



Inter-sectoral mobility of researchers  
in South-Eastern Europe



# Barriers for industry-academia collaboration in Bulgaria

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- Innovation Union - a cornerstone of **Europe 2020** strategy
- Three aspects:
  - **Globalisation** of knowledge production and innovation capacities
  - Impact of the **crisis** on public and private finance, survival of innovative SMEs
  - **Major challenges** to address with reduced means
- **Invest in future growth**  
EU target of **3% of GDP for R&D** in 2020 could create a net **3.7 million jobs** and close to **€800 Bn annual GDP** by 2025

# Innovation Union key measures

## **Strengthening the knowledge base & reducing fragmentation**

- **Education and skills**
- **European research area**
- **EU financing instruments**

## **Getting good ideas to market**

- **Access to finance**
- **Single innovation market**
- **Openness and creative potential**

## **Social and territorial cohesion**

## **European Innovation Partnerships**

## **International cooperation**

# The HR factor

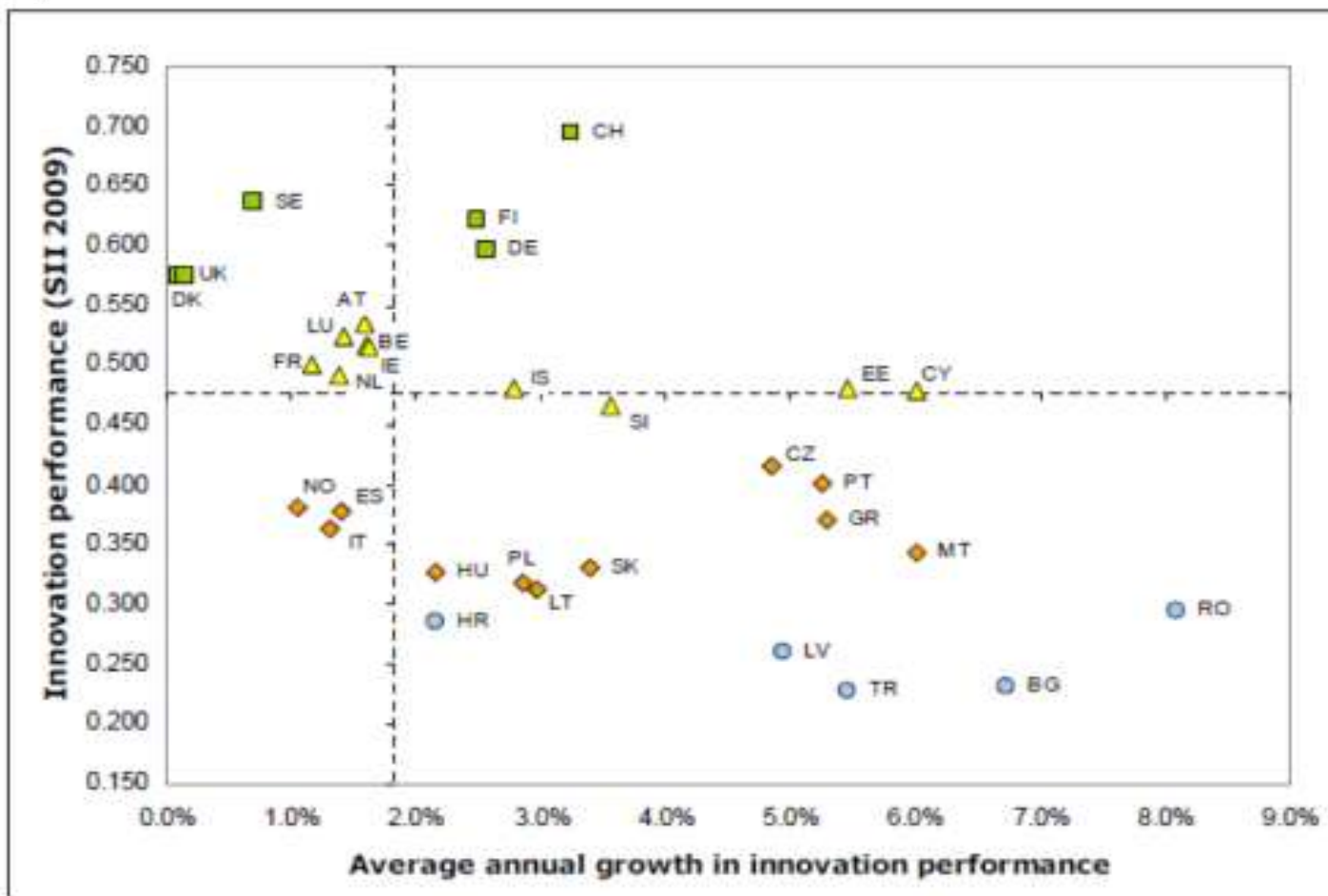
- The role of researchers as generators of new knowledge and innovative ideas, and agents for knowledge sharing and transfer has essentially grown.
- the importance of mobile people as transmitters of technology and tacit knowledge
- For companies, in particular, **incoming researchers influence strongly their innovation performance** through access to high-value knowledge, and thus provide higher competitive advantages.



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# Environment for research and innovation in Bulgaria

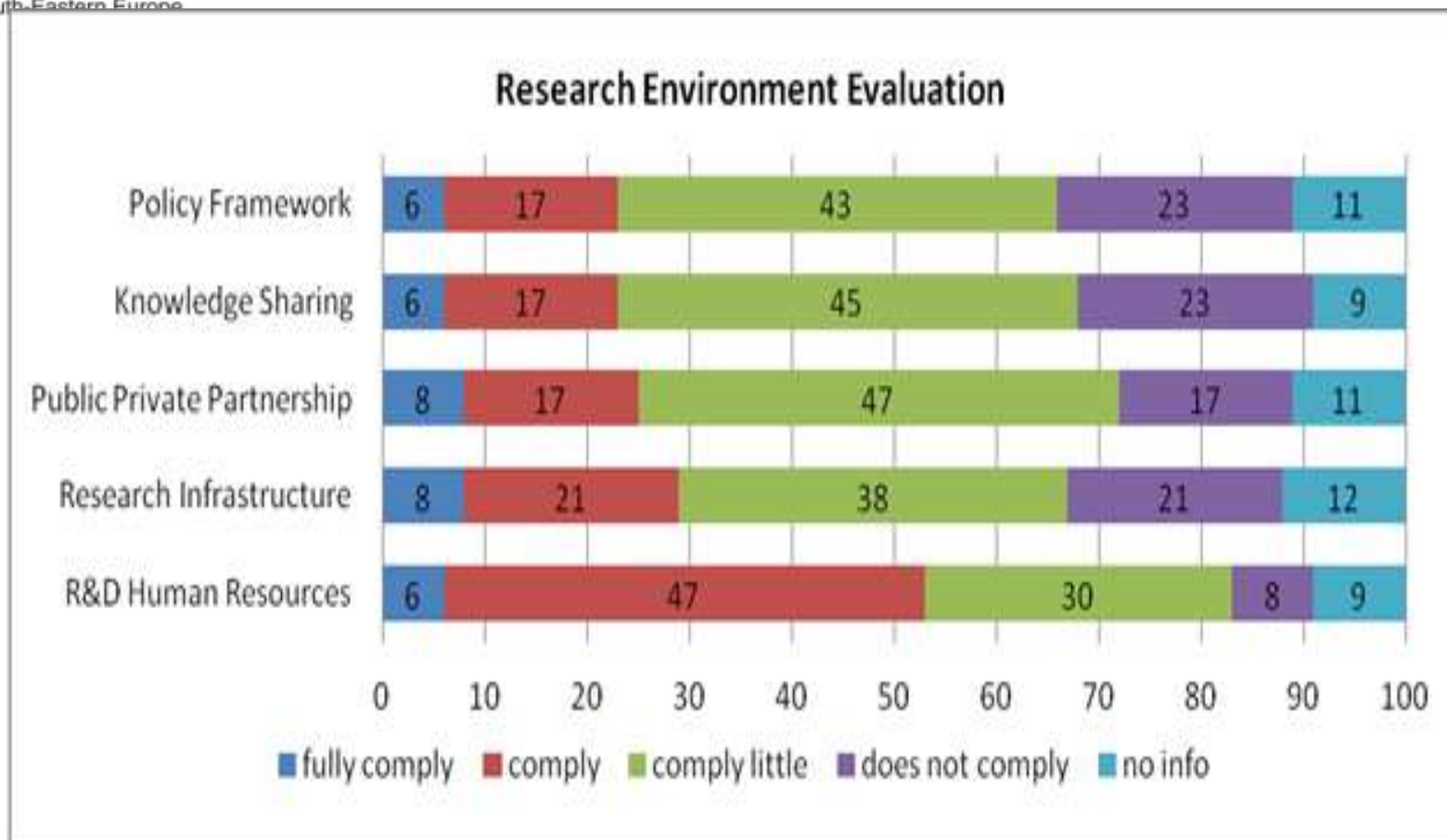


NCIE

# Survey outcomes

- The first group of questions was focused on the perception of the research environment in Bulgaria by researchers and business organizations (Fig. 2). In general, the survey shows not very positive assessment of the Bulgarian research environment. The majority of the respondents consider that it is not favourable for competitive development and attracting best researchers in Bulgaria. About 60-70% of them point out that the research infrastructure is usually insufficient, inadequate (not world-class), or not easily accessible

# Research Environment Evaluation





# Public-private cooperation

- lack of effective public-private cooperation and partnerships, effective knowledge-sharing between public research and business organisations and the general public;
- Lack of well-coordinated research programs and priorities including significant co-planned investments in the public research system.
- In fact, **the prioritization of research turns to be one of the most important factors for industry-driven research** as the available funding is usually dispersed into different small projects and initiatives.



# Some positive trends in HR

- Relatively high number of excellent experienced researchers, and a quite high inflow of qualified young researchers.
- The survey results show that the inflow of competent researches is most intensive in the fields of Mathematics and Informatics (according to 51% of the respondents), and Biology and Medicine (51%). Competent researchers are also available in the areas of Natural Sciences (42%) and Engineering Sciences (30%). The lowest result is achieved for the Social Sciences/ Humanities field (4%).

# Tools for industry-academia collaboration

- internships and/or grants for graduate students and researchers in companies and industry;
- participation of representatives of industry and other non-government organizations in the research organisations or university management;
- collaborating in joint research programs and projects; industry realization of intellectual products and services created by academic institutions.
- A preference is given to the collaboration in research projects and programs (26% of the respondents), which is not surprising because that tool is becoming more popular and proves to be effective in the Bulgarian research environment.



### National Innovation Policy



# Industry role and participation

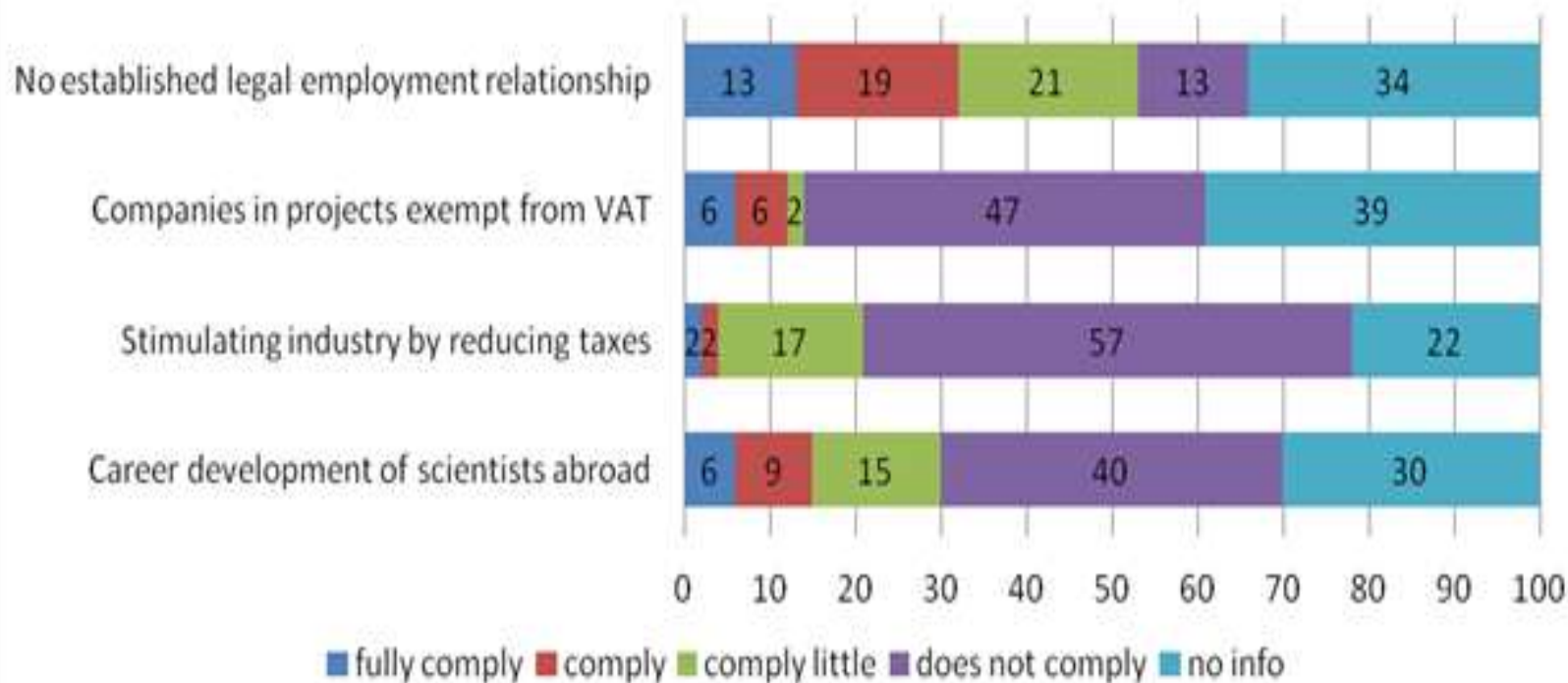
- The survey reveals that industry is also not prepared to enhance the collaboration with academic institutions or to foster mobility of personnel between both sectors.
- Half of the respondents (50%) did not reply to the question related to sharing a concrete example of good practice for career development of researchers in the industry;
- 36% think that “The industry in Bulgaria doesn't really care about science”, and 25% announce that “There are no good practices in Bulgaria at all”.
- One of the most important conditions for successful implementation of inter–sectoral mobility is good management and transfer of knowledge and intellectual property.



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## Government-Academia-Industry Relations



IST

- **Administrative environment and obstacles**

**Indicators:**

- ☆ Recognition of diplomas in the private sector
- ☆ Recruitment procedures of researchers in state and private research organisations or industry- specify if any privileges or priorities are given to the titled researchers
- ☆ Membership of industry representatives in Management bodies of RO and/or universities or other relevant organisations (Councils)
- ☆ Freedom of research (idea, work, results)
- ☆ Access to information



- **Industry environment for researchers**

**Indicators:**

- ☆ specific recruitment conditions for researchers (if any)
- ☆ portability of grants
- ☆ payment - type of contracting and funding (project base/lump sums/normal regular salary)
- ☆ more ...



- **Social security**

**Indicators:**

- ☆specific recruitment conditions for researchers (if any)
- ☆transferability of insurances
- ☆transferability of pension rights/credits
- ☆maternity

# Career Development and Inter-sectoral Mobility Environment and Barriers' Report - II

- **Programme funding environment:**
  - industry tax incentives for hiring researchers
  - supporting/encouraging the establishment of academia management bodies with industry participation
  - opening recruitment of industry representatives in research, etc.
- **Funding tools for the promotion of R&D human mobility between academia and industry**
  - EU R&D Funding Programmes
  - National Inter-sectoral mobility funding tools (funding programmes, grant schemes, project calls and tenders, etc.)
- **Intellectual Property Rights:** legal arrangements as factor for fostering inter-sectoral mobility
  - IPR legal acts, taxes and other conditions for realization of patents, market of intellectual products, protection, licenses, etc.
  - lack of awareness of IPR (or bad knowledge on IPR), lack of transferable results, etc.

## FINAL PART – Good and best practices, opportunities and challenges

- **Current legislation ensuring favourable conditions for promoting enhancement of industry-academia transfer, etc.**
- Examples: Spin-offs establishment rules under research organisations; salary promoting mechanisms – i.e. additional funding under projects; IPRs, etc.
- **Sustaining favourable infrastructure supporting knowledge and technology transfer**
  - Industrial R&D representation
  - industry-academia cooperation,
  - industry's respective needs for R&D personnel
  - Economic/fiscal incentives – TAX incentives (VAT exemption for activities under international projects), risk capital funds, etc.

*Some repetition with the above-mentioned chapters/paragraphs is possible. We need short statements in to be made the comparative analysis.*

## FINAL PART – Good and best practices, opportunities and challenges

- **Instruments for research reinforcement in industry:**
  - Legislation adopted for promoting and fostering innovation process – infrastructure (agencies, councils, etc.), science parks, TTOs (technology transfer offices), incubators, others.
  - Legal provisions for building joint ventures, including spin-outs between academia and industry including placements and internship in industry of researchers, extraordinary professors at universities, training supervision of PhD students by industrialists, etc.
- **Education and training tools for inter-sectoral mobility – examples for:**
  - Entrepreneurial university/academia centres
  - National projects on training on additional skills and competences (i.e. communication skills, awareness of IPR issues, research management training, how to communicate research results, how to build successful spin-offs or tech starts-ups, etc.)
  - Students companies – schemes, funding opportunities, running projects



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# Thank you very much for your attention!

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