



# Funding Programmes for Internationally Mobile Postdocs: Impacts on Individuals, Institutions and Society. – An exploratory study.

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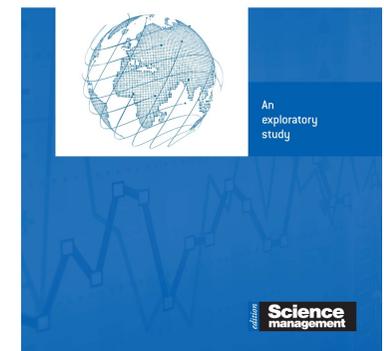
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*Funding Programmes and  
Initiatives for Internationally  
Mobile Postdocs*

Perceived Impacts on Individuals, Institutions and Society





## Reason for the study

The internationalisation of science is no longer a self-evident principle. Increasingly, there is a need to explain internationalisation. Purpose and goals need to be defined and explained more than ever before.

Quelle: Deutscher Bundestag / Parliament of the Federal Republic of Germany (2017). URL: <https://www.bundestag.de/dokumente/textarchiv/2017/kw13-pa-bildung-498400>

Internationalization has been presented as a universal good, as if to create a cross-border, cross-cultural or global connection is to automatically trigger a flow of all-around benefits (...). The claim is made often enough about benefits to the common good (...) but the claim has mostly been couched in very general terms.

Source: Simon Marginson (2019)



# Study design

## Two foundations

- Volkswagen Foundation (VWS)
- Alexander von Humboldt Foundation (AvH)

## Three programme modes

- Incoming
- Outgoing
- Capacity-building

## Two target groups

- Fellows (alumnae / alumni)
- Hosts

## Levels of analysis

- Individual
- Working group
- Institutional – university and non-university research institutions (host and return)
- Societal – a) research system and b) societal life (politics, economy and culture), in Germany as well as in developing countries



## Research methodology: methods and tools

- Analysis of initiatives' / programmes' documentation and reconstruction of intervention logics for the respective funding programmes / initiatives,
- Literature research on selected topics (such as research team diversity and productivity, migrant scientists and international networks, career tracking of international postdocs, return migration),
- Two-stage online surveys of fellows / alumnae and alumni on impacts of funding and on their career paths,
- An online survey of hosts of incoming fellows at German universities and research institutions (only AvH),
- A bibliometric analysis, i.e. mapping of citing authors' institutional affiliations before and after funding (sample).



## Research methodology: methods and tools

- Neither an evaluation nor a comparison of the programmes or the foundations was intended.
- The aim of this study was to explore the broad range of impacts that a) postdoctoral researchers experienced due to individual funding for international long-term mobility they received, and b) the postdocs and their hosts perceived that the fellows' funding has had on the working group, institutions and society.



## Examples of most often perceived impacts on ...

### **Fellow himself / herself**

I advanced my career in research.

The research stay meant a lot for my personal development.

I increased my visibility in international research.

### **Working group**

(PhD) students in the working group benefited from my advice.

My cooperation with the working group (members of it) lasts until today.

I introduced new techniques, methods, or theories to the working group.

### **Host institution**

I helped improve the institution`s publication performance.

The institution benefited from a continued collaboration with me.

I taught or advised (PhD) students at the institution.



## Most often perceived impacts on ... (continued)

### Research system in Germany

I maintained my contact with Germany.

The research project strengthened international research networks in Germany.

The research project increased the international visibility of research conducted in Germany.

### Societal life in Germany (such as culture, politics, or economics)

I conveyed my favourable impressions of Germany to friends, colleagues or family.

I encouraged young researchers in my home country to learn German.

I continued to pay taxes and social insurance in Germany because I stayed or returned there.



## International visibility (in-depth analysis): mapping of citing authors' institutional affiliations

- Measuring the development of the international visibility of postdoctoral fellows over time by *citing authors' institutional affiliations*
- Selected researcher: Africa, VWS senior fellow, Natural Resources “Neglected Communicable Tropical Diseases and Related Public Health Research”, funded between 2008 and 2011
- Publication search: authorised publication list (when applied) and SCOPUS-ID (2007-8/2019) ->103 publications
- Data base: addresses of correspondence authors, who cited the publications of the selected researcher (letter, review, article)
- Data cleaning: overall 2,303 citations (SCOPUS) of all document types, 2,088 citations with affiliations, for ~95% of the citations the locations could be identified (geo coordinates)
- 2 Figures: 1. Citing authors' institutional affiliations for all citing publications until 2008  
2. Citing authors' institutional affiliations for all citing publications from 2012 until 8/2019
- The bibliometric analyses showed that a strong or a very strong increase in the number of citing institutions, as well as global and local expansion of citing authors' institutional affiliations were found.



## Mapping of citing authors' institutional affiliations for a selected VWS fellow

Institutional affiliation of authors who cited publications of the VWS fellow that he or she had published up to the beginning of the funding.





## Mapping of citing authors' institutional affiliations for a selected VWS fellow

Institutional affiliation of authors who cited publications of the VWS fellow that he or she had published from the end of the fellowship until 2019





## General observations at the different levels of analysis

- **The majority of impacts** were reported **at the individual level**. As the levels become more distant from the fellow (the working group, the institution, the research system, society), a decreasing tendency to report impacts was observed. The fellows in the capacity building mode were more likely to report on the societal impact than the fellows in the other modes (and this is more the case for the VWS than the AvH).
- Some impact items were **reported only seldom or not at all** by the fellows. They have either **socio-economic** (industrial outreach, establishing a start-up or spin-off company, collaborations between research and the private sector, generating jobs in the private sector, improved products or processes) or **socio-political** (influence on national policy-making, founding of an NGO, science policy discussions) character.
- Another group of least reported **impact items** were the **negative ones** (e. g. finding a job after the end of the fellowship).



## First strategic question: Improving the design of funding programmes?

At what levels does the foundation want to pursue objectives within a funding programme?

Should the focus be just on the individual level, arguing that the individual funding is what is provided?

Or, should the focus remain on the individual level but spill-over effects (to the working group, institution and society) should be considered as well?

Or, does the foundation want explicitly to pursue goals at the individual, working group, institutional and societal level (i.e. research system and other aspects of societal life)?

Concrete proposals:

- Design of intervention logics (ILs) for each funding programme.
- Operationalisation of the ILs (indicators, target values, monitoring).
- Quasi-experiments and modern data technology (e.g. propensity score matching), should be used to establish a causal relationship between funding and observed effects.



## Second strategic question: Analysis of socio-economic impacts?

The fellows reported **socio-economic impacts** rather rarely. To learn more about socio-economic impacts of the funding initiatives for internationally mobile postdocs, one could, for example, analyse the **Integrated Employment Biographies (IEB)** of the Institute for Employment Research (IAB). With the help of IEB, it is possible to trace employment biographies of employees subject to social security contributions – consisting of periods of employment, periods of unemployment, periods of job search, and participation in active labour market programmes.

Examples for research questions:

- How long would former fellowship holders from abroad have to work in Germany until all costs incurred by the fellowship are amortized?
- How do the employment histories of former outgoing fellows compare to internationally non-mobile postdocs in Germany?



## Third strategic question: internationalisation@home?

Only 10 to 20 percent of the incoming fellows said that they helped internationalise teaching at the host institution in Germany (e.g. organised a journal club, study group).

Less than 50 per cent reported that they contributed to the internationalisation of teaching at German universities.

- Should internationally mobile postdocs coming to Germany for a longer research stay be more involved in the internationalisation of (research-based) teaching @ home?



## Cited references

Deutscher Bundestag (2017). URL: <https://www.bundestag.de/dokumente/textarchiv/2017/kw13-pa-bildung-498400>

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