

Mobility of European researchers to the US: student mobility vs. researcher mobility

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Abstract submitted for the Science and Technology Indicators Conference 2011 on Actors and networks in European Science, organized by the European Network of Indicators Designers (Rome, 7-9 September 2011) – session: Pitfalls and Perils of Internationally Comparative Higher Education Indicators: experiences and results from international research projects

February 2011

This is preliminary work – please do not cite without the authors' permission. Comments welcome.

Research subject and hypothesis

International mobility has been common among scholars for centuries. Whereas Europe has long been the center of intellectual and cultural life, the second half of the twentieth century saw the rise of the United States as the leading power, both economically and scientifically. Hence it has become the preferred destination for students and researchers from across the globe. The US receives almost 19% of all foreign students worldwide (OECD, 2010) and hosts the majority of foreign top researchers in various fields (Hunter et al., 2009; Maier et al., 2007; Laudel, 2003).

Although Europe has recently overtaken the United States in sheer volume of scientific publications, policy makers still voice concerns that Europe is falling behind in terms of science and innovation, and by extent economically. The Lisbon Agenda sets specific goals that Europe should reach to become the most dynamic and innovative world region, including the goal of spending at least 3% of GDP on research and development. Financial resources aside, human capital is a crucial input for science and innovation. But as highly skilled workers are more internationally mobile than other layers of the working population (Docquier and Marfouk, 2006), it is important to not only understand the processes of accumulation of human capital through higher education, but also to gain insight in the motivations and influencing factors that drive international mobility decisions of researchers.

Although intra-EU mobility is being stimulated by diverse policy initiatives at the European level (European Commission, 2003), the lion's share of international mobility of European researchers is still directed towards the US (Ben-David, 2007). Hence, our study focuses on deepening our understanding of the driving factors and effects of EU-US researcher mobility. Mobility can occur at different stages in a researcher's career: as a student (pre-doc) or as a researcher (post-doc). We compare groups of European-born PhD holders who move to the US at the pre-doc or the post-doc stage, and examine whether or not they choose to return to Europe at some point and whether they are different in terms of initial motivations, the influencing factors they experience as restrictive, or in their career outcomes.

Methodology

This paper is based on survey data from the MORE project, which collects information on the mobility of EU-born researchers who move to the US. This information includes the opinion of researchers on a series of subjects, e.g. their motives to go to the US, the effects of this mobility on their career, etc. The survey has been designed and implemented in the context for a project funded by DG Research of the European Commission. This survey initially targeted

- a. researchers who have graduated in the EU and have later been mobile to the US, and
- b. researchers who have graduated in the US and have later been mobile to the EU.

The survey has also extended its coverage addressing also

- c. researchers who have moved between any other regions in the world except from the two combinations above-mentioned, and
- d. researchers who have not been mobile after their graduation.

The survey has been carried out in 2010 in the context of the project “Mobility patterns and career paths of European researchers”. The total net sample of the survey accounts for 5544 observations.

The present paper focuses on European-born¹ researchers of the previously mentioned survey. We retain only researchers who have obtained a PhD, to keep our sample as homogeneous as possible with respect to educational attainment. After clearing out all observations with missing values, this subgroup accounts for 1576 observations. We are interested in the mobility of European researchers between the EU and North America.

Results

In the descriptive analysis, we find that mobility away from the birth country is strongly associated with career-related motivations, especially if that mobility is directed towards North America. By contrast, researchers who obtained their PhD outside their country of birth but who return to their birth region are driven by personal motivations, probably related to the proximity of family and friends. Those researchers who do not return after a PhD abroad are mostly motivated to stay because of financial reasons and access to a professional network.

Researchers who move from Europe to North America experience sizable positive effects on career progress, career productivity and access to resources. Mobility within Europe has positive career effects too, although the perceived effects are not as high as for North America. Returning from North America to Europe leads to a slight loss of career opportunities and access to resources. This mirrors the finding that those who stay in North America do so because they fear a loss of professional contacts and access to funding.

We use a series of multinomial logit models to relate researchers’ choices for particular mobility patterns to their personal characteristics, home country characteristics and motivations. We observe that students from countries that are innovative and academically strong are less likely to go abroad for their graduate studies. Related to this, we observe that students from Central and Eastern Europe (including many of the member states who accessed the EU in 2004 and 2007) are more likely to study elsewhere in Europe rather than in North America. Perhaps obtaining a student visa to North America is more difficult for students from these former communist countries, and access to other European countries is easier.

Researchers who obtained their PhD in Europe, be it in their birth country or in another EU country, are most likely to move to North America afterwards if they are strongly motivated by career factors,

¹ We define Europe as the EU 27 + Norway, Switzerland and Turkey. Although our definition of Europe extends somewhat beyond the borders of the actual European Union, for brevity we will refer to our collection of European countries as ‘EU’ in the remainder of the paper.

whereas personal factors, funding and potential loss of contacts compel them to stay in Europe. Higher salaries are a motivator to become internationally mobile, be it within the EU or to North America. By contrast, researchers who obtained their PhD in North America are motivated to return to Europe by personal factors, but are compelled to stay for financial reasons.

Our study does not explicitly address the link to policy, although it may be informative for EU policy makers who are setting out the policy agenda on international mobility of researchers. Particularly interesting in this regard is the finding that regulatory factors are generally not perceived as very important, by mobile and non-mobile researchers alike, and that forces further away from policy makers' control play a much larger role in shaping mobility patterns. Our findings seem to suggest that Europe would attract more of its emigrant researchers back by allowing universities more flexibility in setting its salaries and improving funding opportunities, rather than addressing regulatory factors such as pension transferability and other social provisions.

In any case, continued efforts in terms of data collection and development of indicators remain necessary to further our understanding of international researcher mobility, and ultimately, to contribute to the design of optimal policies to ensure that Europe will remain a leading region in science and innovation.

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