

Prof Đuro KUTLAČA, PhD

"Mihajlo Pupin" Institute

Science and Technology Policy Research Centre

11000 Belgrade, Volgina 15, Serbia; djuro.kutlaca@pupin.rs

and Associated Professor

Faculty of Information Technology

Tadeuša Košćuška 63, 11000 Belgrade, Serbia

Skype: djuro.kutlaca



“Strengthening the capacities and infrastructure of Innovation in Serbia”

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OECD Workshop on the Western Balkans Regional Competitiveness Initiative

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“Strengthening the capacities and infrastructure of Innovation in Serbia”

[This project proposal is created in cooperation with Ministry of Science and Technological Development and the National Competitiveness Council of the Government of the Republic of Serbia]

Content:

- 1. Background and current state**
- 2. Pilot framework**
- 3. Answers to key questions**

1.

Background and current state

Background and current state:

- The Global Competitiveness Report 2009-2010 [WEF - World Economic Forum], September 2009:

Global Competitiveness Index (GCI): **Serbia is ranked as 93rd of 133** observed countries and is recognized to be an efficiency driven economy.

- The Lisbon Review 2010 [WEF], published in May 2010: **Serbia is ranked 6th** amongst **11** non-EU Eastern European countries with score of 2.95

[Innovation: 0.73 - lower than EU accession 12 countries average; and R&D: 1.28 lower than EU 27 average]

Background and current state:

One of Serbia's key responses to this challenge is to create an **Innovation Fund**.

The legal framework for the formation of National Innovation System in Serbia was established in March 2010 through the **Innovation Law**.

The law enables:

- the formation of organizations for support of innovation activities and technology transfer centers,
- defines intellectual property rights, and
- establishes a Serbian Innovation Fund.

Background and current state:

The Serbian Innovation Fund primary **short term goal** will be to promote entrepreneurship and R&D of market oriented technologies and establish partnerships with domestic and foreign corporations.

The **financing of the Fund** will come from the budget, donor community, industry partners and other sources.

The **Fund will be run** by professional managers with international experience in entrepreneurial ventures.

Background and current state:

The Serbian Innovation Fund will:

- Facilitate formation of companies that provide infrastructure and support for high-tech research and expand existing research and development programs at the Universities and Institutes;
- Create venture/private equity investment channels in high tech research and development;
- Position Serbian high-tech companies to access larger markets.

Background and current state:

No organization in Serbia that effectively tracks the **key metrics** relevant for **evaluation of innovation capacity** of companies needed to assess particular sectors of interest to foreign direct investors.

Taking the Software sector as an example, there is no clear source that estimates the **number, skills, experience and salary** of programmers in Serbia as well as other important indicators of innovation capacity of the companies:

- (a) **Absorptive capacity** as the ability to absorb new knowledge and adapt imported/purchased technologies – this capability is essential for company to grow and innovate;
- (b) **R&D capability** as capacity important to generate new knowledge and also as a mechanism to absorb it.

Background and current state:

Moreover, it is necessary to create a service by which Serbian companies in the R&D sector could advertise their competences and capacities to foreign investors.

An example would be the Software sector in Serbia which is fragmented, full of subscale companies, and has competitive wages. It would clearly benefit from FDI or FDI induced M&A activity but this type of activity requires information that is more granular than currently available.

A number of other sectors in the Serbian economy need similar support in order to attract FDI.

2.

Pilot framework

The 12 month pilot project should be realized through the following activities:

- **Months (0-3):** Review of the Innovation Fund legal framework, structure and policies:
 - o Conduct **workshops and training sessions** with OECD experts in order to learn about the typical structure and operational frameworks for OECD innovation funds. Focus on how OECD Innovation Funds try to form partnerships and products with EU corporations; workshop and conference design;
 - o Conduct **workshops and training sessions** with OECD experts in order to learn metrics and innovation auditing for 10-15 domestic professional (Ministry of Science and Technological Development – MSTD, SIEPA, etc.);
 - o Segment the existing small and medium innovative companies into industry groups and **create a set of key metrics** to track for each industry group.

The 12 month pilot project should be realized through the following activities:

- **Months (3-9):** Engage industry and survey existing innovative companies:
 - o **Engage industry** through networking events and design an Innovation kick-off conference to gather key industry leaders and innovative small to medium companies;
 - o **Create a set of key metrics** to track innovation auditing and measure innovation capacity;
 - o **Launch survey** to gain access and observe metrics and conduct innovation auditing of innovative companies and technologies at the universities and institutes and create database of innovation activities and key metrics by industry in Serbia;
 - o **Cross-check data** with other statistics gathered by the government (e.g., chamber of commerce, Office of Statistics);
 - o **Provide coaching** and education for innovators through invited leadership and entrepreneurship lectures.

The 12 month pilot project should be realized through the following activities:

- **Months (9-12):** Conduct kick-off innovation conference and launch portal:
 - o Conduct **kick-off Innovation Fund conference** to describe the main ways industry and local start-ups can be involved with the Fund, describe main funding instruments and begin industry and innovation company matchmaking process;
 - o Create an **Internet-based portal** where investors could communicate with local companies offering themselves for partnership and investment particularly in the area of R&D and Innovation and conduct quick screening of innovation capacities in companies who are potential partners by accessing their key metrics;
 - o Administration and supervision of **information support**.

The 12 month pilot project should be realized through the following activities:

Outcome:

With the realization of the pilot program, the Innovation Fund will establish **infrastructure** needed to provide efficient financing of innovative projects and small high tech companies and will be positioned to create broader initiatives in specific scientific fields and market themselves to potential investors through an online database of their key performance metrics relative to their industry.

3.

Answers to key questions

1. How will this project benefit the Western Balkans?

GDP growth in the Western Balkans (WB) has been characterized by consumption driven growth in non-tradable goods.

To ensure long-term growth is sustainable WB economies must transition to knowledge and export driven industries.

One of the key barriers to R&D & Innovation FDI investment and venture capital in the region is lack of reliable granular information about innovation capacities in companies and absence of specific investment Fund meant to support potentially high-risk projects which are, by definition, innovation and projects for development of new technologies.

This pilot project would solve this problem by providing credible key metrics of interest to investors on industry sectors important for stable long-term growth in the region and necessary conditions for creation of Innovation Fund, a foundation of key importance to improving country's competitiveness. It will establish infrastructure needed to provide efficient financing of innovative projects and small high tech companies and will be positioned to create broader initiatives in specific scientific fields and market themselves to potential investors through an online database of their key performance metrics relative to their industry. One can also envision cooperation between this Fund and similar ones in the region which would increase the speed at which best practices are shared especially when it comes to policy making, particularly important for creation and functioning for the future Western Balkans Technology Fund.

2. Who would be involved in its implementation?

The project would be lead by the **Serbian Ministry of Science and Technological Development** and **SIEPA** in cooperation with the **Serbian Chamber of Commerce**, the **Serbian Office of Statistics** and other relevant institutions.

Companies identified as leaders in each sector would have a voice in the design and use of the survey material while companies who would sign up for the partnership services would have an input into the matching process.

It is of crucial importance to have **OECD experts** who would participate in the process of identification and refining the key metrics as well as to provide help in designing methods to estimate efficiently innovation capacities from the sectors and monitor realization of the proposed surveys. OECD experts will provide key knowledge about the typical structure and operational frameworks for OECD innovation funds and focusing on how OECD Innovation Funds try to form partnerships and products with EU corporations MSTD will gain the base for creation of Serbian Innovation Fund..

3. How can the benefits of the project be sustained by the beneficiary economy in the absence of support from the OECD?

The legal framework for the formation of National Innovation System in Serbia was established in March 2010 through the **Innovation Law**. The law enables the formation of organizations for support of innovation activities and technology transfer centers, defines intellectual property rights, and establishes a Serbian Innovation Fund. The innovation fund will be managing financing of innovation projects and activities in collaboration with international organizations, institutions, and industry. Its primary goal will be to promote entrepreneurship and R&D of market oriented technologies and establish partnerships with domestic and foreign corporations.

Functioning of the Serbian Innovation Fund will be **permanent activity of the MSTD** as Ministry’ obligation defined within the Innovation Law.

Additionally, Serbia has already proposed and is currently building consensus around the creation of a **Western Balkans Technology Fund**. Such a fund would provide the much needed venture and investment capital to future technology sectors. The fund capitalization is projected at 100 million euro. The Innovation Fund and other outcomes of this project would sustain itself potentially as the beginnings of a research arm of such a fund and through supply of its analyses and information to other FDI investors, and companies in the sector.

Project summary:

Serbia's proposal is a pilot project aimed to help build and strengthen the capacities of Serbia's future Innovation Fund, a foundation of key importance to improving Serbia's competitiveness.

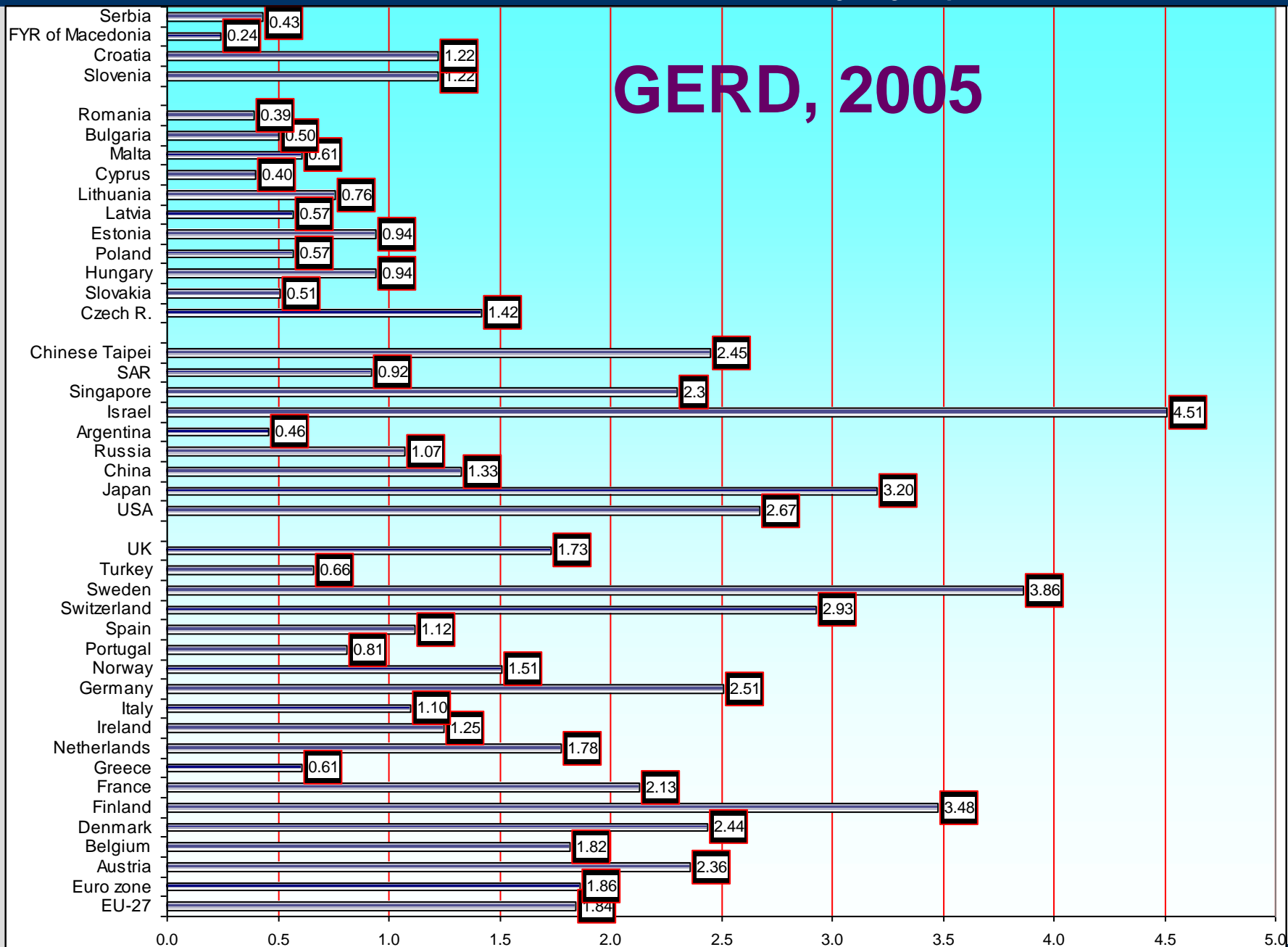
Specifically the pilot project would:

- (a) strengthen legal framework and policies governing innovation activities and help form industry partnerships with large domestic and foreign corporations and identify their interest in the region as well as establish networking events that foster innovation;
- (b) build the key metrics for sectors of most interest to future Research and Development (R&D) and Innovation based Foreign Direct Investment (FDI) in the region;
- (c) survey the existing small and medium innovative companies and technologies at the universities and institutes and create database of innovative activities in Serbia; and
- (d) support creation and administration of a Internet portal where investors could communicate with local companies offering themselves for partnership and investment particularly in the area of R&D and Innovation and conduct quick screening of innovation capacities in companies who are potential partners.

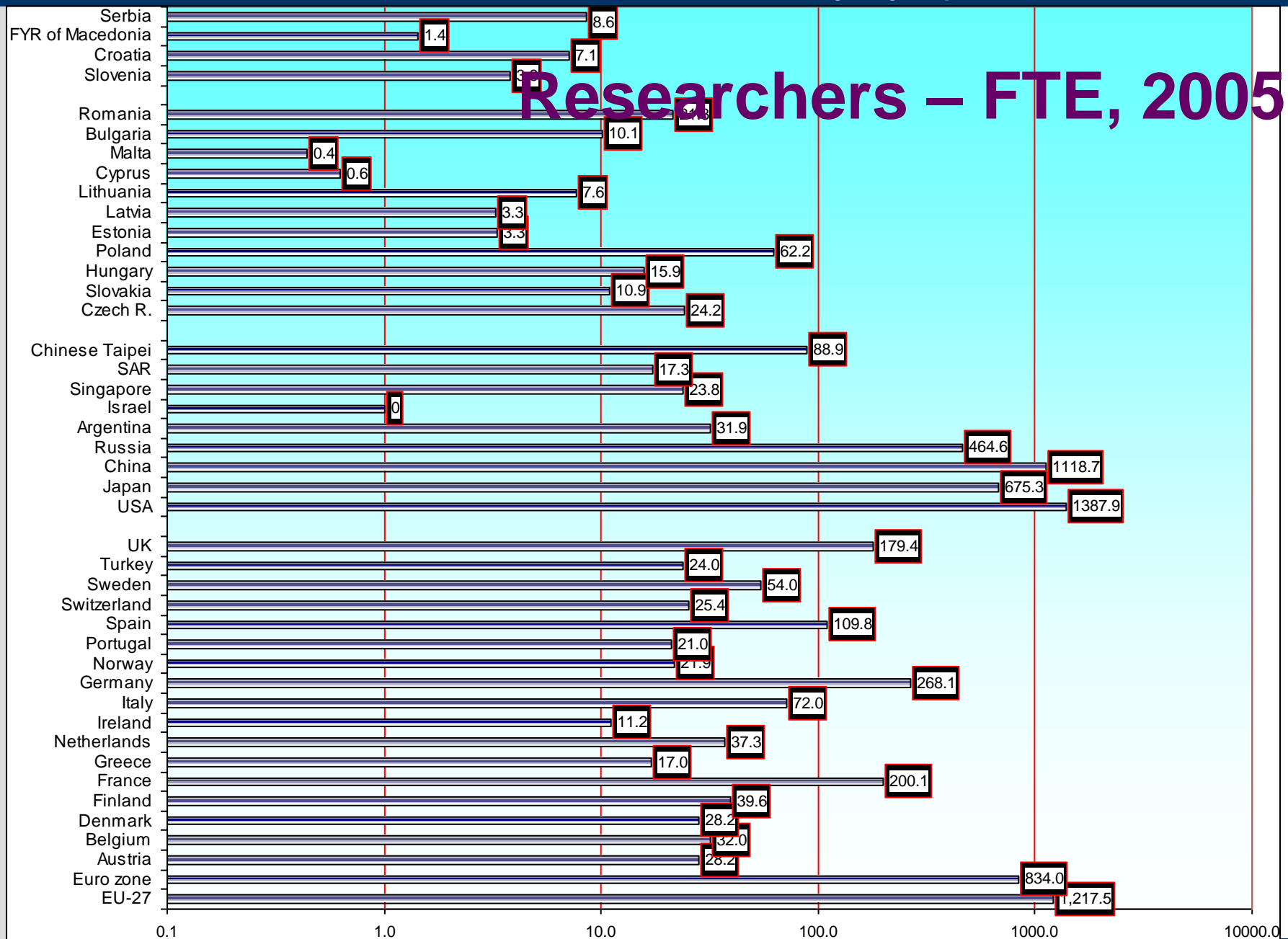
Annex

S&T System in Serbia

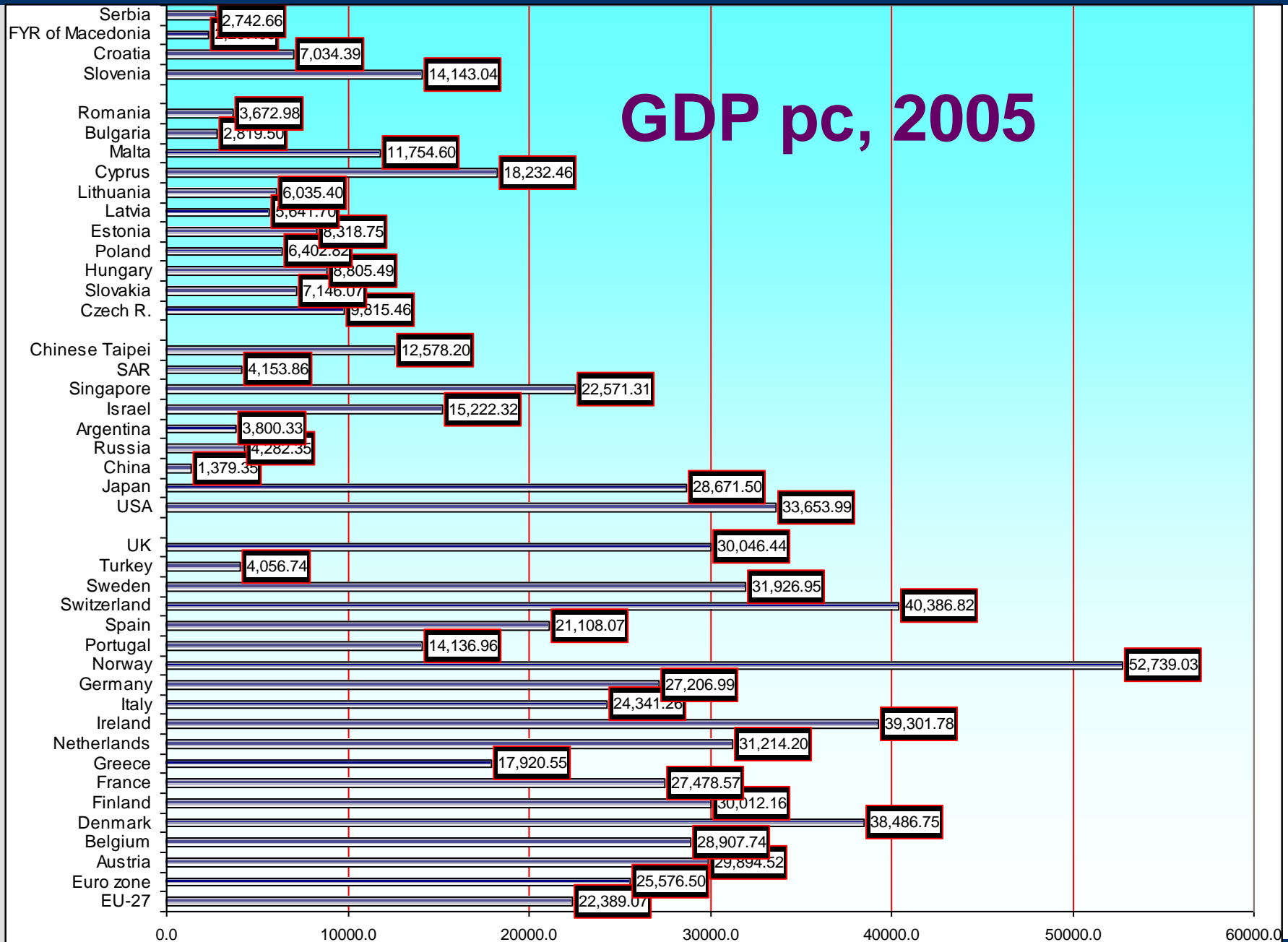
GERD, 2005



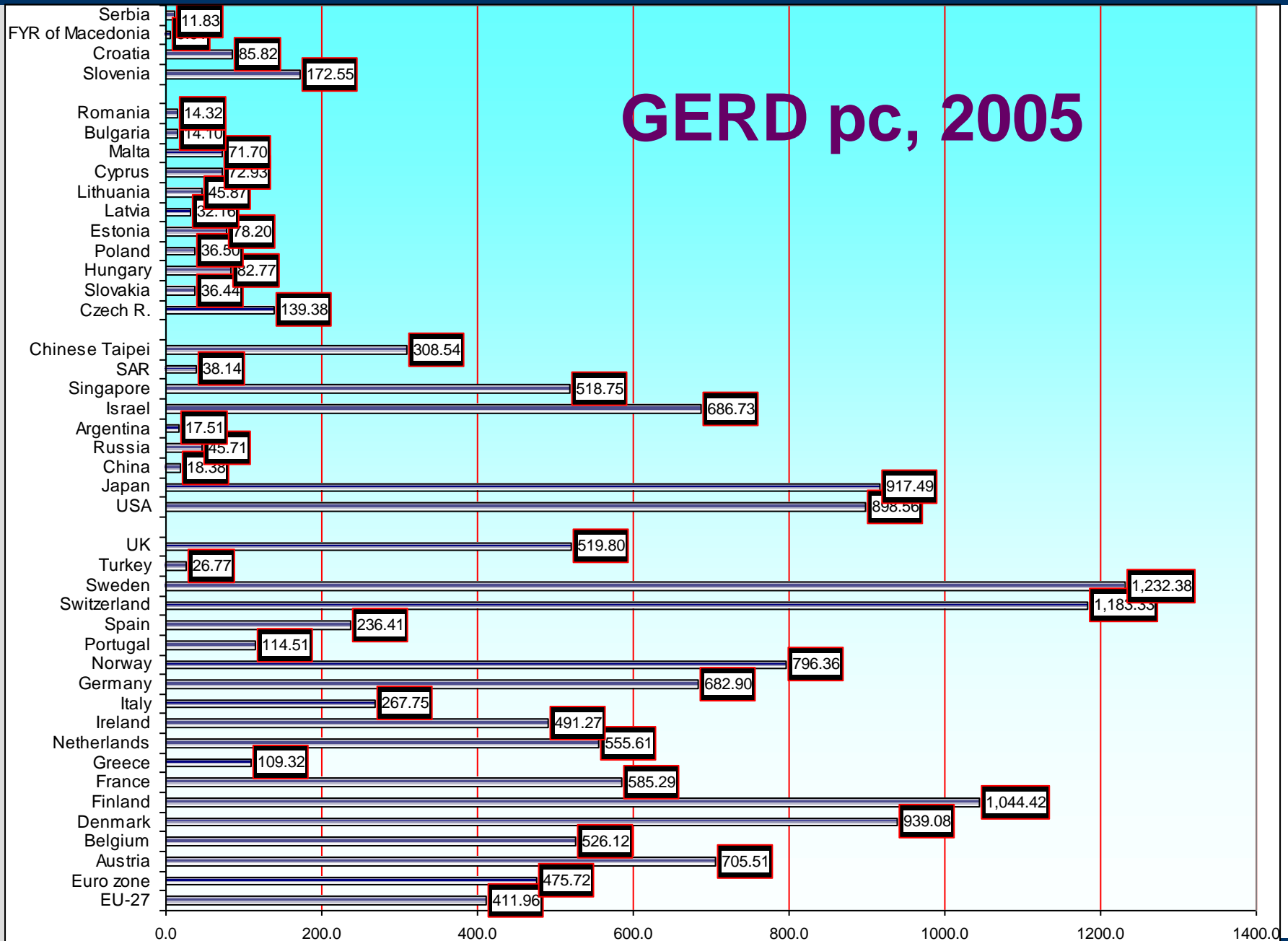
Researchers – FTE, 2005

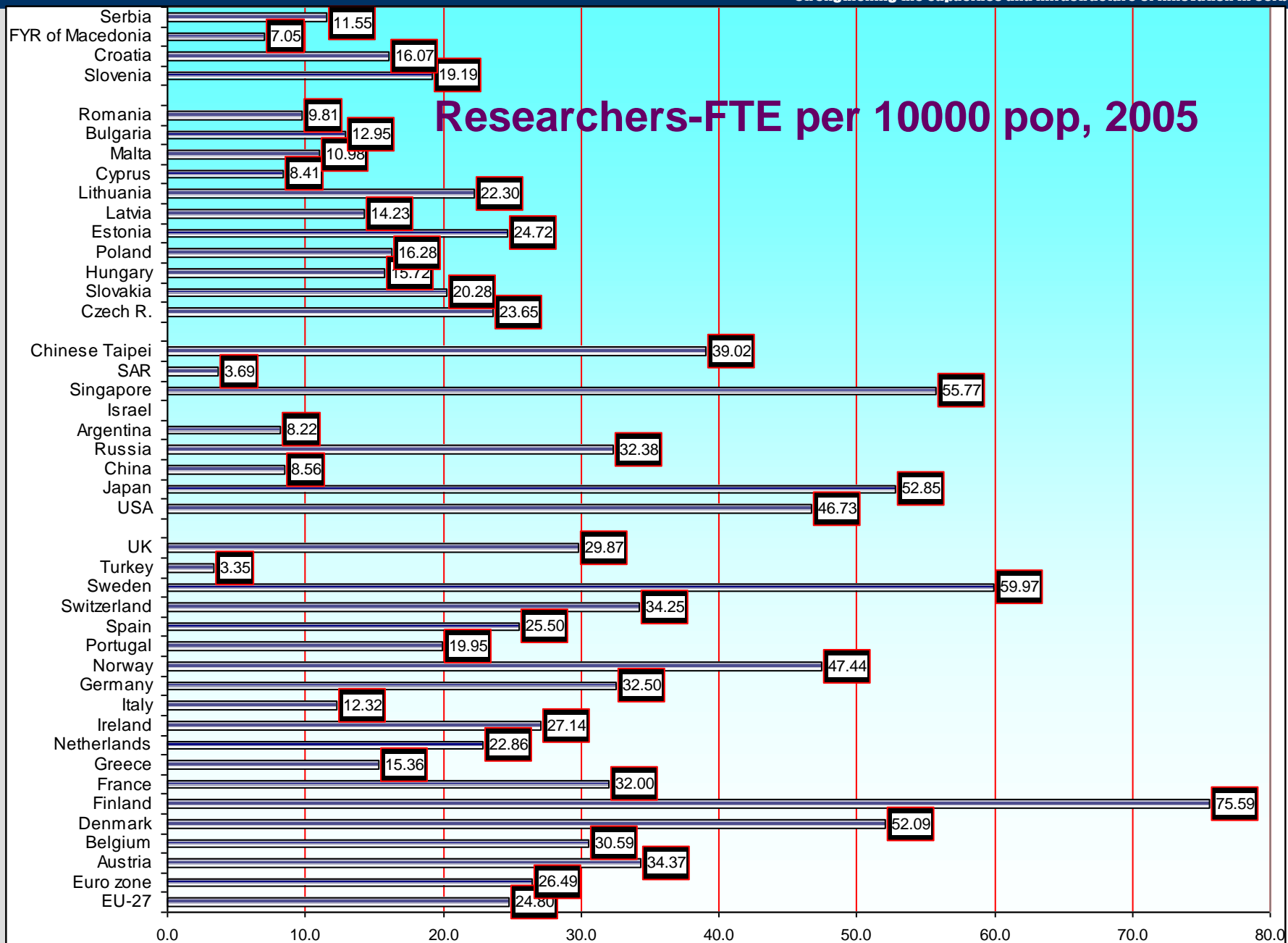


GDP pc, 2005



GERD pc, 2005





S&T&I SYSTEM IN SERBIA

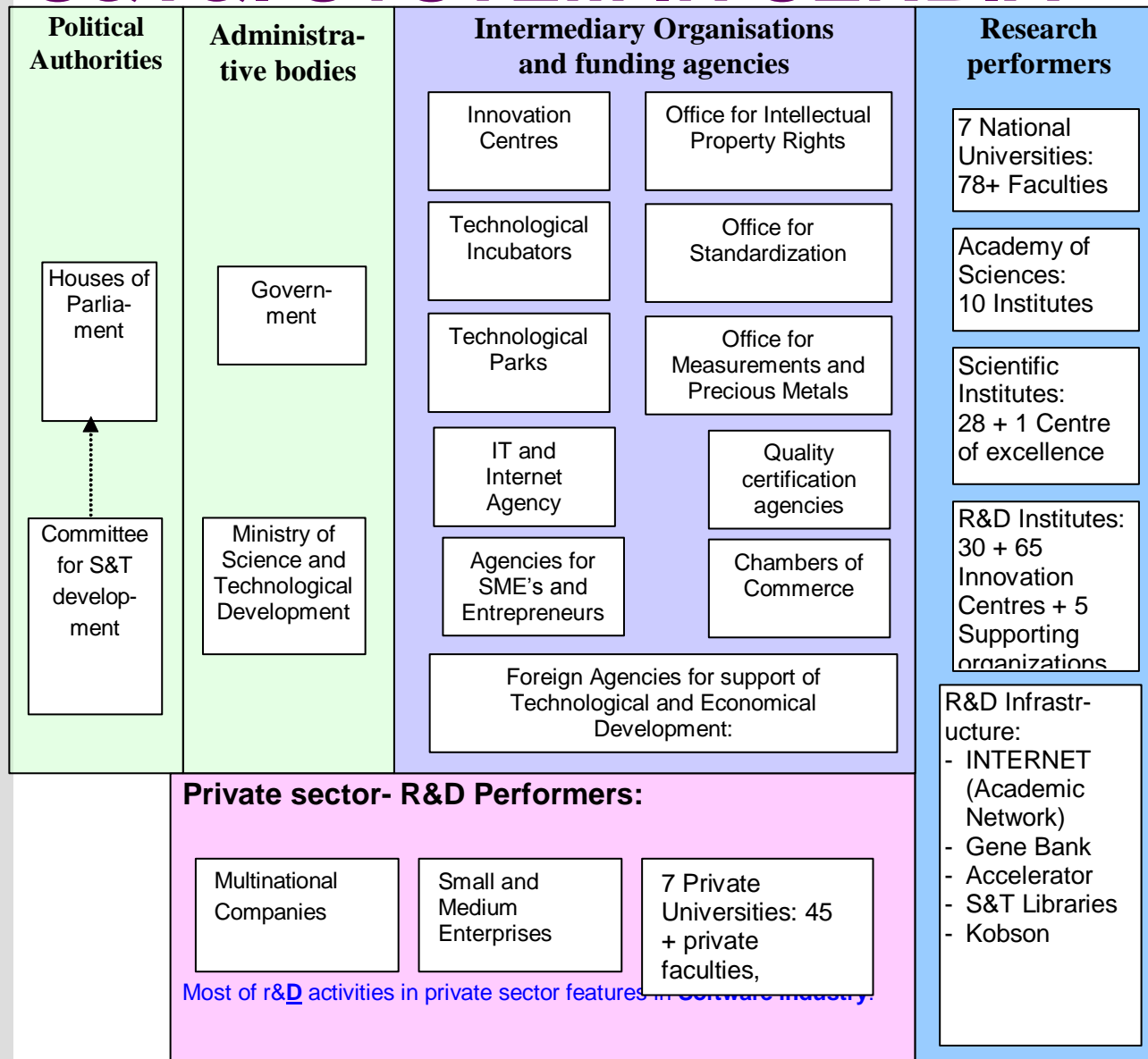
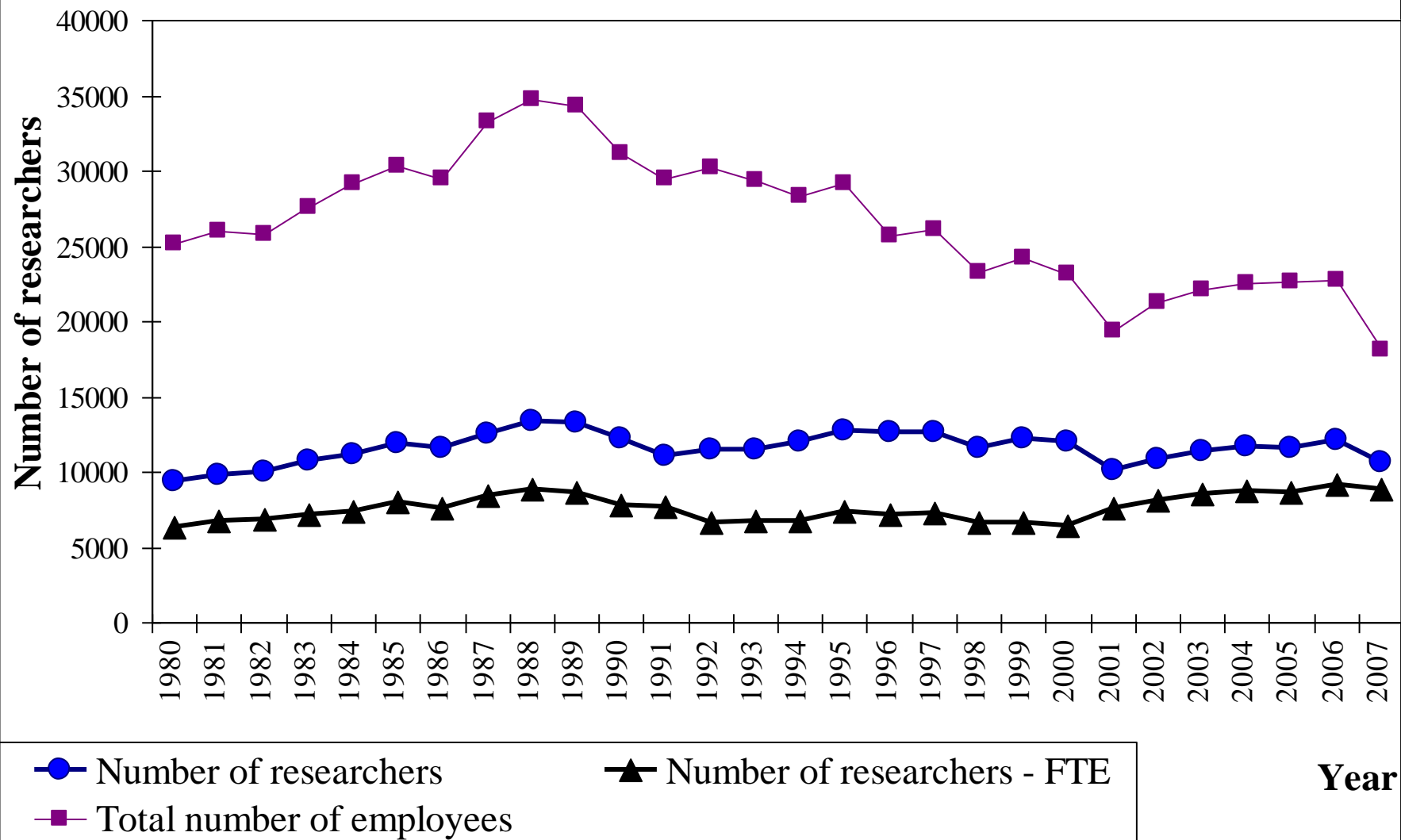


Figure:
Structure of Science, Technology and Innovation system in Serbia

Source: Based on ENIP-PRIME NETWORK model of STI system [Kuhlman, 2003; PRIME, 2003]

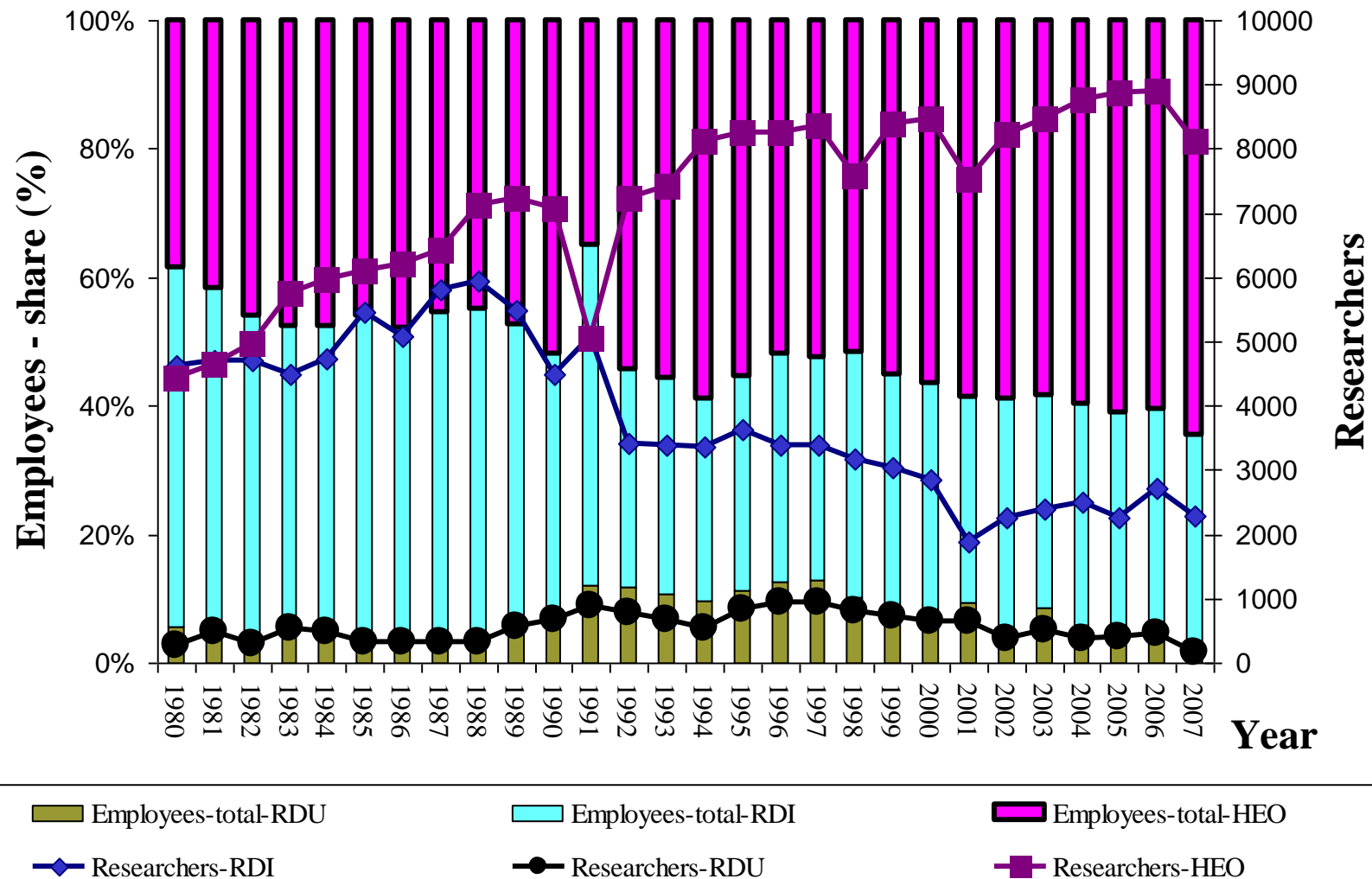
S&T&I SYSTEM IN SERBIA

Serbia - R&D system



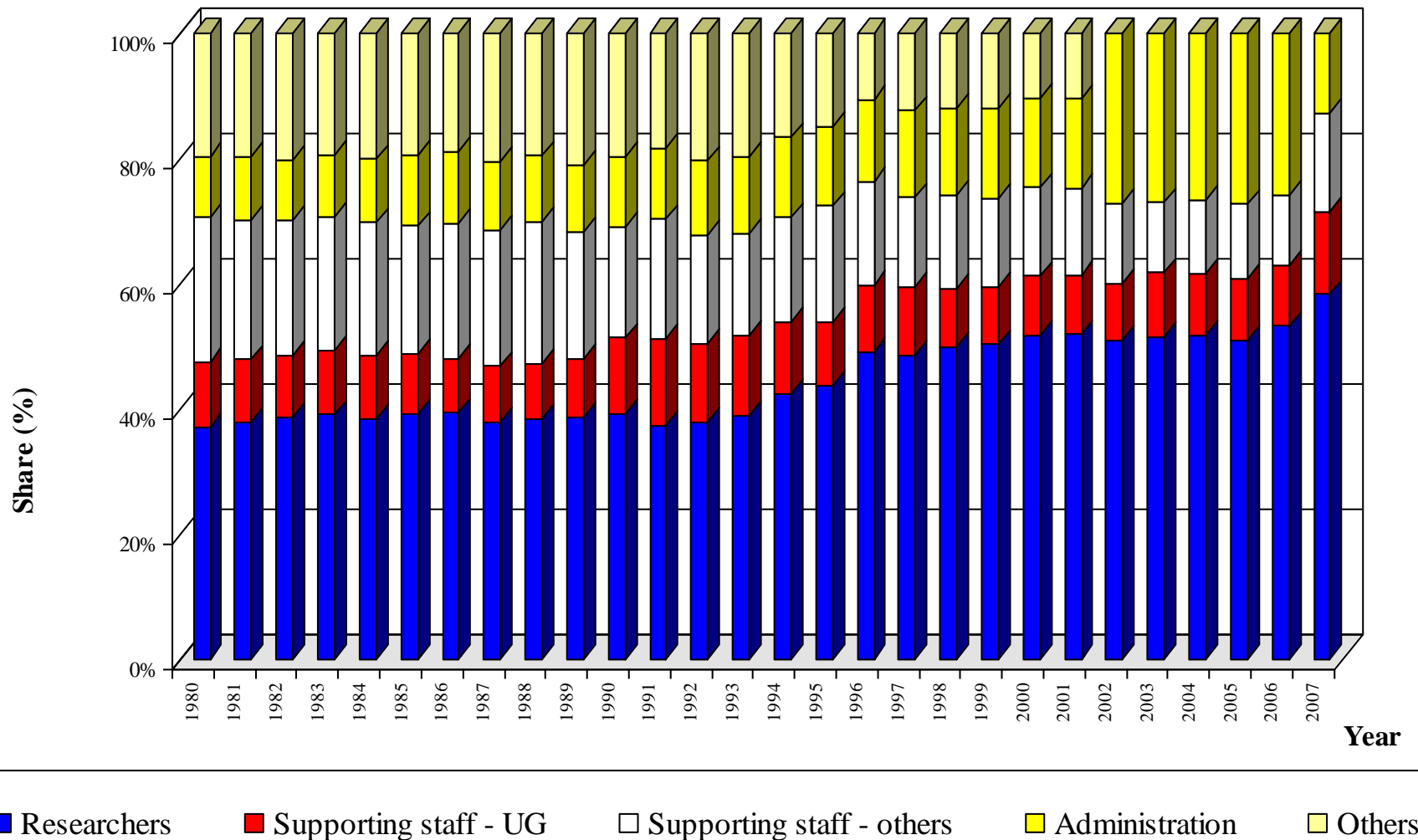
S&T&I SYSTEM IN SERBIA

Serbia - R&D system: Employees, Researchers

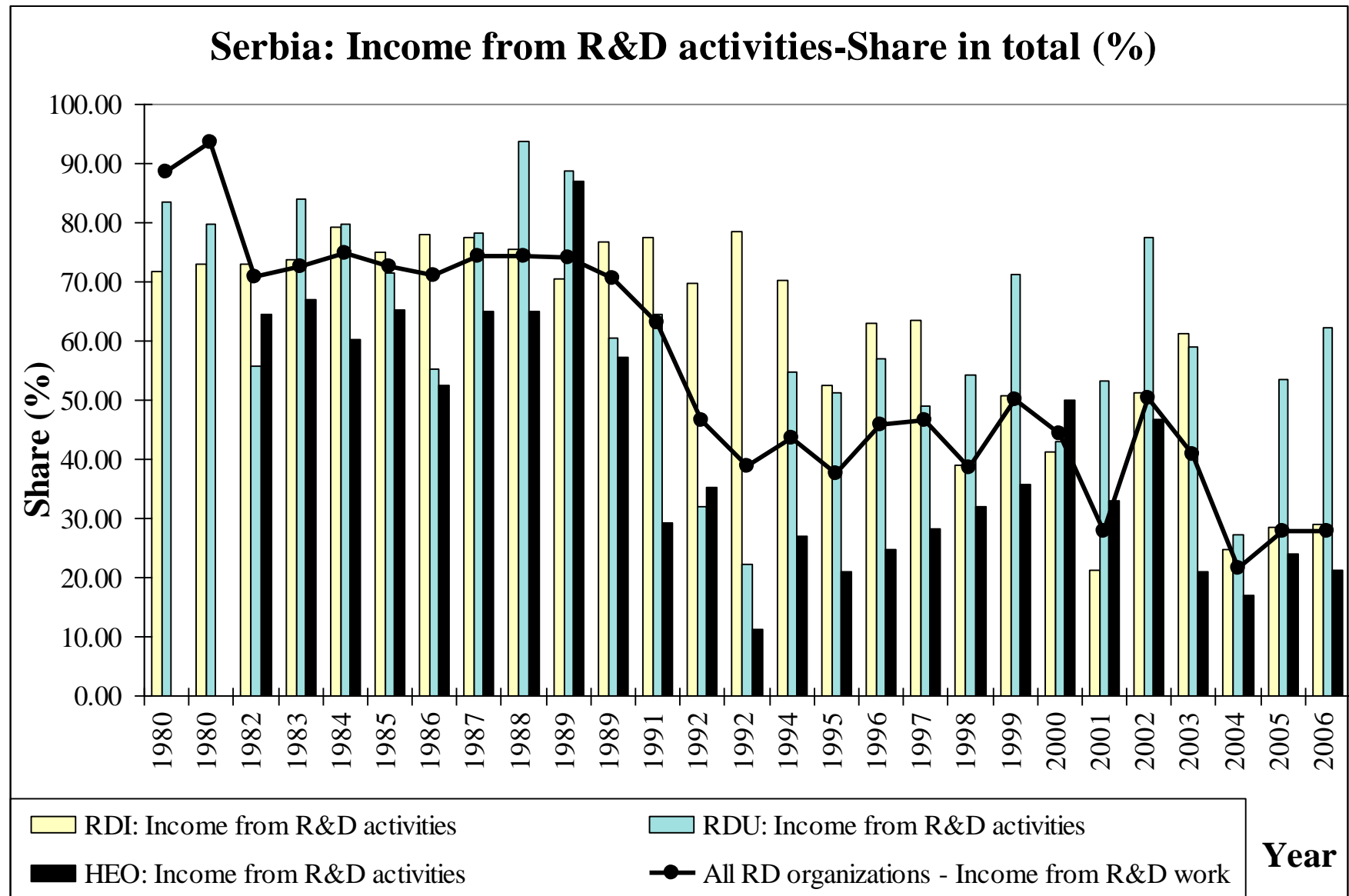


S&T&I SYSTEM IN SERBIA

Employees in R&D system in Serbia

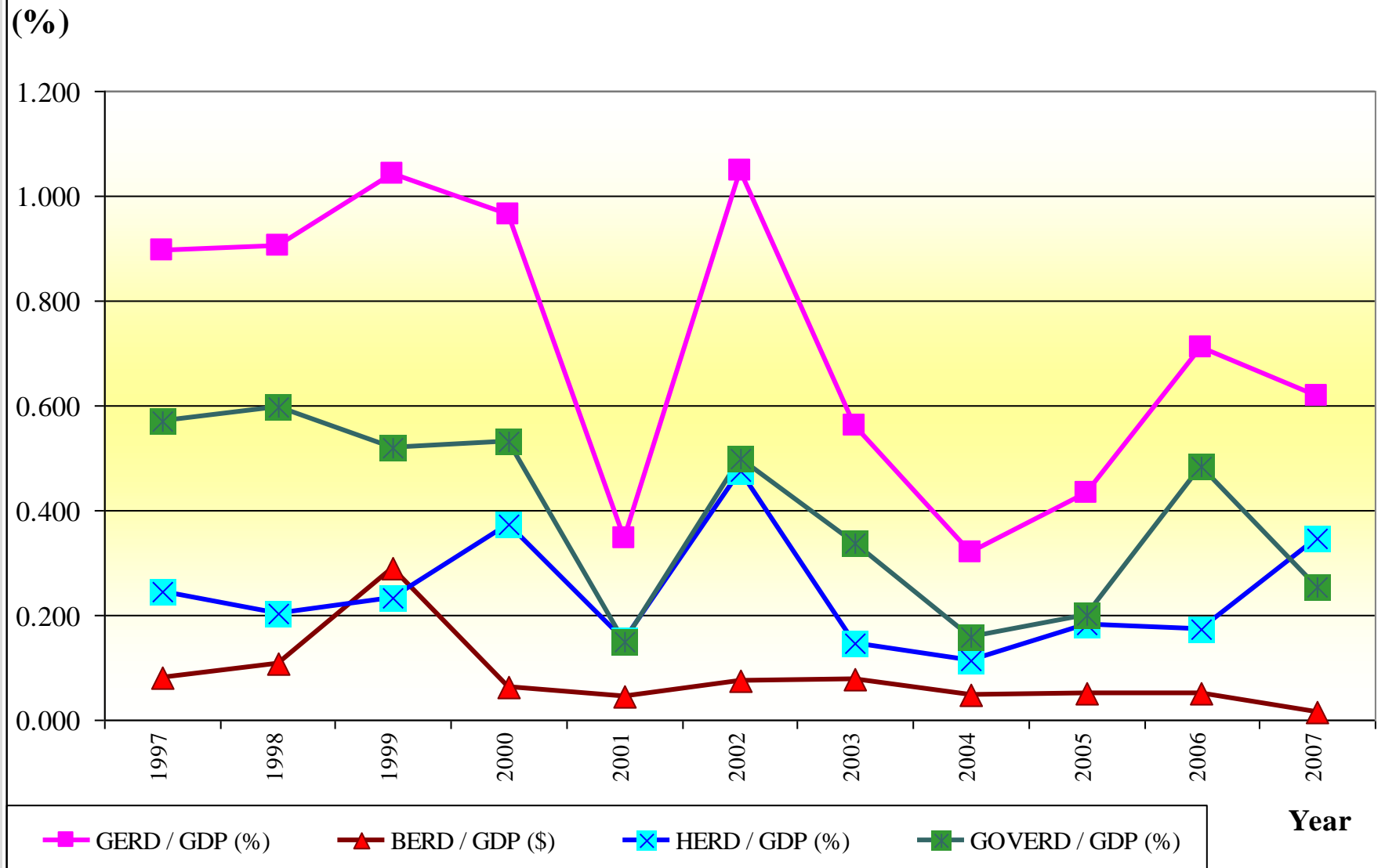


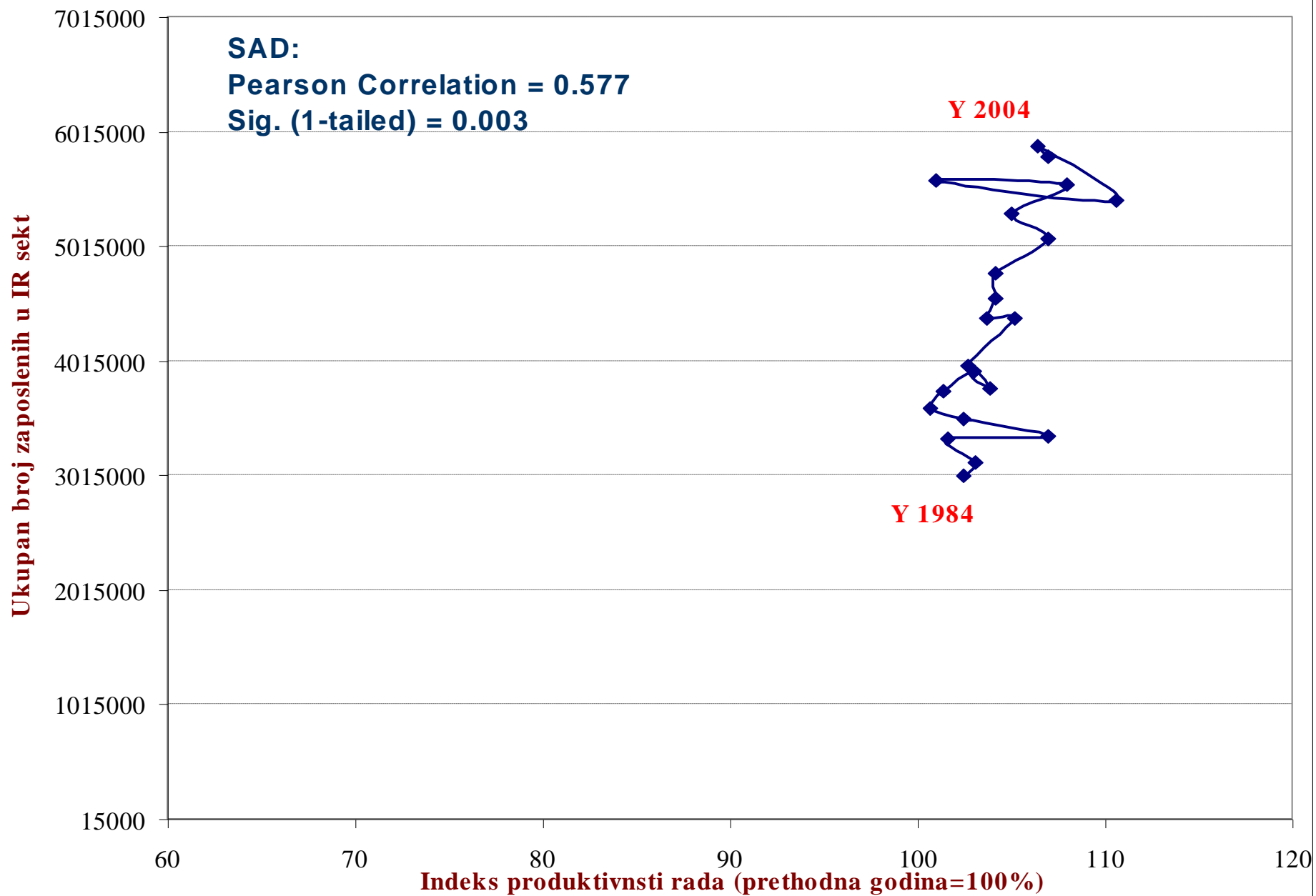
S&T&I SYSTEM IN SERBIA

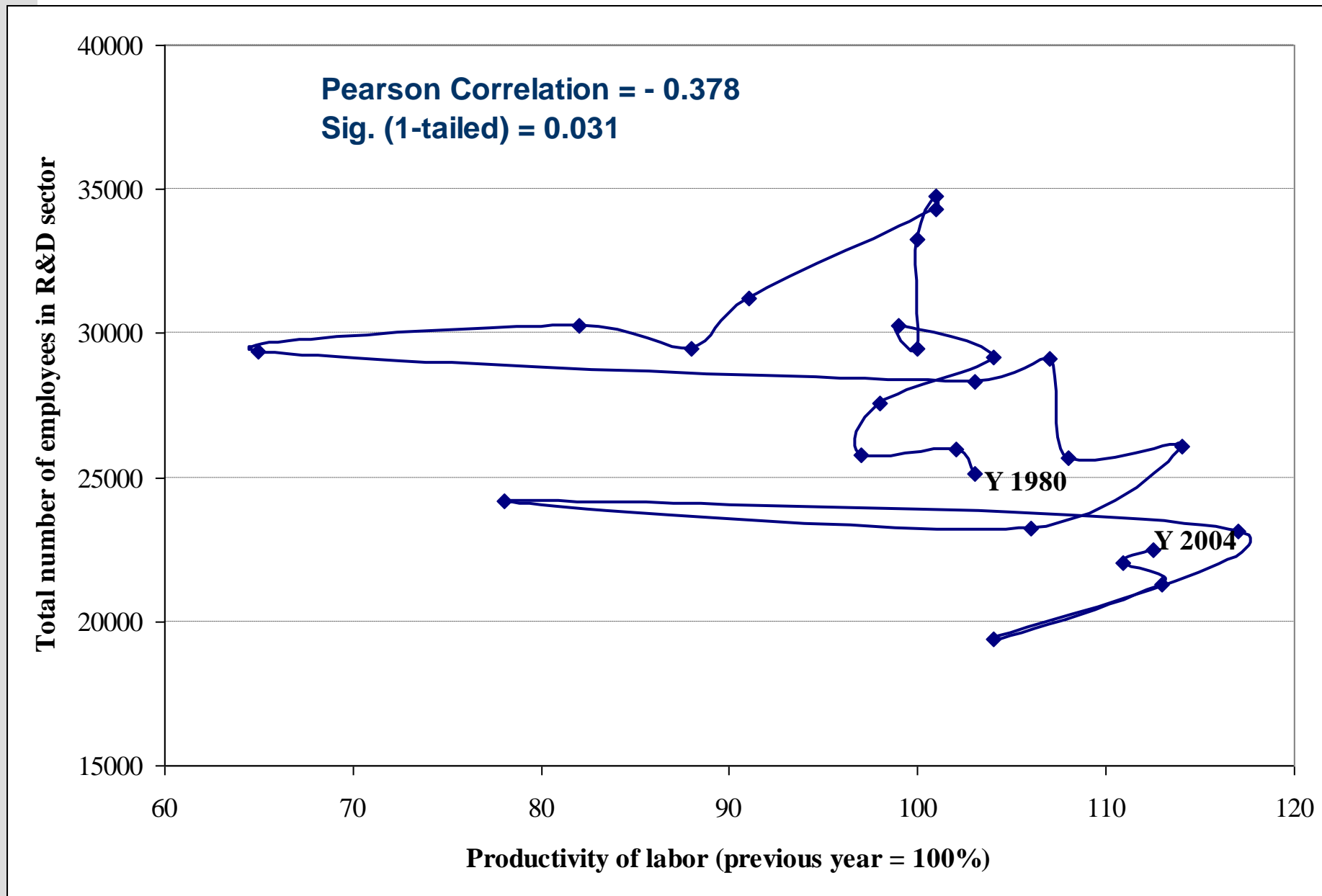


S&T&I SYSTEM IN SERBIA

Serbia: GERD, BERD, HERD, GOVERD / GDP







S&T&I SYSTEM IN SERBIA

BRAIN-DRAIN from SERBIA – **MSTD** data-est.:

- 1991 – 2000: 30.000 graduated left country;
- 2000 – 2010: 2.000 graduated left country.

Most of them are professionals from ICT and natural sciences.

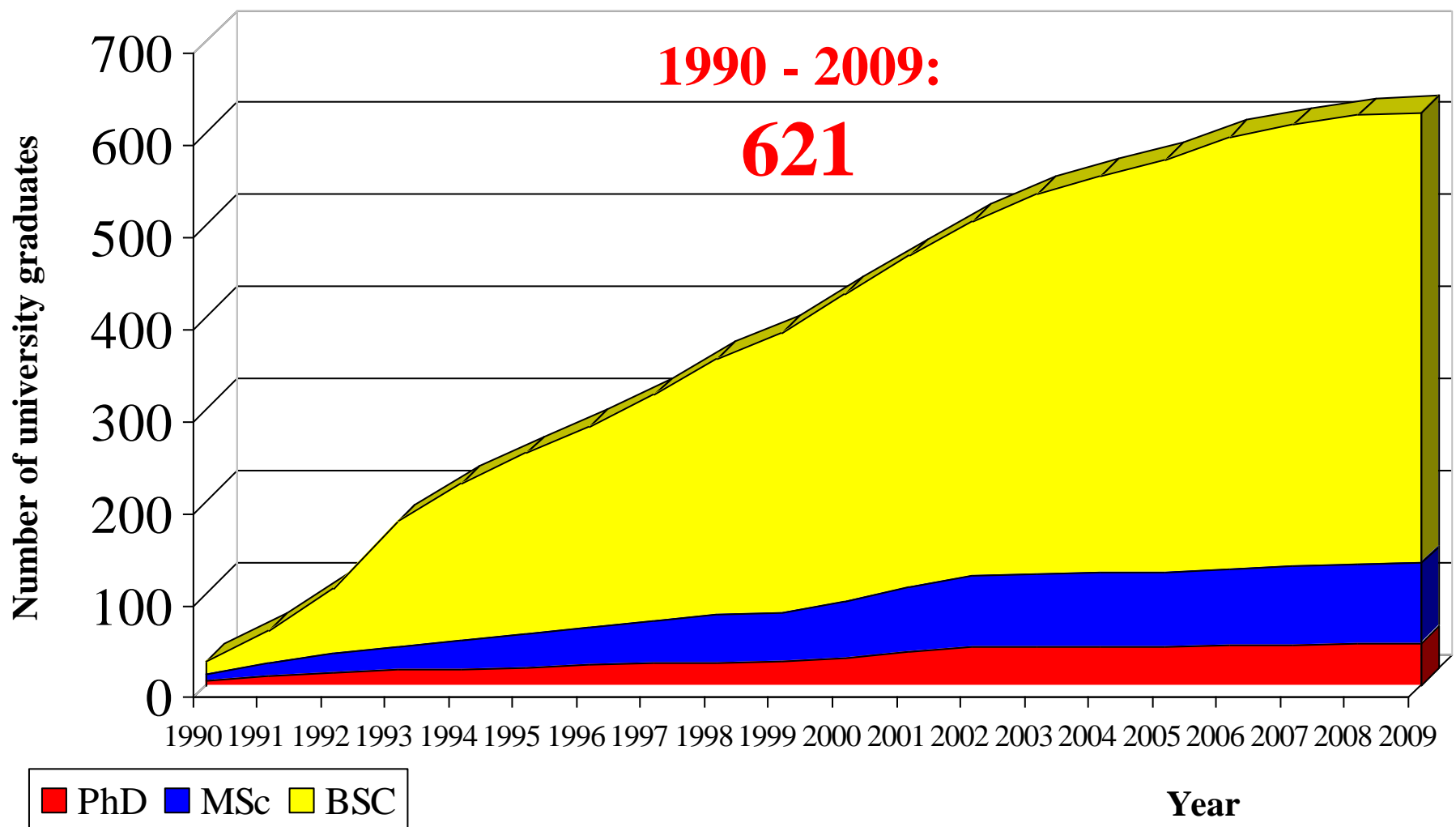
[300.000 USD – cost for education of university degree professional

* 30.000

= 9 billion USD – loss caused by Brain-Drain]

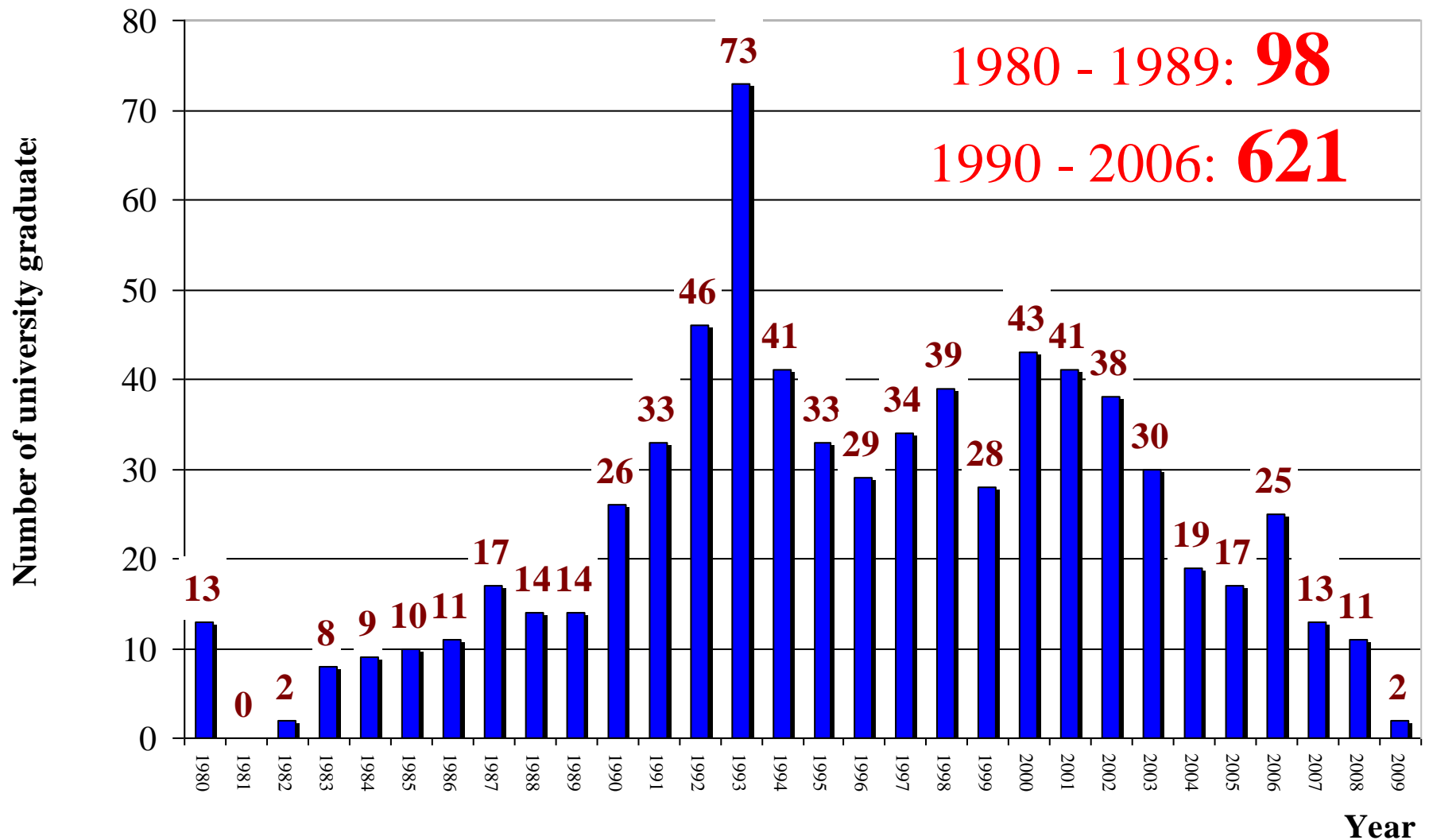
Case – "Mihajlo Pupin" Institute

Mihajlo Pupin Institute - Brain Drain



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Mihajlo Pupin Institute - Brain Drain



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Thank you for your attention!



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