

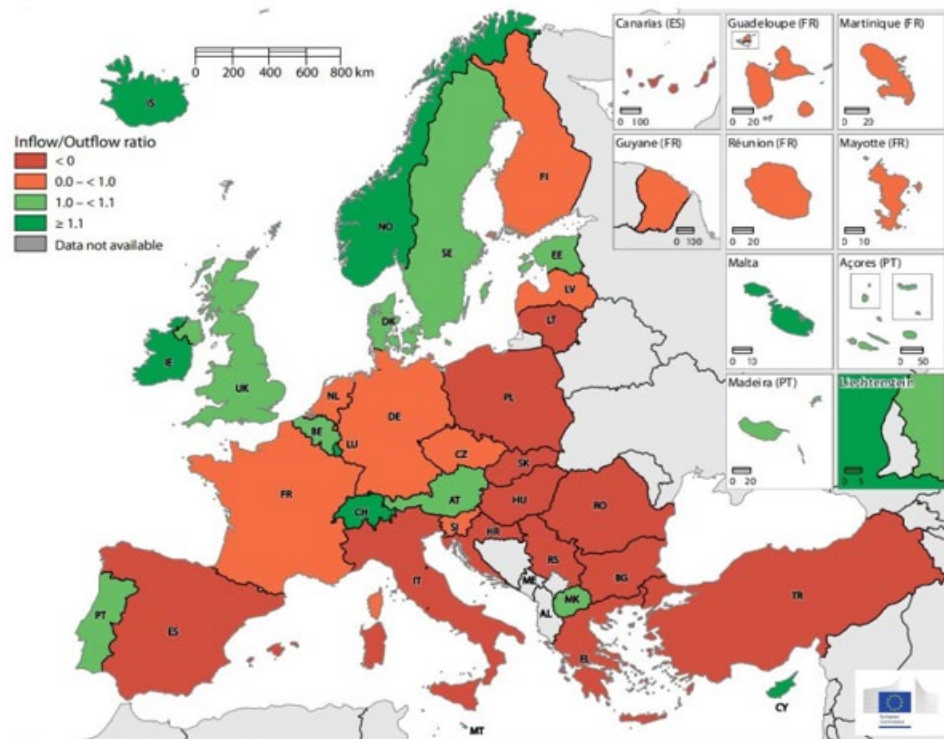
Choose Europe:

Turning European Brain Drain to Brain Gain by 2030

opportunities and challenges to boost European Competitiveness

Manuel Heitor

WHY? ...Brain drain trends Europe 2022



‘European brain drain’

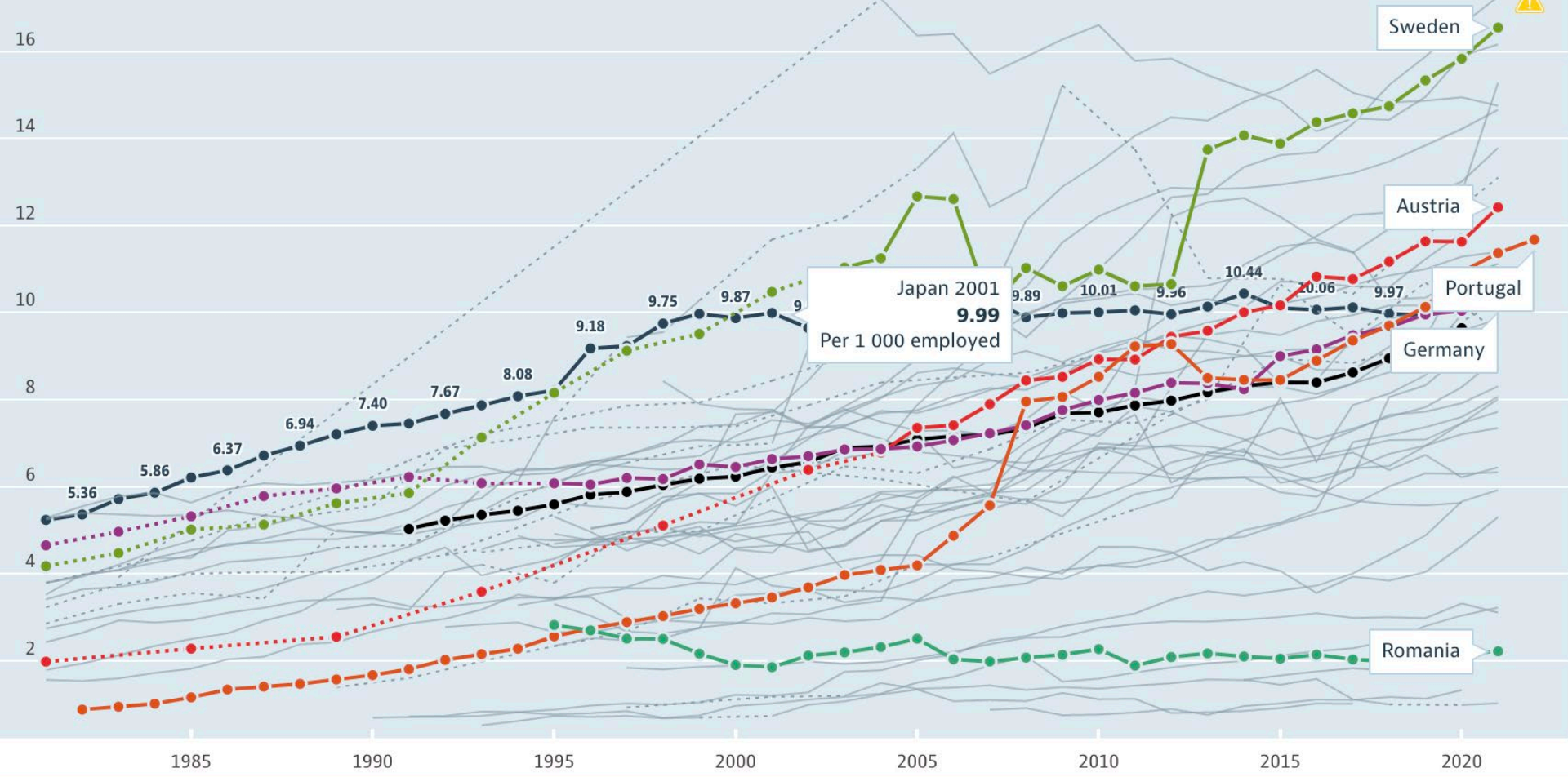
Europe is currently not managing to “attract new talents” nor to “retain the best and brightest minds here in Europe” – overall there is a flow out of Europe, particularly towards US.

Red / orange = net outflow

Source: European Commission, Directorate-General for Research and Innovation (2022), *Science, research and innovation performance of the EU 2022 – Building a sustainable future in uncertain times*, Publications Office of the European Union, Luxembourg, <https://data.europa.eu/doi/10.2777/78826>.

WHY?...Number of Researchers (FTE)/Thousands active inhabitants in EU member

(Source, OECD; on 05 April 2024; <https://data.oecd.org/rd/researchers.htm>)



The two most relevant information sources over last decade....

OCTOBER 2014



Postdoctoral Funding Schemes
in Europe
SURVEY REPORT



- It covers about **109 funding and contractual schemes** for young doctoral researchers and postdoctoral positions, for **2012-2014** (i.e., it is **10 years old**...!);
- The **volume of funding varies widely**, for 3 to 5 years:
 1. 30% of the schemes up to €200 thousand;
 2. 28% of the schemes up to €500 thousands;

The **duration of the schemes** varies widely, but always below 5 years:

- **Only 20% of the schemes offer 5 years or more**;
- Short term funding is prevalent in mobility schemes;

In general, it shows an **unacceptable coupling between “project duration” and “institutional employment” or “contractual schemes”**, leading to **temporary** and **precarity jobs** and **lack of responsibility, at individual and institutional levels.**

CESAER

- conducted among **24 Member universities and one external university in 2024**, highlights success stories and shows that **universities in Europe are ready to expand these if provided with adequate funding and conditions.**
- However, **varying conditions across Europe**—such as **labour laws and funding challenges**—often hinder universities’ ability to offer stable research careers, limiting Europe’s talent retention.

- Shows the need for EC to establish and develop the **Research Careers Observatory**, as planned since 2021 (but still not implemented), making use of lessons learned from this new CESAER survey to monitor research careers.

- Suggests the need to **expand the Marie Skłodowska-Curie Actions** to enhance support for early-career researchers: Launch **“Choose Europe for a Research Career”**, as a co-funding scheme...

Research careers:
A critical choice for Europe

Results, insights and recommendations from
CESAER Research Careers Survey 2024

Recommendations 1: European Commission

1. Set **ambitious targets to reverse European brain drain by 2030/2035:**
 - Achieving **brain gain in Europe, at large, and in the majority of Member States.**
2. Establish, effectively, the *European Research Careers Observatory* to monitor careers, funding, and mobility – **current OECD/EC partnership needs focus and clarification!**
3. **Expand Marie Skłodowska-Curie Actions:**
 - Launch "**Choose Europe**" programme, using the existing MSCA's co-funding mechanism
 - Simplify immigration procedures and processes across Europe
 - Implement "Letta's fifth freedom" for free circulation of knowledge through an **adequate and legally binded "ERA Act"**.

Recommendations 1 (cont.): European Commission

“Choose Europe”:

a unique opportunity for Europe in “Trump 2.0 Era”....

- Use the **existing MSCA’s co-funding mechanism**, to launch and test new scheme in **2025-2027**;
- Funding requirements: to **institution/employer** (i.e., University/RTOs/firms), with the requirement and **guarantee of a “career development path”**, with the clear possibility of a **“permanent contract” for successful grantees with positive assessment at the end of 4th year**;
- Goal: Between **0,5 and 1 million Euros for 5 years** (i.e., less than a “ERC starting grant”), with **50 % from EC/MSCA and 50% from national or institutional funding**, including salary for grantee and other subsidies for launching a research group (e.g., fellowships for research students, travel,...);
- To be adjusted with each institution based on their salaries.
- **ACTION**: experiment **pilot in 2025** targeted to **MSCA cofund projects which host postdoctoral fellowships**: offer an extension to their fellowship by 2-3 years (so 4-6 years in total) using MSCA conditions and rates, on the condition that institutions commit to offer longer term job opportunities.

Recommendations 2: member states (MS)

1. **Stimulate “good jobs”**: promote research career development opportunities, together with adequate **support/technical careers** and **salaries** throughout Europe.
2. **Simplify visa** processes for international researchers and graduates.
3. **Promote Co-funding schemes** to meet the 3% GDP target for research & innovation:
 - **Expand "Seal of Excellence" for high-quality research investments, including Marie Skłodowska-Curie Actions** and the future programme **"Choose Europe"**.

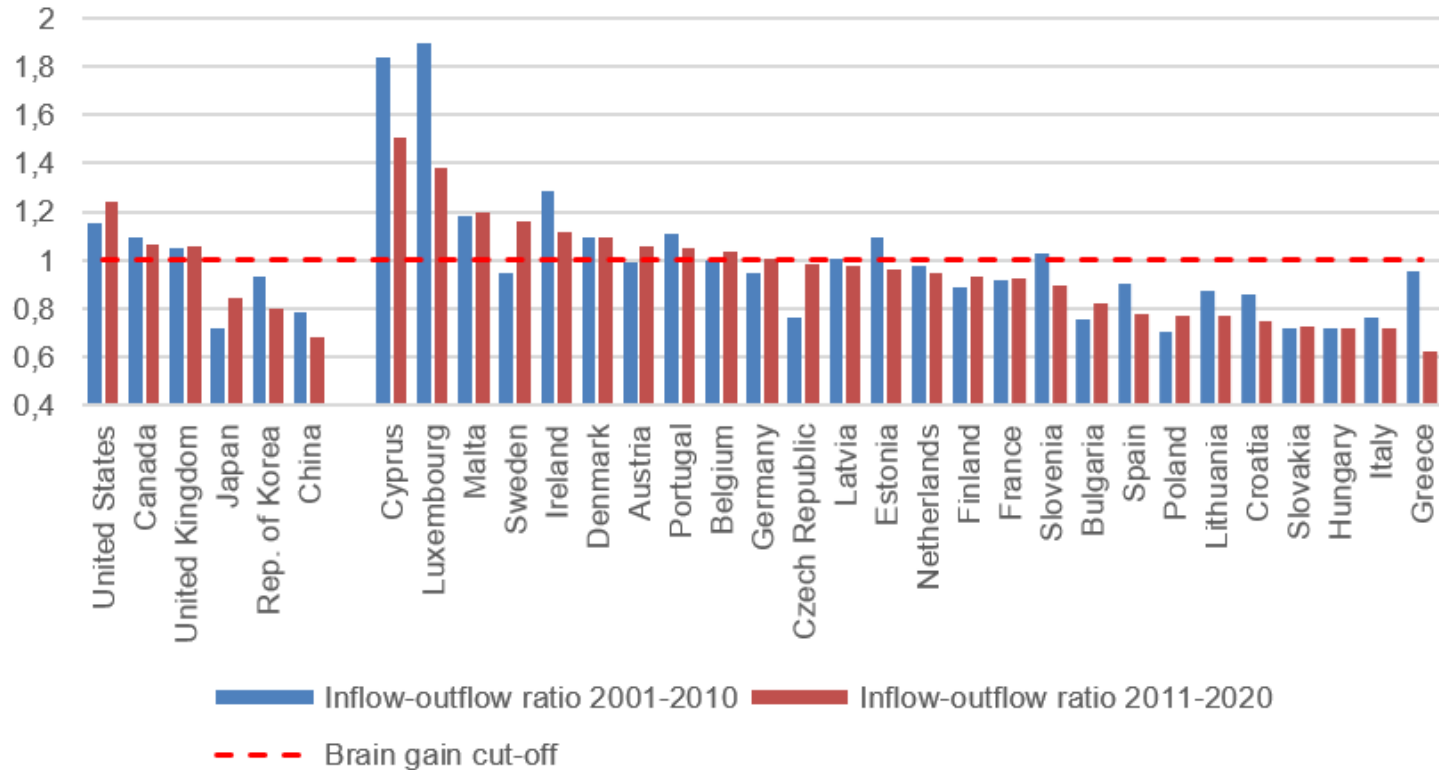
Recommendations 3: for Universities and Research Organisations

1. Foster **improved career pathways** for researchers and support staff.
2. Pursue and advocate for **decoupling of *research contracts* from *project duration***.
3. **Collaborate** with public and private sectors to **create and promote high-quality jobs and, if necessary, foster the creation of new institutions/employers**.
4. Promote **innovative schemes to recruit for early-career researchers**.

Annexes (if necessary)

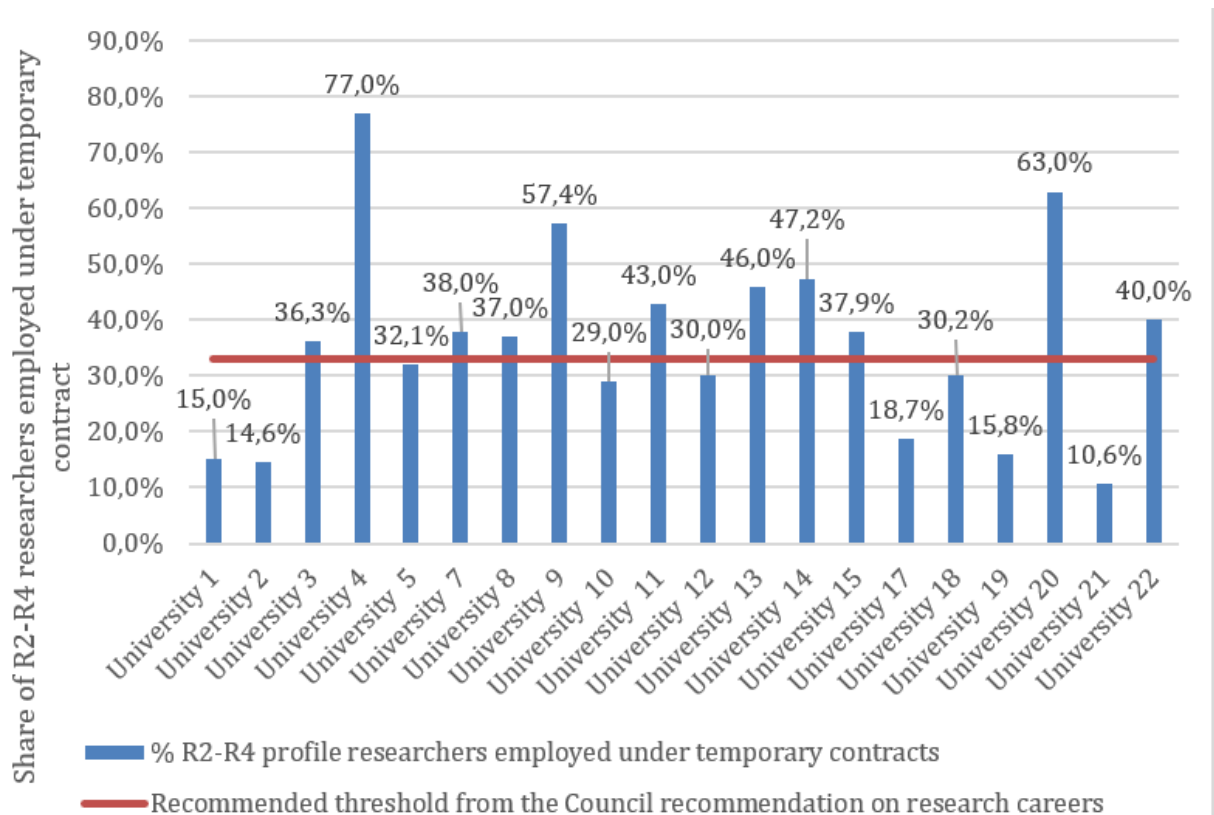
Evolution of brain drain trends 2001-2010 and 2011-2020

Figure 1.1: Evolution of **brain drain trends** for EU member states and across the world for two periods: 2001-2010 and 2011-2020



CESAER Research Careers Survey 2024:

1. Survey: percentage of R2-R4 profile researchers under temporary contracts, January 2024 (24 universities)
2. Detailed case studies (3 universities)



"High Level Group on Human Resources for Science and Technology in Europe, 2003-2004", was set up by Commissioner **Philippe Busquin** as part of the European Commission's broad strategy to address the Lisbon and Barcelona goals:

- **Jose Mariano Gago, LIP/IST**; Former Science Minister in Portugal (Chair), PT;
- **John Ziman**, emeritus professor of physics of the University of Bristol, UK;
- **Paul Caro**, former Director of Research at the CNRS, FR;
- **Constantinos Constantinou**, University of Cyprus, CY;
- **Graham Davies**, University of Birmingham, UK;
- **Ilka Parchmann**, Leibniz-Institute for Science Education in Kiel, Germany;
- **Miia Rannikmäe**, Centre for Science Education in the University of Tartu, Estonia,
- **Svein Sjøberg**, Oslo University; Fin.



Report by the High Level Group
on Increasing Human Resources for
Science and Technology in Europe
2004

...to increase the share of European GDP invested in research from 1.9% to 3%, Europe needs a further 700,000 researchers or 1.2 million research-related personnel by 2010.

The changing nature of the "high-tech" industries means that governments must step in to play a more active role in ensuring and promoting better resources and skills development.

The **public sector is under-funded** and **universities, in particular, should be preparing their science graduates for a more diverse range of careers.**

But it is not just a question of under-funding: **universities must provide a wide range of skills required by a large diversity of science careers** instead of focussing on preparations for academic careers only.

Europe needs to promote scientific careers better:
...calls for a ***new partnership between universities and industry*** to promote careers and a better mutual understanding.