



**RESEARCH AND DEVELOPMENT  
INDICATORS IN THE REPUBLIC OF  
MACEDONIA**

**28 March 2007, Skopje**

# **CONTENT**

- **Research and development policy**
- **Production of R&D statistics**

# **INSTITUTIONS INVOLVED IN R&D POLICY:**

- Ministry of Education and Science
- Macedonian Academy of Sciences and Arts,
- Ministry of Economy
- Ministry of Health
- Ministry of Ecology
- 5 Universities and
- 13 S&T Institutes
- R&D unit within industry

# Universities and S&T Institutes

- State Universities :
- Sts “Cyril and Methodius” – Skopje
- Sts “Clement of Ohrid” – Bitola
- State University of Tetovo– Tetovo
  
- Private Universities :
- University of South and Eastern Europe – Tetovo
- European University – Skopje

# INSTITUTIONS INVOLVED IN R&D

- The Ministry of Education and Science is the governmental body responsible for R&D policy in the Republic of Macedonia
- The Ministry has the responsibility to organise, finance, develop and promote science, technological development, technical culture, informatics and information systems as well as international co-operation related to these issues.
- The responsibilities of the Ministry also include issues related to all levels of education.

# **LEGAL FRAMEWORK FOR SCIENCE AND TECHNOLOGY IN R.MACEDONIA**

- ❖ Law for Scientific and Research Activity
- ❖ Law on Encouraging and Supporting the Technological Development
- ❖ Law on Higher Education
- ❖ Law on Industrial and Intellectual Property Protection
- ❖ Law for Macedonian Academy of Sciences and Arts

# The goals of R&D policy are to:

- Increase the use and transfer of knowledge for economic, social, cultural and environmental development of the Republic of Macedonia;
- Encourage and promote international co-operation and transfer of knowledge and technology from abroad;
- Introduce a monitoring and evaluation system of scientific and technological quality and output of research groups using internationally accepted standards and criteria

- Increase investments in S&T activities;
- Increase the use of international funds, technical assistance, etc.;
- Define and establish interdisciplinary programmes for target research



# R&D intensity (%) of GDP by sector of performance

<b>TYPE OF EXPENDITURE</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>
<b>GERD (Gross domestic expenditure on R&amp;D)/GDP</b>	<b>0.43</b>	<b>0.35</b>	<b>0.44</b>	<b>0.32</b>	<b>0.27</b>	<b>0.22</b>	<b>0.25</b>
<b>BERD (Expenditure on R&amp;D in the Business sector)/GDP</b>	<b>0.05</b>	<b>0.04</b>	<b>0.03</b>	<b>0.02</b>	<b>0.01</b>	<b>0.003</b>	<b>0.015</b>
<b>GOVERD (Government intramural expenditure on R&amp;D)/GDP</b>	<b>0.15</b>	<b>0.16</b>	<b>0.15</b>	<b>0.16</b>	<b>0.15</b>	<b>0.14</b>	<b>0.12</b>
<b>HERD (Expenditure on R&amp;D in the Higher Education)/GDP</b>	<b>0.23</b>	<b>0.14</b>	<b>0.27</b>	<b>0.13</b>	<b>0.11</b>	<b>0.08</b>	<b>0.11</b>

# II State Statistical Office

## R&D Statistics

### Sector for social statistics

- **Department for social protection, education and science**
  1. **Social protection**
  2. **Education**
  3. **Science**

# Survey in the R&D

- 1. Statistical survey for scientific and research - development activity - annual survey**
- 2. Innovation  
( survey for reporting units ) – five-year survey**

# History of R&D

- **The survey for research and development began in 1968**
- **From 1997 the methodology for surveying the scientific and research-development activity is changed according to the Frascati manual**

# Reporting units of R&D

1. The public institutions:

- Public scientific institutions
- Public and private university institutions
- Other institutions and institutes

2. Research - development units in composition of business subjects in the area of economy

3. Business subjects in the area of economy, unregistered for research - development activity

# **LEGAL FRAMEWORK FOR R&D**

Law on State Statistics

Law on Scientific and Research Activity

Law on Higher Education

Law on Macedonian Academy of Sciences and  
Arts

# Response rate

- For 2005, the total received reports were 89.2 %.
- Response rate is similar to the previous years.

## **Users of R&D data**

- Ministry of Education and Science
- Eurostat
- UNESCO
- Others



# RESEARCH AND DEVELOPMENT INDICATORS

- Data are processed according to:
  - Sector of performance
  - Type of employment
  - Gender
  - Age
  - Part time
  - Full time
  - FTE

- Professional attainment
- Ethnic affiliation
- Field of science
- ISIC
- Expenditure
- Personnel and expenditure by region

# Problems

- Not all reporting units fill in the questionnaire
- All reporting units can not complete the data for the expenditures -the higher education institutions
- The Business Enterprise Sector is not completely covered because most of the enterprises do not work anymore.

# Innovation statistics

- The research is carried out in 2005
- Methodological materials are obtained from Eurostat on our request
- The result is not published yet. The statistical publication for innovation is in phase of preparation
- The response rate is approximately 50%

## **Webpages:**

[www.mon.gov.mk](http://www.mon.gov.mk)

- (Ministry of Education and Science)

[www.stat.gov.mk](http://www.stat.gov.mk)

- (State Statistical Office)