

## Research flight fear from new Europe to old

FOR the ten states that joined the European Union in May of this year, admission to the EU carries the risk that there will be a brain drain from the East to the West that will harm the ability of their research institutions to retain staff and attract investment.

John Smith, deputy secretary-general for research at the European University Association, says: "EU structural development funds should be used in the most complementary way with research funds" to prevent research flight in the accession countries.

Money is the greatest difficulty for the new EU member states.

According to a recent presentation in Maastricht by Jaak Aaviksoo, rector of the University of Tartu in Estonia, "national research spending in relative terms" in the new countries is half the European average.

But the number of researchers relative to the population is about the same.

For the 'old' EU-15, the risk is that investment will move west to east to take advantage of lower research labour costs or less tangible conveniences.

According to the *Global Competitiveness Report 2004-2005*, produced by the World Economic Forum, one of the biggest losers in competitiveness was Italy, which dropped nine places and is now on the same level as the Czech Republic.

Italy's decline in the rating was closely linked to its research capability.

"Italy deteriorated especially in areas related to innovative capacity," states the report, "such as university-industry research collaboration, foreign technology licensing, government procurement of advanced technology, company R&D spending and venture capital availability," the report noted.

It went on to list Romania, Slovakia and Lithuania as notably improving countries.

The European Commission's 7th Research Framework Programme proposal currently under consultation suggests upgrading the European "research infrastructures" through trans-European networks. These would encourage coordination of research across borders using the European Research Area network, known as ERA-NET.

It also proposes to upgrade regional research capacities by increasing the EU research budget to a target of 3% of gross domestic product and by upping the combined use of structural funds and research funds on regional projects.

Initiatives are under way to analyze and manage internal flows of skilled workers within the EU.

According to a paper released by the Commission's research department, most movement of researchers is between member states rather than into and out of the Union.

The Commission does not have much clear statistical data on movement of researchers between states, since there is no common definition of what a researcher actually is among national statistical offices.

For example, in some countries a student is a researcher while, in others, he or she is not.



Shedding light: the definition of a 'researcher' varies, so the 400,000 quoted by Mary Harney (inset) may have been inaccurate

# The EU's alarmist 'brain drain' numbers simply don't add up

BY PETE SWEENEY

IN JANUARY 2004, Mary Harney, Ireland's deputy prime minister told the European Parliament that the EU was losing its best and brightest scientific minds to the United States.

"400,000 science graduates are currently working in the US," she told MEPs, and most of them had no plans to come back.

The headline of a press release to publicize Harney's speech, issued by the Irish government which was then holding the European Union's six-month rotating presidency, proclaimed, '400,000 EU scientists working in US: Europe must redress the imbalance'.

The source of the number, according to Ailish Looby, of Ireland's ministry of enterprise, trade and employment, which Harney was then heading, was an article that appeared in *Time* magazine ten days before her speech.

Entitled *How To Plug Europe's Brain Drain*, the author, Jeff Chu, wrote that there was a population of 400,000 "science and technology graduates" living and working in the US.

His article contained a series of anecdotes describing individual European scientists who had fled under-paid, overly bureaucratic research institutions in the EU for better equipped laboratories and more generous salaries across the Atlantic.

The 400,000 number quickly gained credibility. The Irish government wanted to push the importance of strengthening the EU's science and research base.

The eye-catching number could be cited in support of the Irish presidency's argument that: "In the US, the leading research universities have played a key role in driving the knowledge economy forward, promoting excellence and, as a result, attracting the world's leading researchers, including EU researchers."

The *Time* article and its numbers were mentioned in an Irish presidency conference in February 2004 and, after that, in "numerous [European] Commission documents", according to an Irish government spokesman.

In April, Noel Dempsey, then Irish minister for education and science, addressed the European Science Congress and repeated the same figure. As a source, he also cited the magazine article by title.

The number continues to resurface; last month it appeared in the *Neue Zürcher Zeitung*, which claimed that "400,000 European researchers are currently working in the US and three-quarters of them have no intention of returning".

According to Fabio Fabbri, spokesman for the European Commission's research department (DG Research), staff there became concerned by alarms about a brain drain and about the numbers being quoted.

"The problem is worrying," Fabbri said, "but we should use the correct facts." In

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June 2004, DG Research released a memorandum that attempted to deflate concerns entitled *Making research careers more attractive: concrete steps leading to brain-gain results*.

It stated: "The alarmist proportions of 'brain drain' are not borne out in fact," and went on to suggest that "it could even be argued that a 'brain gain' is taking place in Europe".

The memorandum clarified that "the absolute numbers" of EU-born scientific researchers in the US, "are quite small".

According to DG Research, the total number of EU-born scientific researchers in the US numbers around 120,000.

The 400,000 figure appears to originate in a report written by Wendy Hansen, of the Maastricht Economic Research Institute on Innovation and Technology (MERIT), in November 2003, entitled *Brain Drain Study - Emigration Flows for Qualified Scientists*.

In a section headed *European flows to the*

*United States*, Hansen writes that "although the numbers are declining, the US continues to rely upon Europe for foreign skilled workers".

According to Hansen, the 'old' EU-15 supplied "more than 400,000" of the 1.3 million non-immigrants admitted to the US "on a temporary basis" in 2001.

"Most of the EU persons went on intra-company transfers and exchange visits", states the report, "followed by H-1B visas".

If the MERIT report was the source for the *Time* article (which refers to "a survey released in November by the European Commission" without citing it directly), then it has been distorted subsequently.

The 400,000 Europeans do not all constitute 'brain drain' in terms of scientific research capacity.

The majority of these 400,000 Europeans are probably not researchers at all.

According to Fabbri, the MERIT number refers to "overall science workers, not necessarily hardcore researchers", but even that qualification may be too specific, unless one considers a computer programmer or a project manager a 'science worker', much less a researcher or a scientist.

The MERIT report notes that more than half of all foreigners allowed into the United States under the H-1B visa programme are information technology workers and 10% are managers.

Since every one of the 400,000 was admitted under a temporary visa, theoretically they are all coming back regardless of their intention.

The DG Research memorandum states that "there are no reliable figures on return flows".

The MERIT report also contains cautions about its results. For example, the study admits that "very little comparable information exists" about "empirical evidence of international mobility and brain drain/brain gain effects".

It concludes on a sympathetic note. "Policy and decision-makers find themselves in a particularly tenuous position of having to address critical areas, with little empirical evidence or research guidance."