

The Polish science system and science policy

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Structure of presentation:

- 1. A few words about the history of Polish science policy after 1989**
- 2. Current situation of the Polish science system –**
statistics, sectors of R&D, legal framework, main challenges, EU structural funds
- 3. Reforms 2008-2009 - restructuring of the Polish research system**

**A few words
about the history of Polish science and
technology policy after 1989**

History of the country's science and technology policy

In 1991, the Parliament of the Republic of Poland adopted an Act which set up the **State Committee for Scientific Research (KBN)**.

KBN was:

- responsible for the state's science and technology policy
- major governmental source of funds for research
- composed of representatives of the scientific community, elected through general election by all academics who held a doctoral degree
- work of KBN was headed by its chairman

Need for institutional changes – first stage

In 2003-2004 Poland took measures to modernize its research structures.

State Committee for Scientific Research (KBN) was turned into the **Ministry:**

- *2003-2005 – Ministry of Science and Information Technologies,*
- *2005-06 – Ministry of Science and Education*
- *from 2006 – Ministry of Science and Higher Education*

Current situation of the Polish science and research legal system

Current situation – main statistical data (2007)

38 million – population of Poland

6673 million PLN – gross domestic expenditure on R&D activity

Overall budgetary financial means in 2008 amounted to 4,101,9 mln PLN (in 2007 - 3.707,4 mln, 2006 - 3.341,6 mln PLN, 2005 – 2.892,5 mln PLN).

0,57 % of GDP Poland spent on R&D (GERD/GDP)

75 309 – Researchers (43% - women)

4,3 – employment in R&D activity per 1000 economically active persons

73,6% – degree of consumption of research equipment

131 – public higher education institutions

324 – non-public higher education institutions

2 million– number of university students

Current situation – actors of R&D

Institutional structure of Polish science:

- Higher schools (with R&D activity) - 150
- State research and development institutions - 180
- Institutes of the Polish Academy of Sciences - 75
- Enterprises (with R&D activity) - 670

Data for 2007

Current situation – legal framework

The act on the principles of financing science (2004)

- confers the **decision-making power** in the area of R&D policy to the Minister of Science;
- establishes the **Council of Science** (an advisory and consultative body to the Minister);
- creates the basis for R&D strategic planning and programming in the means of **National Programme for Research and Development**;
- introduces modification in **R&D financing system** towards more competitive and performance-based funding from public sources.

Public instruments supporting transfer of technology to economy

- **Technology Initiative (100 mln Euro; 450 projects; 30 % from industry)**
- **Creator of Innovation. Supporting of the innovative academic entrepreneurship**
- **Patent Plus**
- **Possibilities of financing R&D projects in the framework of structural funds (2007-2013)**

Current situation – EU structural funds

EU structural funds for R&D for Polish scientific institutions and enterprises are available from the *Operational Program Innovative Economy* for 2007-2013.

1.3 billion euro for “Research and development of modern technologies” (Priority 1 of OP IE)

and

1.3 billion euro for “R&D infrastructure” (Priority 2 of the OP IE)

Current situation – main disadvantages of science system

Complex and dispersed institutional structure: Higher schools with R&D activity (150), State research and development institutions (180), Institutes of the Polish Academy of Sciences (75)

Low expenditure on R&D – GERD: 0,57% of GDP
(1.84% - EU-27 average)

➤ **Predominance of budgetary spending in the general composition of R&D financing - 58,5% against only 24,5% from business**
(almost two third from business in Eu-27)

➤ **Low level of innovativeness and cooperation between research and business – only 8% of research staff is employed in enterprises**

Reforms 2008 - 2009

Restructuring of the Polish research sector

The overall objectives of reform are:

- improving innovativeness of Polish economy, industry
- accelerating economic development of Poland
- attaining goals defined in Lisbon Strategy
- improving quality and performance of Polish science

Key aspects of the R&D system reform (elements of the strategy):

- institutional and organisational changes;
- change in public research financing;
- setting R&D thematic priorities;
- measures to boost innovation;
- new model of research career.

There has been prepared the package of 5 new regulations:

1. The act on the principle of financing science (the new regulation on bases of existing Act from 2004)
2. The Act of the National Centre for Research and Development (the new regulation on bases of existing Act from 2007)
3. The Act of the National Centre for Science
4. The Act of Research Institutes (changing the Act of Research and Developments Units)
5. The Act of Polish Academy of Sciences

The acts are to be implemented in the second half of 2009.

Institutional and organisational changes

Package of 5 new Acts provides for:

- **New role of the Ministry**
 - **R&D policy and evaluating** (the new role of the Minister and new body - Evaluating Committee of the Scientific Units)
 - **National Centre for Research and Development** (applied research)
 - **Establishing National Centre for Science** (basic research)
- **Consolidation and restructuring of state R&D units**
- **Changes in the structure of Polish Academy of Sciences**

Institutional and organisational changes

The main idea is to separate the policy planning from policy implementation (distribution of public funds).

The Ministry will concentrate its activities on planning and evaluation rather than financing R&D activity. For financing research projects two executive agencies will be established (National Centre for Research and Development and National Centre for Science).

Setting R&D thematic priorities

National Programme of Scientific Research and Development

(approved on 30 October 2008)

- drafted by the Ministry of Science with the assistance of a **special task group** and the active involvement of public administration bodies, research and science environment, higher education community, business and employers' organizations;
- adopted by the Minister of Science and Higher Education;
- identifies national **priority research areas**;
- includes **strategic R&D programmes** (to be managing by the National Centre for Research and Development).

Setting R&D thematic priorities

National Programme of Scientific Research and Development

National priority research areas:

1. Society with secure, sustainable socio-economic development
2. Health
3. Energy and infrastructure
4. New technologies for economy
5. Agriculture and environment

Existing legal framework for increasing innovation of enterprises

Act of 30 May 2008 on certain forms of support for innovation (introduced economic and financial instruments):

- ✓ **Technology loan**
- ✓ **Tax deductions on new technology**
- ✓ **Possibility to obtain by companies the status of an R&D Centre (RDC)**

Incentives to boost innovation

- fiscal instruments for private sector and business (tax allowances, tax deductions, technological loans – for financing the design and implementation of technological investments);
- ability for an enterprise to apply for and be conferred the status of R&D centre;
- enhancing public-private partnership;
- new forms of financing: *venture capital, business angels, seed capital*;
- support for technology transfer, management of intellectual property rights and commercialisation of research results;
- developing entrepreneurial and managerial skills of R&D human resources.

New model of research and academic career

- Introducing the competitive basis for employment in public research institutions (*concours*), possibly with the external assessment (incl. international);
- Improving the criteria for assessment and evaluation of research performance;
- Supporting and facilitating institutional and geographical mobility of R&D human resources;
- Enhancing the potential of young scientists and women in science (grants, stipends, internships, junior research groups);
- Raising the quality level of PhD studies and dissertations;

Thank you for your attention