

Staying in Germany after the doctorate. Regional and sectoral mobilities and career outcomes of Foreign Postdocs.

Otto Anne ^{1*}, Johannes Koenig ^{1,2*}

¹ University of Kassel, INCHER and Institute of Economics, Kassel, Germany

² IAB Institute for Employment Research, Saarbruecken, Germany

* Corresponding author (e-mail: anne.otto@iab.de)

Introduction

In recent decades, the higher education system of most OECD countries is characterized by a dynamic increase in the number of foreign PhD students being among the highest qualified workers. In times of a shortage of highly qualified talent, retaining doctoral graduates in the university region is very important in order to generate returns on public investment in education (Geissler/Koenig 2021), and to benefit for innovative activity (Hunt, Gauthier-Loiselle, 2010) and for economic activity (Ackers 2005). While there is a great literature on skilled international migration, studies on labour market outcomes of foreign Postdocs in destination countries are rather scarce (Tani, 2022). Hence, this leaves unresolved the issue for national economic and innovation policies in how successful foreign scientists are on the labour market and in which segments of the labour market benefit most. The aim of this study is to shed light on the group of stayers - Postdocs who continue their careers in the destination country. We compare the regional and sectoral mobilities of foreign and non-foreign Postdocs in Germany and discrepancies in their career outcomes during the early career phase.

IIPED-Data, Sample and Methods

First, we explore the stay rates of foreign and non-foreign Postdocs in the granting university region when they secure the first position after the doctorate. Second, we compare the sectoral mobilities and career outcomes of both Postdoc groups during the early career phase (up to three years after the doctorate). The focus is on career pathways in the academic and private sector and a set of labour market outcomes is studied such as fixed-term contracts, salaries, working time, management position and educational job matching. This enables us to detect whether there are considerable discrepancies between foreign and non-foreign Postdocs when transitioning into the labour market after graduation and whether initial differences diminish over time. In a third step, regression analyses are conducted to analyse to what extent these sectoral differences in employment outcomes are marked by variation across disciplines and early-career research productivity. We resort to the IAB-INCHER-Panel database of Earned Graduates (IIPED) for Germany which enables us to trace postdocs' individual employment biographies before, during and after the doctorate (Heinisch et al. 2020). The sample consists of 75,500 German and 10,500 foreign PhD graduates in Germany (cohorts 2005-2019), aged 20 to 45 years, and includes only individuals who were employed at a university or non-university research institutions in the year before graduation. The IIPED database provides information on the nationality, and the granting university in Germany, but not whether PhD students migrated from abroad. This can be approximated with the first reported episode on the employment status in the IIPED data, as this data base comprises employment biography information on a daily basis.

Empirical Results

We find that a high percentage of foreign doctoral graduates presumably migrates to Germany for the doctorate. In the sample, 45 % of foreign doctoral graduates have their first employment status reported in IIPED data one to four years before graduation (Germans: 5 %). the majority of these

foreign graduates do not stay on the German labour market and return home or move to other countries. Yet, foreign graduates having the first entry in the IIPED data more than four years before the doctorate are more likely to continue their careers in Germany.

Foreign graduates exhibit higher stay rates in the university region than their German peers when transitioning into the first position after graduation. However, this initial difference between the two groups diminishes during the early career phase. For As many foreign students the transition phase into the labour market takes obviously longer due to a lack of language skills, contacts to potential employers etc., so that they initially remain in the university region for longer.

Unlike German doctoral graduates, who are more likely to move into employment in the private sector, the probability of foreign peers is greater to continue a career in academia, especially if they exhibit a high early scientific productivity. In general, we observe only slight differences in labour market outcomes between both groups. This applies to the academic and private sector. Nevertheless, the regression analysis detects that foreign doctoral graduates show higher probabilities for less favourable career outcomes in both sectors, especially in management positions. Foreign graduates therefore tend to find themselves in a doubly unfavourable employment situation. They concentrate more on academia, which has less favourable working conditions than the private sector, and achieve somewhat less favourable labour market results than German graduates. When comparing the two groups, however, there is a lack of information on other educational qualifications and professional experience acquired in the country of origin before the doctorate. IIPED data also does not contain any information on whether the doctorate was successfully completed within the planned time frame or on individual preferences and personality traits.

Conclusions

Increasing importance of foreign doctoral graduates, but opportunities for the private sector to recruit additional highly qualified talent remain limited due to more pronounced retention in the university and academic system. These first results imply that labour market and political actors should aim to provide better opportunities to integrate foreign Postdocs into the labour market and to create contacts to potential employers. In this respect, early offer of career counselling for foreign doctoral candidates on job options and career prospects within and outside the academic sector could avoid information asymmetries. Moreover, it is recommendable to link the duration of residence permit not to project phases, but to the actual duration of the qualification phase. This enables more flexible transition phases for foreign Postdocs.

Literature

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