



EUROPE

International mobility of researchers

Supplementary report:
Perspectives from industry

Becky Ioppolo, Catherine A. Lichten, Susan Guthrie

For more information on this publication, visit www.rand.org/t/RR2186

Published by the RAND Corporation, Santa Monica, Calif., and Cambridge, UK

© Copyright 2017 RAND Corporation

RAND® is a registered trademark.

RAND Europe is a not-for-profit organisation whose mission is to help improve policy and decisionmaking through research and analysis. RAND's publications do not necessarily reflect the opinions of its research clients and sponsors.

Limited Print and Electronic Distribution Rights

This document and trademark(s) contained herein are protected by law. This representation of RAND intellectual property is provided for noncommercial use only. Unauthorized posting of this publication online is prohibited. Permission is given to duplicate this document for personal use only, as long as it is unaltered and complete. Permission is required from RAND to reproduce, or reuse in another form, any of its research documents for commercial use. For information on reprint and linking permissions, please visit www.rand.org/pubs/permissions.

Support RAND

Make a tax-deductible charitable contribution at
www.rand.org/giving/contribute

www.rand.org

www.rand.org/randeuropa

Preface

RAND Europe was commissioned by the Royal Society to investigate the international mobility of researchers in academia and industry. This report summarises the findings of a roundtable and a series of interviews with industry representatives on this topic, aiming to address gaps in the evidence relating to the mobility of researchers in industry settings.

The report is likely to be of relevance to policy makers, professional bodies, research-intensive companies and the research community more widely.

RAND Europe is a not-for-profit policy research organisation which aims to improve policy and decision making through research and analysis. For more information on this report or RAND Europe more widely, please contact Dr Susan Guthrie.

Dr Susan Guthrie

RAND Europe

Westbrook Centre

Milton Road

Cambridge

CB4 1YG

Tel: 01223 353329

Email: sguthrie@rand.org

Acknowledgements

We would like to thank the following participants for speaking to us on this topic:

- Dr Sheuli Porkess, Head of Medical Affairs, Association of the British Pharmaceutical Industry (ABPI)
- Ned Wakeman, Director, BioHub/BioCity
- Dr Martin Turner, Policy and Projects Manager, BioIndustry Association
- Fraser Burton, Head of University Partnerships, BT
- Kate Hilyard, Corporate Vice President of Global Discovery, Charles River Laboratories
- Bhavina Bharkhada, Education and Skills Policy Adviser, EEF, the manufacturers' association
- Suzanne Lovell, Head of HR, Heptares Therapeutics
- Seamus Nevin, Head of Employment and Skills Policy, Institute of Directors
- Dr Kim Nilsson, CEO, Pivigo
- Kate Barnard, Engineering Programme Manager – University Research, Rolls Royce
- Mark Jefferies, Chief of University Research Liaison, Rolls Royce
- David Doe, VP HR: Innovation, Research & Development, Shell Global Solutions International B.V.
- Maria Palmieri, Government Relations Lead, Tech City UK
- Dr Kenji Takeda, Director, Microsoft Azure for Research

We would also like to thank Sophie Bennett and Eleanor Beal at the Royal Society for their contributions to this work, and Dr Molly Morgan Jones and Dr Salil Gunashekar for their helpful review of this document.

Table of contents

| | |
|--|------------|
| Preface | i |
| Acknowledgements | ii |
| Table of contents | iii |
| 1. Introduction | 5 |
| 1.1. Background and context..... | 5 |
| 1.2. Aims and approach..... | 5 |
| 2. Findings | 7 |
| 2.1. Patterns of international researcher mobility in industry | 7 |
| 2.2. Drivers of and barriers to international mobility..... | 8 |
| 2.3. Implications of Brexit..... | 13 |
| 2.4. Lessons learned gathering information from industry | 16 |
| 3. Conclusions | 19 |

1. Introduction

1.1. Background and context

RAND Europe was commissioned by the Royal Society to investigate the international mobility of researchers, with a particular focus on the UK. The aim of the work was to better understand the patterns of mobility, drivers of and barriers to mobility, and the benefits and consequences of researcher mobility in academia and industry. In the initial phase of the work, we conducted a review of the existing literature¹ and a survey of researchers currently based in the UK,² addressing some of the gaps identified in the existing evidence. Based on this work we were able to establish a range of conclusions around the mobility of researchers in academia. However, we found little in the literature that pertained to industry researchers' mobility, and our attempted survey of research-intensive companies received an extremely low response rate. In order to address this important gap in knowledge, we conducted a roundtable and a series of interviews with industry representatives. This report summarises the viewpoints captured and the key issues and discussion points raised by those respondents.

1.2. Aims and approach

The aim of this study was to establish a better understanding of the mobility of researchers in industry and the issues around that mobility, with a particular focus on the UK context. We aimed to address four main questions:

1. What are the patterns of researcher mobility in industry?
2. What are the drivers of and barriers to mobility in industry?
3. How are companies preparing (if at all) for the UK's forthcoming departure from the EU?
4. How can we better engage with industry to capture information on their research workforce in the future?

To address these questions, we held a half-day roundtable with a number of representatives from industry. This was followed by a series of interviews to capture additional viewpoints from those who were unable

¹ Guthrie, Susan, Catherine Lichten, Jennie Corbett & Steven Wooding. 2017. International mobility of researchers: A review of the literature. RR-1991/1-RS. Santa Monica, CA: RAND Corporation.

² Guthrie, Susan, Catherine Lichten, Emma Harte, Sarah Parks & Steven Wooding. 2017. 'International mobility of researchers: A survey of researchers in the UK'. RAND Report RR-1991- RS. Santa Monica, CA: RAND Corporation.

to attend the roundtable session. Overall we received input from 16 respondents from 15 different organisations spanning a number of different research-intensive companies and sectors. A full list of contributors is provided in the acknowledgements section above. As such, in this report ‘industry’ is understood to focus primarily on research-intensive companies across sectors with at least some operations in the UK. This covers a range of company sizes from start-ups through small and medium-sized enterprises to large multinationals. The remainder of this report sets out a summary of the information provided by these contributors, taking each of the four key questions set out above in turn.

2. Findings

2.1. Patterns of international researcher mobility in industry

In this section we explore the patterns of mobility among industry researchers moving to and from the UK. In particular, we consider the extent to which data are available, at a company level and at a more aggregated level, on the number of research staff from outside the UK (and EU).

2.1.1. *What proportion of industry researchers in the UK are from overseas?*

One objective of our research was to gather some data about the international diversity of the research workforce in industry. This information was difficult to gather for a number of reasons which are described in more detail below, including:

- **Companies do not use a common definition of ‘researcher’:** Employee lexicon and staff titles vary widely between companies, even those within the same sector.³ Within a single company, the line between who is and is not a researcher can be blurry as there are different phases of research in a company’s R&D division.
- **Companies do not always track the nationality of their staff:** Respondents could only provide ballpark estimates of the proportion of staff from outside the UK. In aggregate these estimates ranged between 10 and 50 per cent. Other comments on estimating the proportion of international staff were more anecdotal. For example, one respondent mentioned the number of different languages heard when walking through their office’s corridors.⁴ Respondents also agreed that the proportion of international staff increases significantly in and around London.⁵ Even companies that keep track of international staff do not always make the distinction between those who are EU nationals since they already have a right to work in the UK.
- **Some companies use researchers at partner organisations, such as universities, rather than relying on in-house staff:** While these researchers conduct research for companies, they remain affiliated with their university, and therefore the companies they collaborate with do not keep track of demographic information on these researchers.

³ INT03

⁴ INT01

⁵ INT02; INT03

*[Defining a researcher] is probably the most difficult question. It varies significantly by industry. Generally it would be someone who has highly technical skills... The idea is that they have specialised knowledge in whatever they are doing.*⁶

*This is just not a statistic people track... it's not a field in our database.*⁷

Evidence from industry about levels of overseas staff involved in industry research in the UK – and hence the consequences of limitations on international mobility of staff – could be useful for informing the government about the importance of mobility across sectors. However, though some individual companies might be able to provide some information on the level of international staff within that particular company, many will not. Even if data were available, it is likely that gathering such data in a consistent manner suitable for aggregation would be very challenging.

2.1.2. Summary

- While respondents recognised that data on non-UK staff may be useful for demonstrating the role that these staff play in UK industry, most companies do not have these data readily available. Case studies and anecdotal evidence would be much easier to provide.
- There was general agreement that companies' conceptions of what constitutes a research role vary widely, complicating efforts to obtain and aggregate data on this population.
- The data that are available indicate that there is a sizeable minority of research staff in the UK who have overseas nationality, which varies between sectors and companies but is typically in the range of 10 to 50 per cent.
- All companies and sectors consulted see themselves as operating in an international business environment and benefiting significantly from the ability to recruit highly skilled staff from other countries.

2.2. Drivers of and barriers to international mobility

In this section we explore the drivers of and barriers to mobility between the UK and other countries. In particular, we look at the process of international recruitment, and why and where companies look overseas for research staff. We also explore the importance of mobility as part of the career pathway in industry, reflecting on the finding from the study of academic researchers that respondents felt that good researchers are 'expected' to be mobile. Finally, we explore whether the UK is an attractive place for researchers to come (or stay) and work in industry.

2.2.1. What does international recruitment look like?

Despite a significant presence of international staff, most industry representatives did not indicate that they do much, if any, active international recruitment. Some respondents (particularly from smaller

⁶ INT03

⁷ Roundtable participant

companies) noted that they only recruit applicants who already have the right to work in the UK, meaning those from the UK and EU. These companies do not have a license to sponsor applicants for visas and therefore do not consider applications from non-EEA applicants.⁸ However, most industry representatives reported that international candidates apply to job vacancies and usually have higher salary expectations than candidates from the UK.⁹ One interviewee noted that headhunting is used more in industry than in academia, and that can often lead recruiters to international candidates with particular areas of expertise.¹⁰ Furthermore, particularly in niche fields, recruiters may be looking for candidates who have taken specific courses at a small set of universities in Europe or around the world.¹¹ A company might also look for a candidate from a specific country for commercial reasons – for example, to set up an office in a new country – rather than for their research expertise.¹²

There are certain methods used by some companies that have helped them bring in international staff. One interviewee said that the majority of the company's overseas recruits come from contacts made at UK universities and European collaborations.¹³ International interns or apprentices are easier to bring on board if the company's headquarters are in another country. This is applicable to UK companies sending interns and apprentices overseas and to international companies sending their local interns and apprentices to the UK.

It should also be noted that many of the companies recruit staff from UK universities which, as noted in previous work, have a highly international workforce. Many of the non-UK nationals who are currently working in industry research in the UK may have previously worked and/or studied in UK universities, rather than coming to the UK specifically to work in that company. For example, one respondent noted that part of the reason why they base research operations in the UK is to recruit global talent from top UK universities. They draw on UK universities as a means to accessing the best researchers internationally without having to recruit directly across many countries, and also to establish relationships with them as useful collaborators, without the academics needing to be on the company payroll.¹⁴

*The location of R&D locations is highly influenced by proximity to talent, so usually where major universities or hubs of expertise are located.*¹⁵

2.2.2. *Is there an expectation for research staff to be internationally mobile?*

One of the findings from the previous work focusing on academic researchers was that academics feel they need to be internationally mobile in order to be considered good researchers. That view was not shared by

⁸ Roundtable participants

⁹ INT02

¹⁰ INT05

¹¹ INT07

¹² INT05

¹³ INT04

¹⁴ INT08

¹⁵ INT12

those industry representatives who participated in this study, but there were some cases where mobility and international experience might be valuable. As one roundtable participant noted, most industry researchers are on permanent contracts, whereas most postdoc positions are for a set period. These shorter contracts may be part of the reason why international mobility is common in academia. One interviewee mentioned how many researchers leave academia and take up posts in industry specifically because they want to be more settled and not be expected to move around so often.¹⁶

Overall, industry representatives spoke positively about the value of having international staff. One interviewee explained how a company can suffer from groupthink if it does not bring in international staff; diversity is seen as a critical characteristic of successful businesses.¹⁷ While international experience is not an expectation, hiring managers may look favourably on candidates with international experience as it shows initiative and exposure to a range of topics and contexts.¹⁸ However, more important is evidence of a mix of academic and industry research experience. One respondent at the roundtable noted that those who could only offer an academic track record would likely be less attractive to employ, and that evidence such as industry sponsorship at the PhD or postdoc level could be a useful indicator of an individual who might be appropriate for them to hire.¹⁹ This type of mobility between industry and academia, as well as wider skill sets, may be more important than international mobility in many hiring decisions.²⁰ One respondent noted that companies may want to be able to move people around and therefore in some cases they may feel more comfortable recruiting someone who would be open to taking up a post internationally in the future. This can feel less like a risk if a company recruits a non-UK national who is already studying at a UK university.²¹

For the pharmaceutical industry, a strong understanding of international contexts is seen as being particularly important because drug development is a global endeavour. Among recruiters in research-intensive companies, there is definitely an expectation for staff to be mobile within the EU.²² Many start-up companies have ambitions to grow a business with a footprint in multiple countries. In support of this goal, there can be an expectation for staff to be internationally mobile, or at least familiar with those different international contexts.²³ Some companies actively recruit internationally for research leaders, but not for junior and mid-level research staff. Similarly, there is an expectation that research leaders will have international work experience, whereas this expectation does not hold for research staff in non-leadership roles. Moreover, the expectation for staff to have international experience can become greater for younger staff that are eager to learn and clearly have leadership potential. In some sectors, these individuals' leadership skills are developed through relocating for a period to another country.

¹⁶ INT06

¹⁷ INT01

¹⁸ INT04; INT05; INT07

¹⁹ INT04

²⁰ Roundtable participants

²¹ INT04

²² INT02; INT04

²³ INT02

Recruits from other countries can also be targeted by the pharmaceutical industry for their experience of that country's regulatory system.²⁴ If the company wants to break into that new market they may actively recruit individuals with high-calibre research skills who understand how that country's regulatory system operates and have relevant contacts within the system that would help support the company's move into that market.

*We would like to move talented people around wherever, whenever. If they need visas, fine.*²⁵

*As business is outcome focussed, people move to where their talent can be most impactful and where they want to go.*²⁶

2.2.3. Is the UK an attractive destination for research staff?

The UK is seen as an attractive destination in part because it has good living standards and is English-speaking.²⁷ There are many world-class universities that add to the attraction of being able to do research in the UK.²⁸ The UK is also seen as a destination where researchers can find a job and grow their careers.²⁹ The promise of good general career opportunities in the UK is also a motivating factor for researchers with a partner who is also looking for a new job, making an international move more palatable for the whole family. Related to the use of the English language in the UK, interviewees spoke about the UK's early uptake of innovations in the US that are slower to be adopted in other parts of Europe.³⁰ In addition, the UK was perceived to be the gateway to Europe for global recruits. As the UK is an English-speaking nation, it becomes much easier to 'land' in the UK and then travel around the continent for business or leisure. This geographic proximity to Europe is seen as an attractive feature.

*People invest in talent, really, so if the talent isn't there, the investment dries up. ... That's why they come to London and the UK more widely.*³¹

*For non-UK staff, coming to the UK can be an attractive opportunity for a 2–3 year stint.*³²

There are, however, barriers to recruiting from overseas. For example, UK immigration and visa policies are perceived to deter international recruitment rather than encourage or facilitate it, especially for small and medium-sized enterprises.³³ There were other concerns raised about the different challenges small and

²⁴ Roundtable participants

²⁵ INT01

²⁶ INT12

²⁷ INT01; INT05; INT06

²⁸ INT01; INT04; INT05

²⁹ INT02; INT06

³⁰ INT05; INT06

³¹ INT02

³² Roundtable participant

³³ INT03

medium-sized enterprises face in recruiting international researchers. In larger companies, HR can be reluctant to go through the extra hassle of recruiting someone from overseas and filing the visa paperwork, but they do it often.³⁴ There are also financial concerns that can create differences in practice between smaller and larger companies. Companies may provide sums of several thousand pounds in relocation support, but this is not necessarily common practice, and it is easier for larger companies to provide than smaller companies. While these barriers to attracting workers to the UK have existed for the last several years, respondents noted anecdotally that they have received fewer applications from EU candidates since the EU referendum. If there were to be concerns about barriers to international talent becoming insurmountable, relocating overseas as a strategy for mitigating those barriers would only be an option for larger companies.

*[Moving overseas is] easier said than done. Larger companies could move parts of their operation abroad.... [but] lots are SMEs. If they are family-run businesses, it's hard to shut the doors and leave. There's maybe a time-lag issue in that once we know what kind of deal we've got, if it proves really difficult, then we might see companies leaving.*³⁵

Participants saw the issue of retention as more important than recruitment, though the effort expended on recruitment often exceeds that placed on retention. The cost of living, buying a house, and starting a family is relatively expensive in the UK. Roundtable participants mentioned instances of losing staff because costs were too high to settle in the UK permanently.³⁶ Some international recruits may find it more feasible to stay permanently, but if business or legal circumstances require that the move can only be temporary, it is possible the candidate may not come to the UK at all. For international staff from certain countries, the currency exchange issue has also been seen to be a problem for the last five years.³⁷

There was some disagreement between representatives from different industries about how competitive UK salaries are. One respondent said some staff would need to take a 50 per cent cut in salary compared to similar positions held in other European cities. Another held that salaries in the UK are competitive compared to Europe but not to the United States, particularly for management-level positions.³⁸ One interviewee spoke about the importance of hiring younger staff or recent graduates for these reasons and training them in the skills they need for more senior posts over time, but sometimes – particularly in small businesses – this is not possible and posts remain unfilled.³⁹

³⁴ INT04; INT06

³⁵ INT03

³⁶ INT02

³⁷ Roundtable participants

³⁸ INT05

³⁹ INT03

2.2.4. Summary

- Drivers and barriers for staff to move to the UK were generally seen as similar to the findings for academic researchers, with the quality and vibrancy of research in the UK trading off against factors such as the salary available and the cost of living, as well as other practical concerns such as finding suitable employment for a partner.
- Industry staff generally saw experience of international mobility as more important for managers than research staff, though the ability to move both types of staff across borders to offices and sites within a company (e.g. for intra-company collaboration) was seen as useful for international companies.
- Visas were seen as a barrier that larger companies are better equipped to overcome than smaller companies.

2.3. Implications of Brexit

The outcome of the UK's referendum on EU membership in 2016 was one of the drivers behind this research, and the Royal Society was interested in understanding industry reflections on international researcher mobility in the context of the UK's forthcoming withdrawal from the EU.

2.3.1. The challenge of uncertainty

With Brexit negotiations ongoing, a number of participants said that it is too early to know how business practices, including recruitment, will change.⁴⁰ One interviewee suggested that larger organisations may be more advanced in their preparations for changes in the availability of talent, while smaller organisations can only reassure employees that they will do everything they can to keep them.⁴¹ Despite this uncertainty, most participants expressed concerns around the potential impacts of any limitations on mobility to and from the EU for their research staff and in recruitment. A number of participants mentioned that they have noticed a decline in the number of European applicants for job vacancies since the referendum.⁴² Some also noted that the uncertainty around Brexit may be leading to misconceptions around the potential implications of any changes to immigration rules, and that as such companies and representative/trade bodies need to be up to speed on developments in order to inform their staff or members and reassure them as Brexit negotiations develop.⁴³

I would love to say to my employees that I will commit to them, but I have no idea what the [immigration] rules are going to be.⁴⁴

⁴⁰ INT02; INT03; INT04; INT07

⁴¹ INT05

⁴² Roundtable participant; INT07

⁴³ Roundtable participants

⁴⁴ Roundtable participant

2.3.2. Strategies for accessing talent

Overall, companies are most concerned with ensuring that they have the right people for the job, whether from the UK or overseas. Patterns of international recruitment may change in the context of Brexit. For industry employers, development of the domestic talent pool is also relevant to efforts to access the right skills.

There was a shared concern among roundtable participants and interviewees that the next generation of talent may be easier to find outside the UK, which is why international recruitment is important to a number of industry sectors.⁴⁵ This talent could be in a certain skill area (e.g. informatics) or topic area (e.g. a particular disease). Some companies are trying to build relationships with universities to access relevant skills and expertise, but this is considered a long-term strategy.⁴⁶ Similarly, as one participant noted, international recruitment is also relevant for university lecturers: students need to be learning appropriate skills from the most qualified educators, and the best lecturers often come from overseas.⁴⁷

One interviewee suspected that there will be an increase in recruitment from outside the EU as a result of the final Brexit agreement.⁴⁸ Alternatively, some suggested that the UK education system could be more focused on creating the talent needed for UK industry.⁴⁹ For example, one respondent noted that their company was supporting a scheme to help support the employability and career development of UK postgraduate researchers by clearly articulating and addressing the challenges in employing researchers from academia into industry, for example through annual conferences around the topic with postgrads and PhD students. The idea of this programme is to grow the UK talent pool so that their supply of research staff is more certain. There is always a significant trade-off for industry recruiters between hiring the best candidate from anywhere in the world versus a more local candidate who has adequate skills and is more affordable. Different contexts call for different recruitment strategies.⁵⁰

There is also an issue [in the UK] that the education system isn't helping – there aren't enough people studying STEM subjects, let alone [enough people already] qualified in these areas.⁵¹

There is a value to hiring staff locally because they are more likely to be satisfied to stay in the post longer. There are natural risks with hiring international candidates and moving them out of their home environment. In industries where the average employee age is higher, restrictions on international recruitment will make it difficult for standard posts to be filled when current employees retire.⁵²

⁴⁵ INT02; INT03; INT04

⁴⁶ INT03

⁴⁷ INT03

⁴⁸ INT07

⁴⁹ INT03; INT04

⁵⁰ INT01

⁵¹ INT03

⁵² INT03

Some companies are also providing advice to their employees on their rights and situation in the context of Brexit, or hiring employment lawyers to help support retention. However, it was also recognised that providing advice is challenging at this stage, when the final terms of the Brexit agreement are not confirmed.⁵³

Several companies with an international presence noted that they had the option to strengthen their research operations overseas to compensate for challenges in recruitment and retention in the UK.⁵⁴ However, none of the respondents had made concrete plans to do so at this stage.

2.3.3. Concerns around the potential impact on academia

Many companies recognised the interdependence of academic and industry research in the UK, hence there were some concerns among industry respondents about the potential impact of Brexit on the academic research sector. The extent to which companies were concerned about the impact of Brexit on academia varied significantly between sectors and individual companies in our study. A lot of this variation depended on the extent to which the individual companies engaged with research. For example, one company conducted a lot of research through UK partner universities and so was more concerned about this than others.⁵⁵

One concern was the extent to which universities are able to access funding from sources such as Horizon 2020,^{56 57} with one respondent also noting that this could be detrimental to their own research programme if they are no longer eligible.⁵⁸ One interviewee felt that there was not too much concern on this front due to the expectation that the UK government will invest to cover the lost funding from European sources.⁵⁹

Other respondents expressed concerns about the extent to which UK academia could access international talent, both in terms of its implications for the quality of UK research and its international reputation, and perhaps more importantly as a route for UK companies to access the best international talent indirectly by recruiting from UK universities.⁶⁰

*It's a symbiotic relationship: if academia isn't doing well, industry suffers.*⁶¹

⁵³ Roundtable participant

⁵⁴ INT04; INT08

⁵⁵ INT04

⁵⁶ Horizon 2020 is the current round of European Commission research funding under their regular 'framework programmes' to support research across Europe. The programme supports large collaborative research projects across Europe and provides a significant amount of funding to UK universities.

⁵⁷ INT03; INT04

⁵⁸ INT04

⁵⁹ INT07

⁶⁰ INT08

⁶¹ INT05

Ultimately, as noted above, the quality of the UK research system as a whole is one of the factors that make the UK an attractive place to come and work as a researcher in industry. It is therefore important for industry as well as academia that the UK is able to maintain its reputation and quality as a research centre internationally.

2.3.4. Summary

- Access to talent is a crucial consideration for all the sectors and companies consulted; it drives recruitment decisions and could impact decisions about where companies choose to locate.
- The Brexit vote and related developments have highlighted concerns across companies and sectors about access to talent and risks for staff retention. Concerns about access to markets and EU funding for research were also mentioned by some participants.
- Concerns regarding the impact of Brexit on academia varied widely across companies and sectors in this analysis. Some companies are highly reliant on academic research and/or perceive that the UK's strong academic research system and reputation is important for drawing highly skilled staff in science or engineering fields to the country, who could then move into industry roles or collaborate with industry.
- Companies generally have not introduced measures to address these concerns, largely because there remains a lot of uncertainty about how their ability to recruit and retain EU staff will be affected by Brexit. However, there is anecdotal evidence that they have begun to feel some effects already, in the form of staff being less interested in UK jobs or looking for other opportunities.
- Some companies have introduced apprenticeship programmes and discussed the possibility of training UK staff for specialised roles, but building the domestic pipeline takes time and can be challenging since it relies on advance knowledge of what future skills will be needed. In fast-moving areas this may be unrealistic, which is why companies need to be able to quickly recruit people with specialised skills as their needs arise.

2.4. Lessons learned gathering information from industry

In this section we explore the best ways to access information on the mobility of industry researchers based on the suggestions made by respondents at the roundtable and through interviews.

The challenges we have experienced in collecting and aggregating data across companies are not new, nor are they unique. Participants in this study who work for industry representative bodies and associations often try to gather similar information from member companies and have used similar techniques to RAND Europe (survey, roundtable, and interviews), noting that they also struggle to get the information they need.⁶² While we did learn that more direct methods of information gathering, such as interviews and roundtable discussions, were more effective than a survey, there may be means of improving levels of

⁶² INT02

response and engagement. One respondent noted that to collect information of the nature needed for this study, a general manager may be more able to access the necessary data rather than someone in the Human Resources department.⁶³ The time of year the survey was conducted might also have presented challenges since spring/summer is salary review time so Human Resources staff are typically busy.⁶⁴ More generally, in terms of timing, it might be that at this stage companies do not feel that there is enough certainty around Brexit to participate or comment on possible implications.⁶⁵

Relationships with the individuals that are contacted are considered important. One respondent felt that using existing relationships may be the only way to access information,⁶⁶ while another suggested using influential individuals as advocates for the research may encourage others to participate.⁶⁷ This may put sector associations in a good position to collect the kinds of aggregate information needed for further studies in this area. One respondent suggested that there may be individuals within the Research Councils who act as industry liaisons and who could act as this broker, providing links to individuals who would be engaged with these issues and responsive.⁶⁸ Another respondent suggested scientific recruitment agencies as a useful route to relevant data,⁶⁹ and HMRC workforce data was also mentioned as a source.⁷⁰

As noted previously, ‘researcher’ is a term which is challenging to define for many companies, in contrast to academia where mandatory workforce reporting to HSEA provides clear definitions of ‘researchers’. Finding clearer, more specific terminology could help facilitate data collection. It might also be best to revise expectations about the extent to which quantitative information is likely to be available – unless new initiatives are taken up by individual companies or sector associations – and consider the value of more qualitative inputs such as, for example, anonymised case studies.

Another consideration is the incentives for industry participation. According to one respondent, industry representatives want to know ‘what’s in it for me’ when taking time to participate in a study.⁷¹ Clearly articulating the value of the final research ‘product’, whether it is meant to share best practice,⁷² or have an impact on government policy,⁷³ can help encourage participation. Demonstrating past success in influencing policy would be one way to facilitate participation.⁷⁴

⁶³ INT04

⁶⁴ Roundtable participant

⁶⁵ Roundtable participant

⁶⁶ INT01

⁶⁷ INT01

⁶⁸ INT04

⁶⁹ INT05

⁷⁰ INT05

⁷¹ INT03

⁷² INT03

⁷³ INT03

⁷⁴ Roundtable participant

Regarding the specific content of the research material, for surveys it was noted that asking as few questions as possible would improve response rates.⁷⁵ However, it was also suggested that telephone conversations may be preferable to an online survey because it provides more nuanced and specific detail,⁷⁶ though this has resource implications for both the organisations conducting the research and those participating in it.

2.4.1. Summary

- With regard to data on research staff, there was general agreement that companies' conceptions of what constitutes a research role vary widely, complicating efforts to obtain data on this population.
- In terms of engaging companies for future work, respondents emphasised the importance of demonstrating how the work could have tangible benefits for them and direct impact on policy decisions.
- Use of personal contacts and advocates to help access the right people to respond within each company was also considered important.

⁷⁵ INT05

⁷⁶ INT07

3. Conclusions

Overall, the evidence collected from this industry consultation suggests that comparable, standardised data on the levels of mobility among industry researchers is not readily available. Despite this, anecdotal evidence indicates that non-UK staff are important to research-intensive companies and likely make up a significant minority (in the region of 10 to 50 per cent) of the research workforce. Access to global talent is seen as important to UK businesses in allowing them to fill skill gaps in the UK labour market and draw on expertise in other markets where needed. Mobility also facilitates cross-national working in companies with operations across many countries. The UK is an attractive place to work because of the quality and vibrancy of research conducted here, but the cost of living is high relative to wages, and the practical challenges involved in mobility are also a barrier. Visas in particular are a barrier for smaller companies who often do not have a sponsorship license.

Uncertainty following the EU referendum has led to concerns across sectors and companies about their ability to recruit the best and retain existing international research staff. Concerns were also raised around access to markets and EU funding. Respondents reported that they are only beginning to think about new approaches to mitigate barriers to hiring international staff. However, some companies have started to develop their in-country training activities (e.g. through introducing apprenticeship programmes) to try and anticipate potential skill gaps, though this can be challenging in fast-moving fields. Anecdotally, some note that there have already been fewer EU applications for UK jobs.

Given that companies in the UK want to maintain ready access to a diverse pool of talented research staff, it will be important to continue to engage with and try to capture information on the patterns of mobility in industry and strategies that are developing into best practices. Based on the evidence collected here, this may need to be qualitative rather than quantitative in nature, at least in the interim. Strategies for engagement should focus on demonstrating the tangible benefits of participation for companies, and on drawing on personal networks and advocates to identify relevant, motivated individuals to provide input.