2: Regional R&D centres

**Graph 5: Subsidies from the OP RDI in the Czech regions (in mil. CZK)**

<table>
<thead>
<tr>
<th>Region</th>
<th>Priority axis 1</th>
<th>Priority axis 2</th>
<th>Priority axes 1 and 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Bohemian</td>
<td>10,000</td>
<td>5,000</td>
<td>15,000</td>
</tr>
<tr>
<td>South Moravian</td>
<td>8,000</td>
<td>4,000</td>
<td>12,000</td>
</tr>
<tr>
<td>Moravian-Silesian</td>
<td>6,000</td>
<td>3,000</td>
<td>9,000</td>
</tr>
<tr>
<td>Pilsen</td>
<td>4,000</td>
<td>2,000</td>
<td>6,000</td>
</tr>
<tr>
<td>Olomouc</td>
<td>2,000</td>
<td>1,000</td>
<td>3,000</td>
</tr>
<tr>
<td>Liberec</td>
<td>1,000</td>
<td>500</td>
<td>1,500</td>
</tr>
<tr>
<td>Zlin</td>
<td>500</td>
<td>250</td>
<td>750</td>
</tr>
<tr>
<td>Usti</td>
<td>250</td>
<td>125</td>
<td>375</td>
</tr>
<tr>
<td>Hradec Králové</td>
<td>125</td>
<td>62.5</td>
<td>187.5</td>
</tr>
<tr>
<td>South Bohemian</td>
<td>62.5</td>
<td>31.25</td>
<td>93.75</td>
</tr>
<tr>
<td>Vysočina</td>
<td>31.25</td>
<td>15.625</td>
<td>46.875</td>
</tr>
<tr>
<td>Karlovy Vary</td>
<td>15.625</td>
<td>7.8125</td>
<td>23.4375</td>
</tr>
<tr>
<td>Pardubice</td>
<td>7.8125</td>
<td>3.90625</td>
<td>11.71875</td>
</tr>
</tbody>
</table>

Note: 1 EUR = 25 CZK, 1 USD = 19 CZK
OP Research and Development for Innovations

The most important projects in the South Moravia Region

**CEITEC**
- research centre of scientific excellence
- 4 universities and 2 research institutes
- aim of the project: to build laboratories outfitted with first-class equipment that will be used for basic and applied research in the field of life sciences and advanced materials and technology

**ICRC**
- International Clinical Research Center which is the result of long-term close cooperation between experts from St. Anne’s University Hospital Brno and Mayo Clinic in Rochester in Minnesota
- an innovative science and research center and a top-quality public healthcare center focusing on prevention, early detection and cure primarily of cardiovascular and neurological diseases
OP Enterprise and Innovations

- focuses on the business environment development and support of enterprises, especially the innovative ones
- Beneficiaries: 1) firms 2) universities, research institutes and territorial administrative units
- In our analysis we deal with subprograms that are aimed at introduction of innovations most of all:
  - Innovation Program (innovation projects)
  - Potential Program (development centres (departments) in enterprises)
  - Prosperity Program (business incubators and science parks)
Innovation infrastructure

- two technology incubators and STPs (INTECH)
- biotechnology incubator INBIT
- Czech Technology Park
- Incubators and STPS of Research Institute of Building Materials

**Preparation:**
- incubator INMEC incubators
- CERIT Science Park
- Prof. List STP
- BI and STP for creative industry
- BI and STPs in Blansko and Břeclav,
- Competence Centre in Kuřim,
- business incubator Novira,
- two STPs established by the Regional Chamber of Commerce
- STP Morava-Záhorie
Conclusions

The South Moravian Region:
- sophisticated institutional framework embodied by the South Moravian Innovation Centre
- considerable concentration of universities into the regional capital
- high number of students corresponds and high number of those that study natural science and technical branches
- high number of entities and employees in the field of R&D
- relatively high volume of financial resources for R&D
- enormous development of innovation and enterprise infrastructure is in progress
- significant potential for further development