**TUBITAK, Ankara**

Conference on Attracting Research Talent

# Trends in Brain Circulation

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# Issues

- Brain Circulation and Migration of Researchers
- Why bother about Brain Circulation?
- Current Brain Circulation Flows
- Reasons for Europe's Brain Drain
- What could be done to achieve a balanced, sustainable brain circulation?

# Typology of Brain Circulation

## Geographical Mobility

- Student and Teachers Exchanges (Erasmus, etc.)
- Researchers exchanges (FP7 People, bilateral agreements, sabbaticals, etc.)
- Employment abroad

## Inter-Sectoral Mobility

- Researcher taking jobs in business or administration

# Why do we need Brain Circulation?

**Europe has …**

- **insufficient number of RTD staff**
- **Low mobility of researchers**
- **an aging research population**
- **Brain drain (mostly to US)**

**And as a consequence:**

- **knowledge generation is too weak**
- **development of new technologies is slow,**
- **marketing and branding weak as well.**

# Background figures (1):

- Europe has 1.3 million researchers (FTE), while US have 1.4 million. **Since our population is double, share of RTD staff in work force in EU is 5.4 per thousand – compared to 9.0 in US. Since 2000 growth was stronger in EU (mostly in business sector) than in US.**

- Aging of research population is a concern: **35% of RTD staff are in 45-64 age group, compared to 31% in 25-34 age group.**

- EU generates twice the number PhD graduates than US, and has higher share of world scientific publications: in **2006 EU had 37% and US had 31% share.**

# Background figures (2):

- European researchers are insufficiently mobile: results of a recent survey show that 46% of respondents are currently not mobile and have not been mobile in the past. About 35% would like to be mobile in future, while 12% of youngest researchers expressed no interest in mobility.

- If Barcelona target of 3% GERD is achieved Europe would need by 2010 about 700,000 new research positions. By head count there were in 2006 in EU-27 3.1 million R&D personnel – that is 22% increase.

- EU universities are strongly behing US universities in excellence: **institutional citation index per discipline shows that only 26% of ours are world leaders in at least one discipline, compared to 81% from US !**

# Background figures (3):

- EU still suffers brain drain: 70% of EU PhD students intend to stay in US. Only 13% of all European researchers currently working abroad intend to return home!
- European RTD staff is too static: only 5.7% of RTD staff are non-residents, in new members it is only symbolic, below 1% (SI-0.3%).
- Reasons for emigration: broader scope of activities 61% in EU; 19% in US. Better access to leading technologies: 51% in EU, and 4% in US.
- European politicians fail to recognize the need for larger immigration – therefore no proactive strategy. Current processes bring educated migrants to US, and 85% of migrants to EU are poorly qualified (only 5% for US).

# Background figures (4):

- Share of US companies in world "power brands": **52%**
- US has also a stronger share in sources from highly quoted scientific publications in EPO patent applications: **US 50%, EU only 26%.**
- Shares in EPO patent applications: **EU 38%, vs 30% US.**

# European Brain drain Background:

| Factors for leaving country of residence | EU-25 | US |
|---|---|---|
| Broader scope of activities | 61.5 | 19.1 |
| Better access to leading technologies | 51.3 | 4.3 |
| Better career advancement opportunities | 38.5 | 8.5 |
| Better access to R&D funding | 30.8 | 2.1 |
| Broader job opportunities | 28.2 | 4.3 |
| Better earning opportunities | 25.6 | 0.0 |
| More favourable tax system | 15.4 | 4.3 |
| Better living conditions | 10.3 | 10.6 |
| Contract/agreement extended | 5.1 | 4.3 |
| Family responsibilities | 4.3 | 4.7 |

Source: MERIT e-survey for DG Research

# EU Policies and Activities (1):

- ***European Researcher's Mobility Portal*** launched 2003 to provide information on training & jobs for researchers. In 2004, the ***ERA-MORE Network*** was launched - now consisting of 200 Mobility Centres in 35 countries, providing tailor-made assistance to mobile researchers and their families. The two were re-launched in June 2008 as ***EURAXESS Researchers in Motion***, for comprehensive information on researchers' mobility, available jobs and rights.
- ***ERA-Link*** initiative to network European researchers' communities outside Europe, officially launched in ***US*** in June 2006. ERA-LINK ***Japan*** launched in June 2008 and ERA-LINK ***China*** is scheduled for 2009.
- After broad stakeholder consultations in 2005 the Commission issued ***European Charter for Researchers and Code of Conduct for their Recruitment***. So far, more than 200 organisations representing over 800 institutions, covering 23 countries signed the Charter & Code on voluntary basis.

# EU Policies and Activities (2):

- In 2005, the ***Scientific Visa Package*** was adopted to facilitate administrative procedures for third country researchers entering the European Community. It includes Council Directive 2005/71/EC (12 October 2005) and two Recommendations: 2005/761/EC on short-term visas and the 2005/762/EC on long-term admission (more than three months). The Directive has been transposed in 15 Member States.

- European Commission has also conducted some awareness raising activities. In 2006 Commission launched a call for proposals for the organisation of the ***Researchers Night*** where 31 proposals were funded, resulting in organisation of Researchers Nights in more than 100 cities in 21 countries, and more than 100,000 people participated.

# EU Policies and Activities (3):

In the EC Communication (May 2008): ***Better careers and more mobility: A European Partnership for Researchers***, the Commission seeks partnership with Member States to ensure necessary human resources are available to sustain and enhance the contribution of science and technology to a knowledge-based European economy.

The aim of Partnership is to align and focus efforts of individual Member States. Joint priority actions should make EU a more attractive place for researchers, and allow researchers to be more mobile between countries, institutions, and between the academic and private sector.

Key areas for action are: systematic opening up of recruitment, meeting the social security and pension needs of mobile researchers, providing fair employment and working conditions, and ensuring that researchers have the right training and skills.