

From Brain Drain to Brain Gain @ SSC 2021

BRAIN MIGRATION PHENOMENON

Peter Hošťák

supported by

- Visegrad Fund

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Trenčín
2026
Cultivating
Curiosity

What is at Stake?

Hypothesis: *Research institutions in the **V4 region** have been **adversely affected by a brain drain** that has been triggered as a side effect of the transformation processes that began after the fall of Communism and continues to this day when research institutions have to adapt to the **challenges of global competition for talent.***

FUNGLASS HEADCOUNT

March 2017: 22

16 researchers + 6 PhD
Slovakia + 1 student from abroad

November 2020: 78

48 researchers and technicians + 19 PhD students + 11 admin

Majority from abroad - 4 continents, 18 countries

Slovakia, Poland, Germany, Belarus, Slovenia, France, Spain, Turkey, Egypt, Iran, India, China, Vietnam, USA, Mexico, Colombia, Argentina, Brazil

Agenda

Two presentations (money and more)

- *To involve the senior researchers of the participating V4 institutions in search for **proven talent management strategies** (especially in terms of adapting to the influx of talent from abroad) that will empower them to turn brain drain into brain gain.*

What works and what not

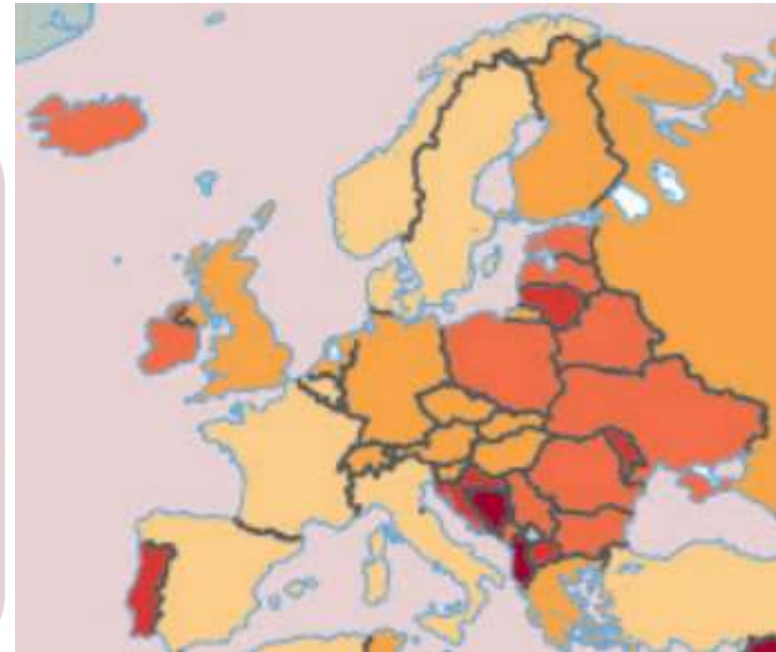
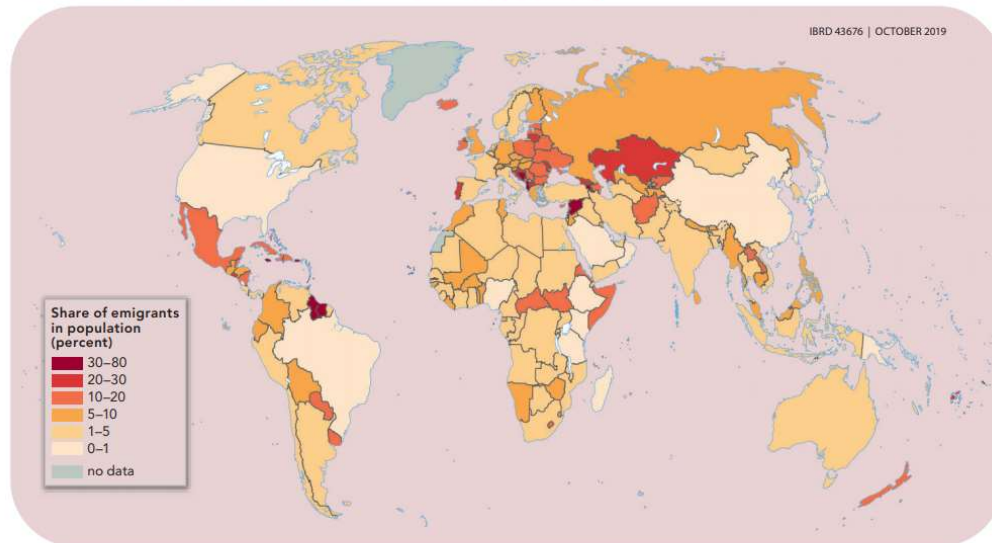
- Panel discussion – sharing best practices to recruit and retain talent
- **Panelists:**
 - *prof. Galusek (FunGlass, Trencin),*
 - *prof. Wagner (University of Pardubice),*
 - *prof. Handke (AGH - University of Science and Technology, Faculty of Materials Science and Ceramics, Krakow)*
 - *Dr. Balazsi (Centre for Energy Reserach, Budapest).*

Exploring Glass Together

- *Thinking beyond the box – bridging research with art and industry. Brainstorming session in collaboration with the Trencin ECoC Candidacy Team.*
- *Moderated by leading glass designers active in the local creative industry – Dominika Belanská, Michala Lipková, and Jakub Pollág*

Brain Drain Statistics

MAP 2.2 Emigrant-to-population ratio, by country

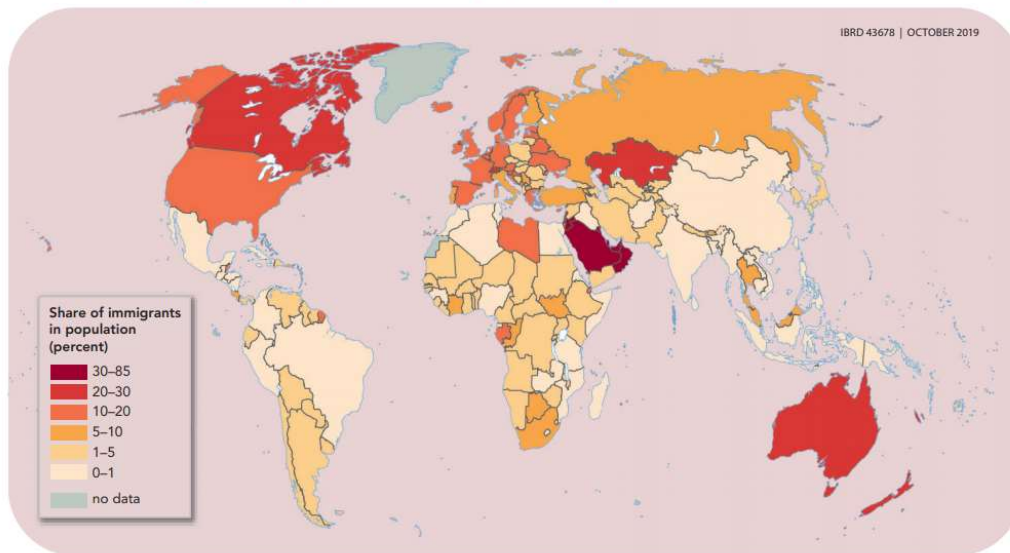


Source: UN DESA 2017, 2019.

World Bank. (2019). Europe and Central Asia Economic Update, Fall 2019: Migration and Brain Drain.

Brain Gain Statistics

MAP 2.1 Immigrant-to-population ratio, by country



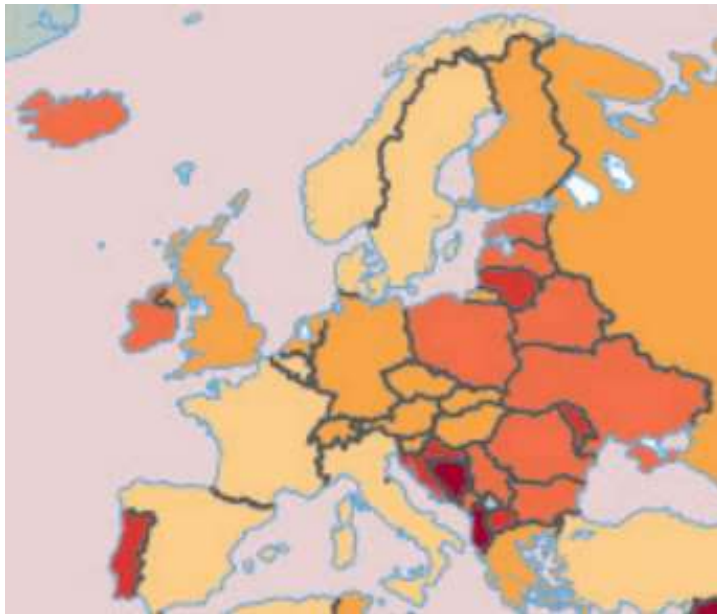
Source: UN DESA 2017, 2019.



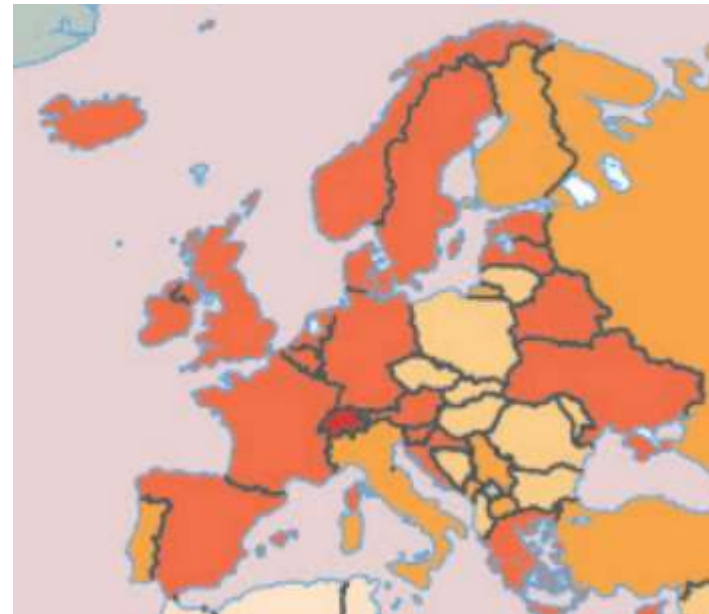
World Bank. (2019). Europe and Central Asia Economic Update, Fall 2019: Migration and Brain Drain.

Emmigrant to Population vs. Immigrant to Population

Emmigration-to-population



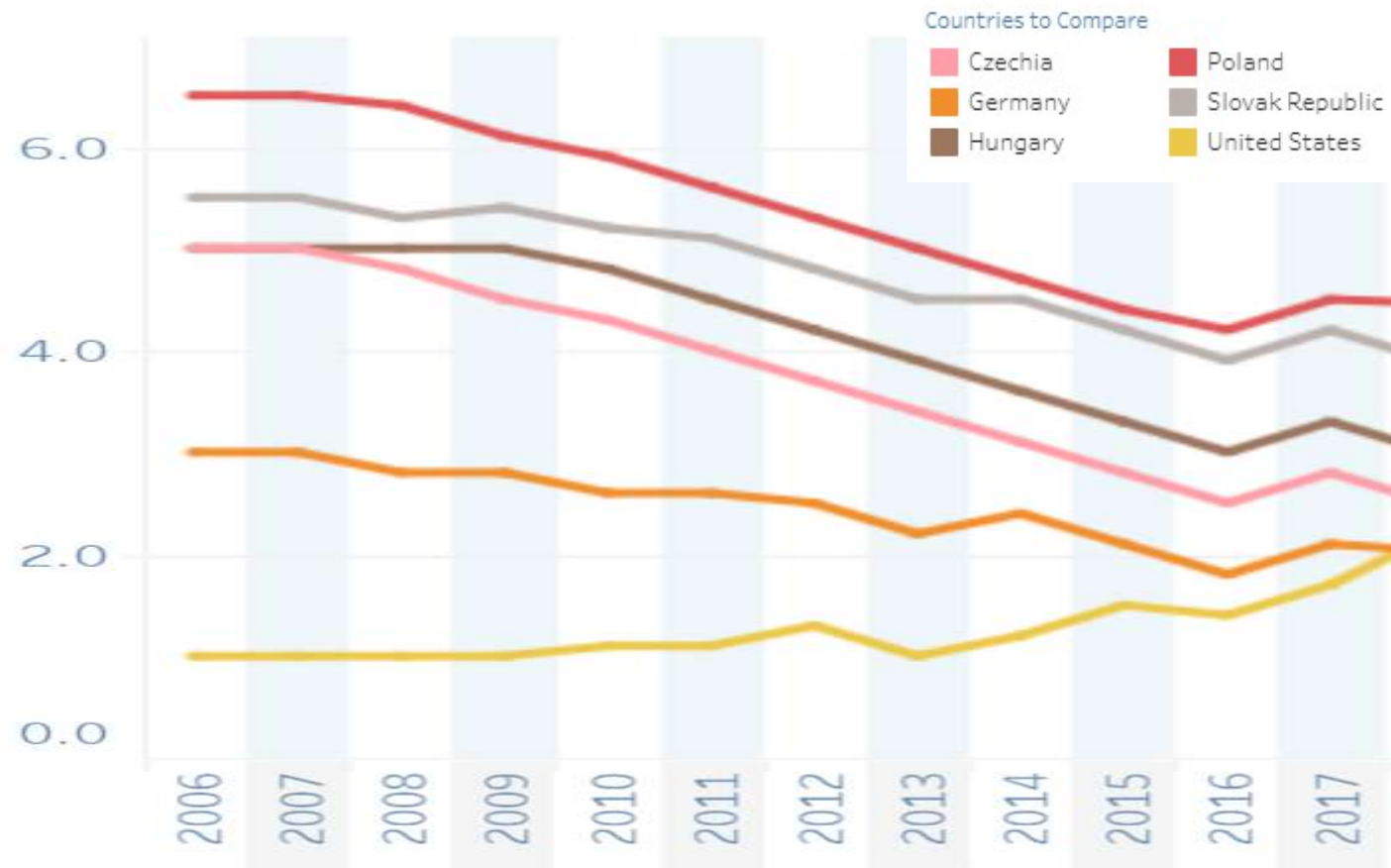
Immigration-to-population



World Bank. (2019). Europe and Central Asia Economic Update, Fall 2019: Migration and Brain Drain.

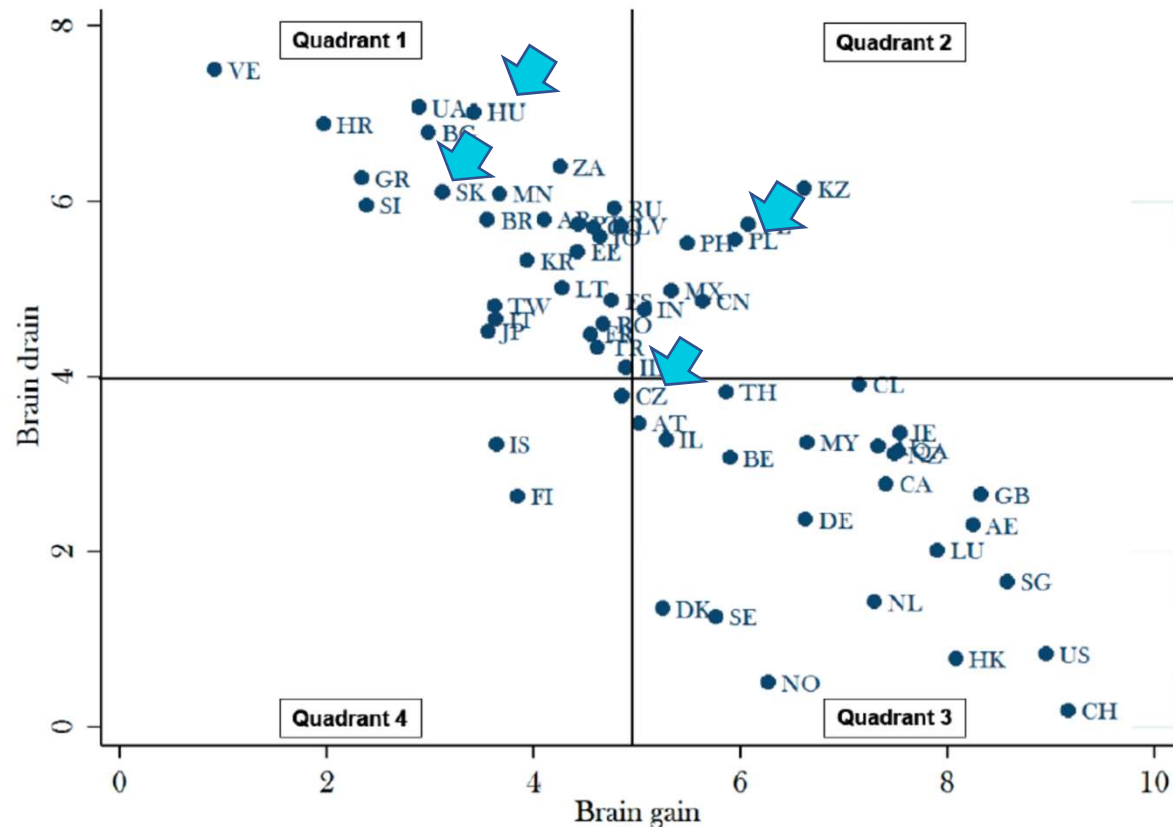
FUND FOR PEACE

Human Flight and Brain Drain Index



Global distribution of talent

Graph 1. Global distribution of talent (2016)



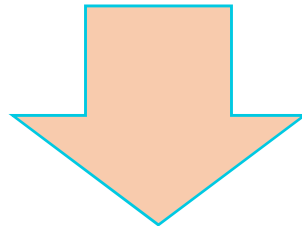
Source: *WHAT DRIVES BRAIN DRAIN AND BRAIN GAIN? THE MAIN FACTORS BEHIND TALENT FLOWS, BASED ON COMPETITIVENESS DATA.* By IMD Professors Shlomo Ben-Hur and Arturo Bris, with José Caballero (IMD World Talent Ranking 2016) <https://www.imd.org/research-knowledge/articles/what-drives-brain-drain-and-brain-gain/>

Determinants of Migration

Potential migrants weigh the economic, social, and other personal **costs and benefits** in deciding whether and where to move.



They move from low-wage to high-wage locations and are attracted to labor markets with better current and future employment opportunities.



On the cost side, the most important determinants of mobility are physical and cultural distances.

World Bank. (2019). Europe and Central Asia Economic Update, Fall 2019: Migration and Brain Drain.
<https://openknowledge.worldbank.org/handle/10986/32481>

RESEARCH & ACADEMIA

TRUE or FALSE: It is not possible to run a Center of Excellence relying solely on local talent.

WAR FOR TALENT?

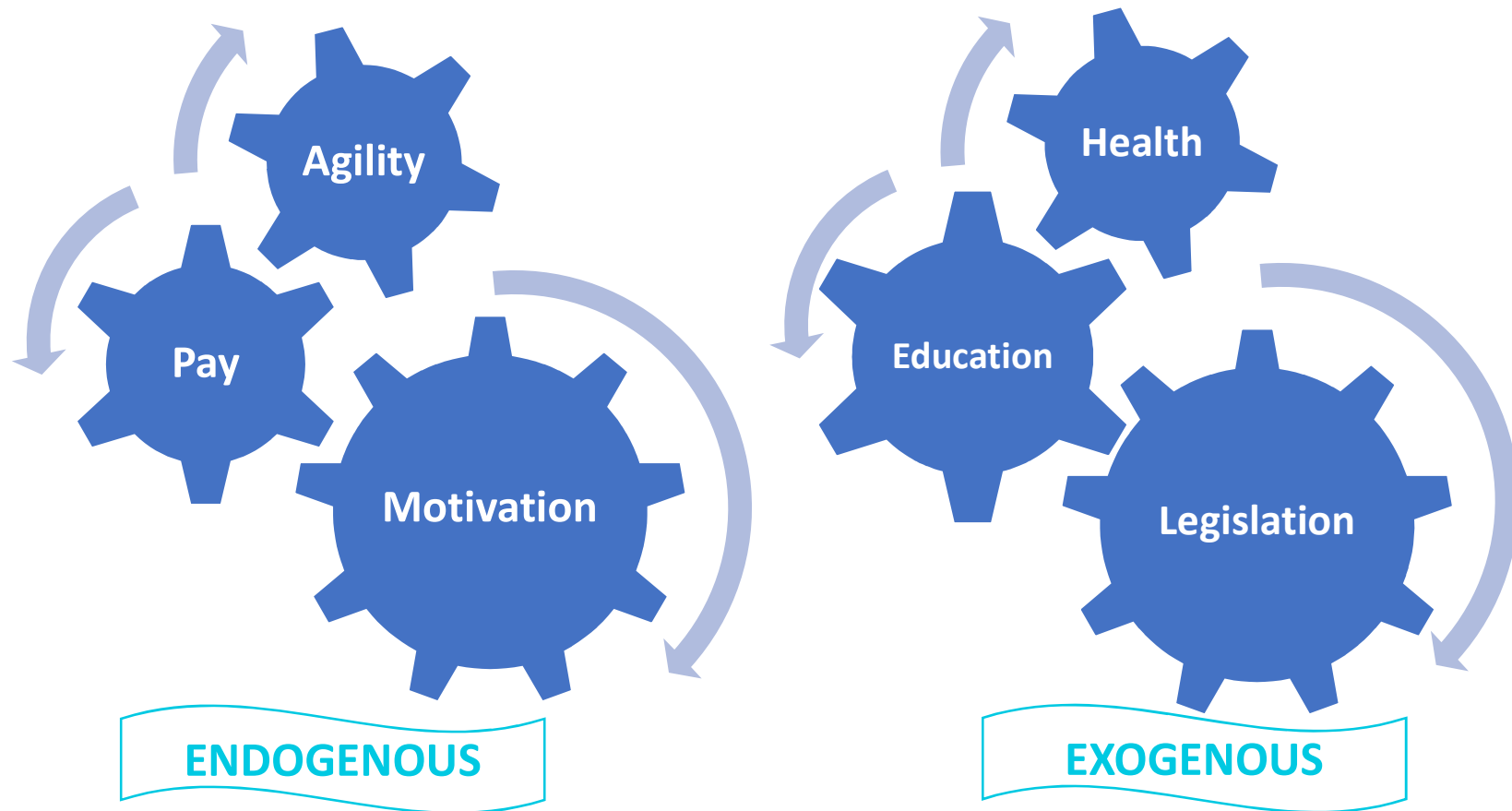
According to the VSNU, the Association of Universities in The Netherlands, there's a 'war for talent' going on. All across Europe, universities are scrambling to get the best staff and students from abroad to attend their institutions.

The ideas behind this battle are often noble. More mobility leads to an exchange of cultures, to more research collaboration and, ideally, to better job prospects for the individual movers.

However, the competition for the best brains has some serious side effects. Some countries are faced with a brain drain, while others can hardly manage the influx of foreign students and staff.

Source: <https://decorrespondent.nl/10661/im-looking-for-students-and-academic-staff-tell-me-about-brain-drain-and-brain-gain/5509148359946-165900f3>

Key factors driving talent flows



Source: *WHAT DRIVES BRAIN DRAIN AND BRAIN GAIN? THE MAIN FACTORS BEHIND TALENT FLOWS, BASED ON COMPETITIVENESS DATA.* By IMD Professors Shlomo Ben-Hur and Arturo Bris, with José Caballero (IMD World Talent Ranking 2016) <https://www.imd.org/research-knowledge/articles/what-drives-brain-drain-and-brain-gain/>

Endogenous factors driving talent flows

Pay - Relatively speaking, remuneration levels appear to have only a marginal impact on the attractiveness of countries to foreign talent. The quality of the education system in a country is, for instance, of greater significance at determining talent flows.

Motivation - Worker motivation is a key factor in reducing brain drain, it also contributes to increasing brain gain. It sends a strong signal to overseas talent that, for example, firms in a particular country offer a **work environment** highly conducive to maintaining strong employee morale.

Agility - The agility and **adaptability** of companies to market changes as well as inclusive corporate values also reduce brain drain. The agility exhibited by companies may be perceived of as **trait of innovation** thus attracting overseas talent while also encouraging locals to remain in their home country.

*Source: WHAT DRIVES BRAIN DRAIN AND BRAIN GAIN? THE MAIN FACTORS BEHIND TALENT FLOWS, BASED ON COMPETITIVENESS DATA. By IMD Professors Shlomo Ben-Hur and Arturo Bris, with José Caballero (IMD World Talent Ranking 2016)
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Exogenous factors driving talent flows

Legislation - Legislation that effectively promotes scientific research, non-restrictive immigration laws, and a lower risk of political instability, all decrease brain drain. This suggests that more open and forward-looking societies better prevent domestic talent from leaving the country.

Education - The quality of an education system is an important factor in increasing the inflow of overseas talent, or brain gain. This may be an indication that highly skilled staff consider the quality of schools for their children when making a decision whether or not to relocate. In addition, quality of education, particularly at university level, may entice local talent to remain in their country by reducing the need to search for a better education elsewhere. On the other hand, attending university overseas is likely to lead to permanent relocation increasing the brain drain experience by an economy.

Health - A country's health infrastructure is a significant determinant of talent attractiveness. This may be the case because a workforce that enjoys overall healthy lives tends to remain in their country of origin thus reducing the need to attract foreign personnel.

*Source: WHAT DRIVES BRAIN DRAIN AND BRAIN GAIN? THE MAIN FACTORS BEHIND TALENT FLOWS, BASED ON COMPETITIVENESS DATA. By IMD Professors Shlomo Ben-Hur and Arturo Bris, with José Caballero (IMD World Talent Ranking 2016)
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WHAT WORKS AND WHAT NOT

PANELISTS

prof. Galusek (FunGlass, Trencin),

prof. Wagner (University of Pardubice),

prof. Handke (AGH-University of Science and Technology, Faculty of Materials Science and Ceramics, Krakow)

Dr. Balazsi (Centre for Energy Reserach, Budapest).

PANEL DISCUSSION TOPICS

Status quo - the phenomenon of brain drain / brain gain

Strategies to attract talent from abroad

How to retain talent

Status quo - brain drain / brain gain phenomenon

Your view on how your institution is doing in this regard.

Q1. Are you adversely affected by brain drain?

(emigration, academia vs. industry, big cities vs. college towns)

Q2. Do you benefit from brain gain - have you succeeded in recruiting PhD students or researchers from abroad?

Strategies to attract talent from abroad

GENERATING INTEREST - OUTREACH EFFORTS THAT WORK

- *doctoral students*
- *early stage researchers*

CONVERSION OF AN APPLICATION TO AN EMPLOYEE (STUDENT)

- **ENDOGENOUS FACTORS**

- **Motivation – research excellence**

reputation of your institution vs. reputation of individual researchers

research infrastructure vs. human capital

- **Agility**

opportunity to make an impact vs. bureaucracy

- **Pay and other benefits**

- **EXOGENOUS FACTORS**

- *Legislation, Education, Health Care, Other*

How to retain talent

Adaptation processes

- *workplace (research infrastructure training, tutoring....)*
- *out of work*

Human research strategy

- *career development plans*
- *continuous training*
- *Performance review*
- *academic mobility*

Working environment

- *teambuilding*

Other tricks

CONTACT

Peter Hošťák, Ph.D.
Head of Administration and European Projects Office
peter.hostak@tnuni.sk

www.funlass.eu

FunGlass - Centre for Functional and Surface Functionalized Glass
Alexander Dubček University of Trenčín
Študentská 2, 911 50 Trenčín, Slovak Republic



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