Doctoral Mobility in the Social Sciences

Social Sciences

Economics

Doctoral Mobility in the Social Sciences

Report to the NORFACE ERA-NET

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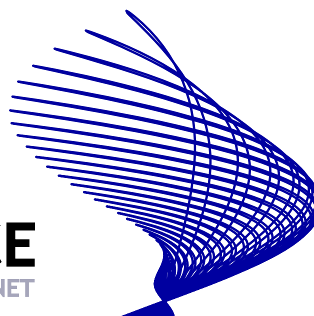

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Contents

Section 1 Introduction to the Study and Report 7

Section 2 Diverse Mobilities : Mobility Patterns 8
- 2.1 Introduction 8
- 2.2 Moving For a Doctorate 8
- 2.3 Mobility During the Doctorate 9
- 2.4 Mobility ‘outwith’ the Doctorate 10
- 2.5 Illustrative Flows 11
- 2.6 Summary 11

Section 3 Diverse Doctorates 14
- 3.1 Introduction 14
- 3.2 Individual Research 14
- 3.3 Doctoral Research and Employment: The Dominance of ‘Non-Linearity’ 15
- 3.4 ‘Part-Time’ Doctorates and Mobility 16
- 3.5 ‘Linked’ Doctorates 17
- 3.6 Portability of Funding to Complete Doctorates Abroad 17
- 3.7 Systems in Flux: The Changing Nature of Doctoral Studies 18
- 3.8 Joint and Multi-Site ‘International’ PhDs 18
- 3.9 Funding Short Stays 19
- 3.10 Summary 20

Section 4 Diverse Motivations 21
- 4.1 Introduction 21
- 4.2 Recruiting in Global Markets 21
- 4.3 Mobility and Supervision 22
- 4.4 Mobility and Networks 26
- 4.5 Time, Productivity and Mobility 27
  - 4.5.1 The Length of Doctoral Research 27
  - 4.5.2 Research Productivity 28
- 4.6 Discipline and Topic Specific Concerns 31
- 4.7 Language and Mobility 33
- 4.8 Choice or Constraint ? The ‘Expectation of Mobility’ 35
- 4.9 Mobility and Internationalisation 39
- 4.10 Summary 41

Section 5 ‘Diverse People’ 45
- 5.1 Introduction 45
- 5.2 Life-Course and Mobility 45
- 5.3 Financial Barriers 48
- 5.4 Summary 50

Section 6 Conclusions : Recognising and Valuing Diversity 51

References 52

List of Tables and Figures

Tables		
Table 1	Prior Mobility Experience in the Marie Curie Scheme by scientific panel	9
Table 2	Proportion of tertiary level students who are studying abroad from OECD countries of origin, in the UK, Germany and US in 2004	12
Table 3	Foreign students by field of study in selected OECD host countries, 1998	13
Table 4	International components in doctoral projects	32
Table 5	Perceptions of the Importance of international mobility to career progression by discipline	35
Table 6	Optimal Length of Doctoral Mobility Stays	36
Table 7	Tertiary Students' Ages in 2002/2003	45
Table 8	Average ages at entry to doctorates, by Country	46
Table 9	Marie Curie Fellows' plans for international mobility by age group	46
Figures		
Figure 1	Number of doctoral graduates in the EU25, by fields (1998-2004)	13
Figure 2	Impact of Mobility to Progress in Home Country on Return	36

Section 1 Introduction to the Study and the Report

Improving mobility at doctoral level is seen as an important building block in securing the long-term future of the European Research Area (ERA), and facilitating cross border research collaboration. NORFACE -***New Opportunities for Research Funding Cooperation in Europe***[1] -is a partnership of twelve research agencies in the social sciences in receipt of core funding from the European Commission's 6th Framework Programme, under ERA-NET. This report is a contribution to NORFACE Work Package 4, 'Building up research co-operation' and relates to the international mobility of researchers. The European Law and Policy Research Group (ELPRG) were contracted by NORFACE to undertake an overview of international doctoral mobility in the social sciences. The study considered the following areas:

- The policy context influencing mobility
- The supply and flows of social science doctoral researchers
- Funding issues relating to doctorates and mobility
- The benefits and challenges of mobility for participants and the social science community.

The contract for the review took place over a 4 month period and involved an online questionnaire for social science doctoral researchers in the NORFACE countries which achieved 548 responses[2]. This was complemented with in-depth, semi-structured, interviews with doctoral candidates (32) and supervisors (10) in four case study countries (the UK, Germany, Portugal and Norway). The interviews were concentrated in the disciplines of Sociology, Economics and Law. The report is structured as follows. The report opens with a description of the patterns of mobility identified in our sample population. The remainder of the report considers the factors influencing these patterns. It begins with an analysis of the structure of doctorates in different countries and contexts. This is followed by a discussion of the motivational factors shaping attitudes to different forms of mobility. In addition to 'positive' factors encouraging people to move in order to add value to their doctoral research experience, the section also draws attention to the dangers of institutionalising an 'expectation of mobility' in research careers both in terms of intrinsic value but also differential opportunity. Finally, the report identifies some examples of good practice where mobility appears to work particularly well.

[1] The NORFACE countries include Denmark, Estonia, Finland, Germany, Iceland, Ireland, Norway, Portugal, Slovenia, Sweden, The Netherlands and the UK.

[2] The survey was not issued to a representative sample (given that we didn't have a complete population to draw from and we had to adopt different methods e.g. targeting by institutions where NORFACE partners were unable to supply contact details) This means the sample was purposive and to a large extent selfselecting which may have elicited greater responses among doctoral candidates who were mobile or undertaking comparative research.

Section 2 'Diverse Mobilities': Mobility Patterns

2.1 Introduction

The tender issued by NORFACE did not specify the forms of mobility that it was primarily interested in but spoke more generally of the 'benefits and barriers to mobility' and ways of facilitating mobility. Our response to the Tender explained our reasons for taking a broad approach capable of capturing all forms of mobility, including short stays. We were keen to understand more about how different forms of mobility contribute to the quality of research and underpin the kind of 'research co-operation' and 'cross-border research collaboration' referred to in NORFACE Work Package 4 (under which this project was funded). On that basis, we were not primarily concerned with finding ways of promoting levels of mobility (as an end in itself) but rather with identifying effective forms of mobility and means of encouraging these. Just over a third (36%) of the NORFACE survey respondents reported having spent periods of at least 1 month working or studying abroad during their doctorates.[3] As might be expected those respondents who were at an early stage in their doctorate were less likely to have experienced mobility than those near to completion.

The diverse structures associated with doctoral research both within and between countries, coupled with marked diversity in the level and nature of funding inevitably generate different forms of mobility. Furthermore, the motivations for undertaking mobility shape the timing, duration and location of moves. The following section describes the kinds of mobility our sample of respondents were engaging in. It opens with a series of short, illustrative, case studies.

2.2 Moving For a Doctorate

Perhaps the most obvious form of doctoral mobility concerns those situations in which a researcher moves to another country in order to register for, reside in and complete a doctorate there. 15.9% of respondents in the NORFACE survey had moved abroad in order to register for and undertake the whole of their doctorate in the host country. Although the numbers are quite small, it is evident that moving abroad for the duration of the doctorate is more common in some countries than others. For example, only 2.8 per cent of UK respondents had moved in this way compared to 18 per cent of Estonian respondents. This might well reflect access to funding opportunities rather than 'choice' as such. In many cases, however, this apparently 'normal' model is adjusted to suit the circumstances:

Portuguese researcher registers for her doctorate in the UK with a UK-based supervisor but remains resident and employed in Portugal. Supervision works with visits both by supervisor and candidate and by development of joint projects (including supervisor's Marie Curie fellowship in the Portuguese institute). Subsequently extended supervision to include a Portuguese expert but this is not formally acknowledged in the UK.

Portuguese researcher moves to and registers for a doctorate in the UK on a full-time basis but undertakes extensive fieldwork in Portugal. No supervision or formal contact with a university in Portugal at that time.

Another respondent, a Canadian, had a very similar experience. She moved to the UK for her masters and registered there for her doctorate but then spent 8 months in Canada during her fieldwork. She also reported attendance at international conferences 'worldwide'.

In some cases researchers did not actually move in order to undertake their doctorate abroad but rather established a link and enthusiasm during a previous stay, often at undergraduate or Masters

[3] 421 respondents answered this question.

level. This process is often referred to as 'staying-on' and much previous research has established a strong tendency amongst foreign researchers to remain in the same host country (Ackers, 2001; Ackers, 2008; King and Ruiz Gelices, 2003).

Analysis of pre-doctoral mobility amongst Marie Curie funded doctoral researchers identified high levels of previous mobility (Van de Sande, Ackers and Gill, 2005). 52% of respondents in the survey of Marie Curie fellows reported periods of mobility of over 3 months' duration prior to their doctorate. Some disciplinary differences were also evident; social and human scientists and economists were most likely to have been abroad for three months or more prior to the fellowship:

Table 1 *Prior Mobility Experience in the Marie Curie Scheme by scientific panel*

	Percentage of 'Early Career' Marie Curie Fellows who had spent at least 3 months abroad prior to their Doctorate
Disciplinary Panel	
Chemistry	41%
Engineering	56%
Physics	45%
Maths / IT	56%
Life science	48%
Environment and Geo-sciences	60%
Social and Human Science	**64%**
Economics	**67%**

Source: Van de Sande et al, 2005

These figures are broadly similar to levels of mobility identified in other surveys (Jons, 2007). An earlier study of the representation of women in the Marie Curie scheme (including post-docs) found that 62% of respondents had previously lived abroad prior to their application to the scheme (Ackers, 2003).[4] There was evidence in the NORFACE sample of this retention of 'overseas' students who had studied undergraduate or taught postgraduate degrees abroad. 57% of survey respondents indicated that they had spent time abroad prior to their PhD (n=444). The subject of study also plays a role in mobility patterns and clear differences are distinguishable between disciplines. Only 27% of doctoral candidates in social policy had been abroad prior to their PhD, followed by psychology (29%). Disciplines were respondents had been most mobile before their doctoral studies were Political Science and Administration (64%) and Law (57%).

The cases below illustrate the pragmatic and strategic reasons why students might progress into doctoral studies at the same host institution. In some cases it is simply 'easier' and logical (opportunities arise);

I quickly realised that one year was a bit too short. It was a largely a matter of convenience. It was simple to just apply for a transfer from the Master degree to the PhD within the same university rather than filling out applications.

In others, it is more strategic as candidates identify and develop links with potential supervisors or an interest in their research:

I decided that I wanted to work in a specific area with a specific person and I applied here after my masters.

One supervisor felt quite strongly that, 'the best PhD students we have, all did Erasmus. That's in the database … they found this link between the students that got grants -the best students in Portuguese universities had a year abroad during their BA'.

2.3 Mobility During the Doctorate

The majority of the doctoral candidates in our sample 'chose' to register and reside in their home country and would be defending their thesis there

[4] A recent ESRC-funded study found that mobile Polish and Bulgarian doctoral and post-doctoral researchers were very likely to have spent time abroad during their undergraduate degree (Ackers, 2008).

(307 or 56% of the total)[5]. This does not imply that they were less mobile or 'international'. The degree and quality of mobility varied significantly depending on a range of factors (of both a professional and personal nature).

Norwegian registered in Norway spent 3 months in the UK during his Masters and 8 months in the US during his doctorate. He also attends international conferences on a regular basis.

In some cases researchers had little, if any, experience of mobility or contact with the wider international research community, even if their project had an international flavour.

Researcher working on European identity was registered in her home country and had not spent any time abroad. She was not able to attend any international conferences unless they took place in her home country. Her lack of mobility reflected her personal circumstances.

A number of UK-based researchers had also experienced no mobility at all at any stage of their education / academic career:

UK national did his first degree, Masters and doctorate in the UK. The only time he had spent abroad was during a 1 week training course.

In general those people who had registered their doctorate abroad were more likely to experience on-going mobility during their research. Just over 40% of those respondents who were registered abroad said they had spent a period of at least one month in another country during their PhD compared to 27% of those who were registered in their home country (Table 4, Appendix 2).

The following example illustrates the high level of on-going and varied mobility that some doctoral researchers engage in sometimes involving a range of locations:

This Chinese researcher did 2 Masters degrees, one in Norway and one in Sweden before commencing her doctorate in Norway. During her PhD she has attended international conferences (with visits of 2-4 days each time) in the UK; Switzerland, the Netherlands, Demark and China. She has also spent 2 months in Sydney, 6 weeks in Edinburgh and 12 weeks in London, New York and Washington D.C.

On the other hand, many people who register and live abroad for the duration of their doctorate (and therefore 'appear' very international) may exhibit relatively little if any on-going mobility during their doctoral research:

Portuguese researcher did her first degree with the UK Open University by distance learning then moved to the UK for her Masters and was encouraged by her supervisor to register for a doctorate afterwards but in a different institution. She has spent no time out of the UK for research purposes or conferences during the 4 years of her PhD.

Perhaps one of the most common 'models' identified concerned cases where the doctorate was registered in the home country and the researcher made a series of often quite short stays in another country – often connected with fieldwork or with supervision. The apparently common practice of co-supervision[6] in Portugal is a case in point:

Portuguese national resident and working in a Portuguese university. Co-supervised by UK-based expert who she sees on a regular basis for stays of 1 or 2 weeks at a time. Little other mobility.

2.4 Mobility 'outwith' the Doctorate

In some cases what might appear as a very low level of mobility and internationalisation connected to the doctoral project itself is nevertheless complemented with high levels of on-going mobility and research collaboration as part of their professional role.

Researcher is registered in home country and resides there and is not planning to spend any periods abroad, apart from conferences. However, prior to her PhD she worked as a research assistant on an EU-funded project and became full integrated in an international research team attending regular meetings in a range of locations. She maintains these research links.

[5] The remainder failed to provide an answer.

[6] Co-supervision is discussed in more detail in Section 3.8 and 4.3

In one case the person in question is the Director of a research organisation in the NGO sector and travels abroad to work with international teams on a regular (monthly) basis. In another example the respondent had an administrative role as an international officer in her home university and although she could spend little time abroad for her doctoral research (because of these work commitments) and had to select the most proximate foreign institution to register in, she travelled regularly to diverse European locations as part of her employment. Her PhD topic was also closely related to her employment.

2.5 Illustrative flows

As explained above there are multiple forms of mobility that feature in doctoral careers the downside of this variety being that moves and patterns are not reliably recorded (for further details see Ackers, 2008). The European Commission's consultation exercise (on the ERA) found a marked prevalence of short-stays amongst the respondents; although the majority (74.6%) had a 'mobility experience' nearly half of this group (45.3%) had spent less than 3 months abroad (European Commission, 2007b). These stays would not feature in mobility or labour force statistics. Rannveig concludes that, *'Neither census data nor migration data is suited to capturing the movements of many kinds of circulating migrants. Permanent settlement migration paradigm still defines most data collection systems'* (2007: 4). It is only possible, therefore, to provide some background data on students registering for a full degree abroad (or those on formal schemes such as ERASMUS) and even in this category there are evidence gaps.

The last thirty years have seen a massive growth in the number of students studying at tertiary level in a different country from 0.6 million worldwide in 1975 to 2.7 millions in 2004 (OECD, 2006: 286). Numerically, the US was the largest host of foreign students in 2004 (22 per cent), followed by the UK (11 per cent), Germany (10 per cent) and France (9 per cent) (OECD, 2006: 288). The number of students undertaking tertiary level studies in the EU continues to increase, and had reached around 895,000 in 2002, an increase of 19% from 1999 (Wilen, 2005: 1). Students studying in another EU country accounted for around half of all foreign students (Wilen, 2005: 1). The UK and Germany stand out as the two major EU host countries for students, *'The UK, with around 227 000, and Germany, with about 219 000, accounted for 25.4% and 24.5% respectively of all reported foreign students for the EU. In both of these countries, foreign students represented around 10% of all students at the tertiary level, slightly up compared to its 1999 level for Germany, but down for the UK.' (Wilen,* 2005:2.) However, these major 'host' countries are recruiting different pools of students, often influenced by geographic proximity (Table 2).

Turning our attention to disciplinary differences, (Figure 1) when looking at tertiary education as a whole, the field of 'social sciences, business and law' produces the most graduates in almost all NORFACE countries. However only in Portugal, does this category also produce the majority of doctoral graduates (Eurydice 2007:165). In the other countries studied the majority of doctoral graduates are to be found in the science, mathematics and computing disciplines (the UK, Ireland, Germany), or Health and Social welfare (Iceland, Estonia, Netherlands and Norway) or Engineering, manufacturing and construction (Denmark, Sweden and Finland).

Following the general trend the numbers of doctoral graduates increased in the social sciences, business and law between 1998-2004 by 28.8%, less than the increase of 34.5% in the humanities, but greater than the 11.4% rise in science, mathematics and computing (IPTS, 2007: 14)

Looking at OECD figures, it is apparent that the social sciences, are amongst the most popular fields for students to move abroad to study at doctoral level (Table 3):

2.6 Summary

- Respondents in the NORFACE survey and interviews displayed a variety of patterns of mobility. The patterns identified illustrate

the importance of understanding academic mobility as a 'process' rather than a one-time event (Ackers, 2008).

- Just under 16% of respondents had moved abroad for the duration of their doctorate. The majority (56%) were registered in and were primarily resident in their home country.
- Just over a third (36%) of both groups had spent episodes of a month or more abroad during their PhD. Researchers registered abroad were more likely to exhibit on-going mobility (40%) than those that remained at home (27%).
- Patterns of mobility were extremely diverse and many had not spent any time abroad at all in the course of their doctorate. However, quite a few had moved in connection with their professional employment and were actively 'international' in that sense, often in research roles.
- Just over half (57%) of respondents had spent some time abroad prior to their doctorate. In some cases they remained in the host country following their undergraduate or Masters degree. Some disciplinary differences emerged with 13 social policy and psychology students less likely to have experienced prior mobility compared to political science and law students.
- Patterns ranged from extended stays of 3 years or more for the duration of the doctorate, to medium term stays of several months or so to undertake fieldwork or spend time in host institutions through to quite short stays of maybe a week or so, either for fieldwork, supervision or to participate in events. In many cases respondents combined these diverse forms of mobility over the course of their doctorate.
- This section has described patterns. It is important not to imply any value to these; longer stays in themselves do not necessarily imply greater overall mobility or a higher level of international exposure and experience.

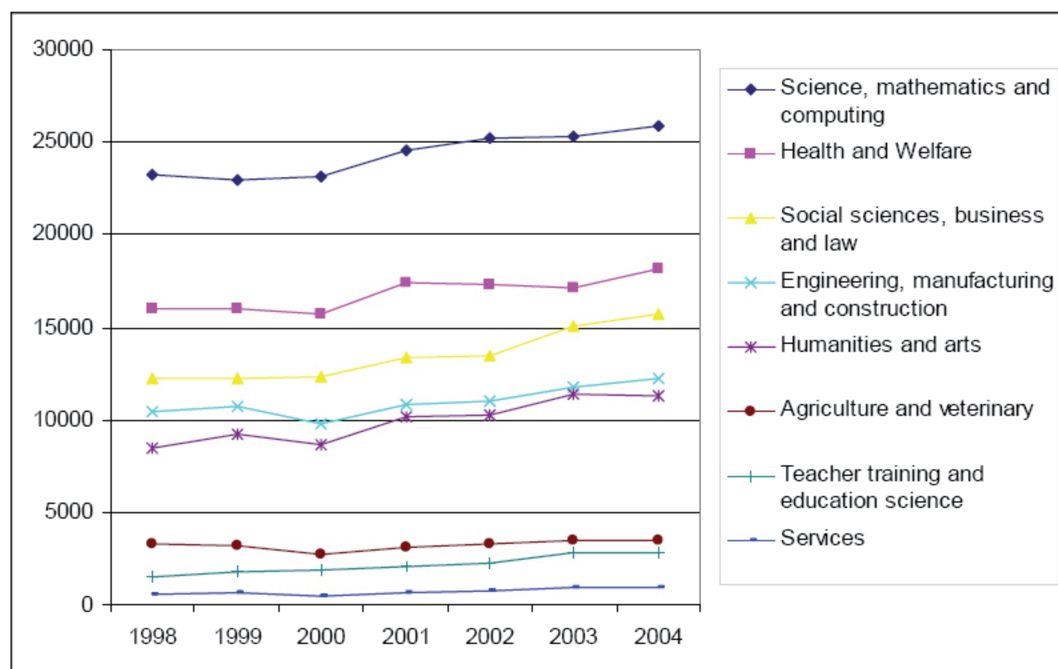
The following section goes on to identify some of the factors shaping the form that doctoral mobility takes.

Table 2: *Proportion of tertiary level students who are studying abroad from OECD countries of origin, in the UK, Germany and US in 2004*

Country of Origin	Country of destination		
	Germany	**UK**	**US**
Australia	3.5	16	28.9
Austria	5.6	10.6	7.3
Belgium	9.3	22.1	7.5
Canada	1.4	9.9	68.8
Czech Republic	35.1	5.1	14.9
Denmark	10.6	25.2	13.0
Finland	10.6	18.8	6.2
France	11.7	19.7	11.9
Germany	–	19.6	14
Greece	14.8	44.6	4.2
Hungary	38.5	4.6	12.4
Iceland	5.2	9.9	15.3
Ireland	2.7	82.5	5.7
Italy	18.1	11.6	7.4
Japan	4.1	10.4	66.5
Korea	5.6	3.5	53.5
Luxembourg	30.1	12.1	0.7
Mexico	4.0	8.1	54.4
Netherlands	15.3	20.1	12.3
New Zealand	1.0	8.3	14.6
Norway	5.1	23.5	9.5
Poland	50.6	3.2	9.6
Portugal	15.1	20.8	6.9
Slovak Republic	10.4	1.0	3.7
Spain	21.8	22.1	13.2
Sweden	6.0	24.3	22.4
Switzerland	21.0	14.2	15.1
Turkey	50.7	3.6	21
UK	8.4	–	32.8
US	7.3	28.7	–
Total from OECD countries	14.2	16.1	

(Source: selected destination countries from OECD, (2006) Education at a Glance 2006: 308-309)

Figure 1: *Number of doctoral graduates in the EU25, by fields (1998-2004)*



Source: IPTS (2007): 14

Table 3: *Foreign students by field of study1 (ISCED6 level) in selected OECD host countries, 1998*

	Percentage					
Host	**Engineering, manufacturing and construction**	**Sciences**	**Humanities and Arts**	**Social sciences, business and law**	**Others**	**Total**
Australia	13.1	13.6	9.3	50	14	100
Austria	15.3	11.5	28.1	33.9	11.1	100
Czech Republic	15.1	6.4	11.9	21.9	44.7	100
Denmark	3.4	8.9	33.8	37.6	16.3	100
Finland	25	12.2	27.1	20.6	15	100
Iceland	2.5	5	67.1	15.5	9.9	100
Japan	20.3	3.3	24.6	39	12.9	100
New Zealand	7.7	12.7	14.8	53.9	10.9	100
Norway	11	13.8	31.3	24.7	19.2	100
Switzerland	17	17.5	20.8	34	10.7	100

Source: OECD (2001: 109)

Section 3 'Diverse Doctorates': the Structure and Funding of Doctoral Research

3.1 Introduction

Despite efforts to encourage harmonisation in doctoral programmes across the European Union, the concept of 'doctoral research' encompasses a wide and in some respects growing degree of diversity[7]. Of course access to and the quality of funding has a major role to play. Although the outcome may be broadly the same (a thesis and viva) the process of actually getting to that point varies enormously. The next section describes a range of different 'approaches' to doctoral research and the opportunities and challenges these present in terms of mobility.[8]

The structure and organisation of doctoral studies varies enormously not only from one country to another but also from institution to institution, discipline to discipline and within these. This section briefly outlines different 'models' of doctoral research highlighting examples from the empirical work undertaken as part of this study.

3.2 Individual Research

In some cases, doctoral researchers apply for competitive funding for dedicated full-time personal scholarships which do not oblige them to engage in other forms of work. These kinds of awards are relatively common in the UK and are currently replacing previous approaches in Portugal, but less common elsewhere. Studentships are generally awarded through annual competitions held either by the funding body directly or administered through the host university. These studentships can be very attractive because they are generally not linked to teaching or other research duties and thus maximise the time available for research and writing the thesis. The Marie Curie Scheme also funds this type of scholarship with a condition that the holder be mobile during the award (i.e. not living in their home country).[9] Researchers holding individual 'studentships' generally experience greater flexibility in terms of their ability to travel and spend time away from their parent institution. In addition, research councils may allocate additional funds to support stays abroad for their 'home' candidates. The ESRC, for example, allows their award holders to apply for a 3 month paid extension to visit an overseas institution. Portugal has also been actively introducing a new system of individual doctoral scholarships to replace the older 'licence' system (see below). Doctoral researchers are able to apply for these Portuguese scholarships irrespective of where they register – so they may register their doctorate abroad (or spend some of the time abroad) and access Portuguese funding for the duration of their doctorate. During periods abroad they receive almost double the maintenance payment.[10]

Some restrictions exist in terms of eligibility for individual studentships. In the UK and Ireland, research council studentships are open to EU nationals. The DFG in Germany funds national and international PhD candidates through their Research Training Groups. However, the financial support offered to non-nationals is often inferior and may exclude them from maintenance

[7] Appendix 3 provides a brief introduction to the 'Bologna Process' and the changes that are taking place in relation to doctoral research.

[8] This section is not designed to give a comprehensive overview of doctoral programmes but is illustrative and grounded in the empirical research.

[9] The practice of funding whole PhDs has changed in recent years with Marie Curie funding at doctoral level now including shorter stays at dedicated 'training sites.

[10] We were informed that the stipend for a doctoral scholarship in Portugal is set at 950 € per month for periods spent in Portugal and 1,700 € per month during periods abroad.

funding.[11] The following Irish researcher expressed concern at this apparent 'discrimination':

When I was offered an ESRC case award I accepted despite finding that I was not going to receive the maintenance grant. I did this because there were few opportunities in my home country. I think it is disgraceful that just because I had not been resident here for three years I was not eligible for funding. How can a policy like this encourage mobility? I have done the same job as a UK citizen and I was selected through the interview process as the preferable candidate. As a minimum contribution to improving opportunities for mobility I would suggest eligibility requirements should be EU wide.

A Belgian survey respondent made a similar point in relation the rights of third country nationals:

[They] should not make a division anymore between students who are EU or international when it comes to funding. A good proposal is a good proposal and will enrich any university and hopefully universities will realise that.

One survey respondent from Kazakhstan expressed frustration because he was barred from mobility opportunities on the grounds of his nationality:

I would like to go for one year to Barcelona during my PhD, but I have no possibility as a resident of a non EU-country to find the financial support for this.

Where researchers are self-funding, their ability to exercise mobility will depend on their personal financial status (Section 5.3).

3.3 Doctoral Research and Employment: The Dominance of 'Non-Linearity'

It is common in the natural sciences to progress in a fairly linear fashion from undergraduate study through Masters study and directly into doctoral research (Ackers, 2005a; Rothwell, 2005). This linearity is not so evident amongst social science doctorates. Many social scientists have spent some time since their first degree in some form of professional employment or outside professional activity altogether perhaps bringing up their children. While nearly half (42.7%) of survey respondents were in full-time education immediately prior to their doctorate, the remainder were working (roughly half in research and half in alternative occupations) and a small minority had taken career breaks or were in part-time study. The Portuguese system (which is currently in the process of change) has until recently encouraged this kind of approach. Here the doctorate has been viewed more as a form of mid-career accreditation, critical to progression into senior positions, than an 'entry' point into academic positions. As a result many of our respondents were 'mid career' and taking advantage of a three year 'licence' or sabbatical from their other duties in order to pursue their doctorate. The following case shows how a Portuguese candidate had built up a career as a lecturer prior to her PhD:

I started lecturing in a private college. It was temporary although I stayed there for 2 or 3 years. I was already working in 2 other colleges on a part-time basis so I kept these jobs and then I was offered a contract at one of them. I stayed there for 1 or 2 years always teaching sociology and social science methods. Eventually there was an opening in the University. They were looking for lecturers – assistants – and I applied and got the place. I then got a lectureship at [another] University. I'm still there and hopefully going to end my PhD thesis in August. I started it 6 years ago and had 3 years' license.

Although Portuguese academics are generally awarded 3 or 4 years relief from teaching none of the respondents were able to complete their doctorate in that period and so continued to combine their doctoral research with their other duties for the remainder of the time.[12] Nevertheless this period provided strong opportunities for mobility. In the above case the researcher worked in the academic sector. In many other situations the decision to commence a doctorate involved a

[11] Following the Bidar ruling measures such as student loans and other support packages are now available to those students who are settled in the host state, i.e. who have lived there for 3 years or more (see Case C209/ 03 Bidar v London Borough of Ealing and another)

[12] This reflects the nature of the traditional Portuguese doctorate and not their ability.

career change:

I was working at the central bank. They offered me a permanent position when I said I was going to quit. I got bored from that job.

I worked for 2 years in the private sector not as a lawyer but as a project manager in a software company more by accident I sort of went there. My PhD research is more related to what I did in my Masters research and undergraduate studies.

3.4 'Part-Time' Doctorates and Mobility

In addition to this group of 'academic returnees' a large group combine doctoral research on a 'part-time' basis with other professional commitments.[13] The UK is somewhat unique in permitting formal 'part-time' registrations and this approach to doctoral research is highly popular in the UK[14]. Around 50% of UK doctoral registrations are part time (Ackers et al, 2006: 57). In other countries, where the registration is often not formally required at all or is not referred to as 'part-time,' the nature of their contract requires doctoral researchers to engage in significant other professional duties (as research assistants or teachers for example). As a result the candidate is effectively working part-time basis on their doctorate, retains strong ties to that country and is less able to exercise mobility[15]. Recent research has shown how the specific nature of a researcher's employment in the home institution shapes the timing and duration of mobility episodes (Ackers, 2008). An Irish NORFACE respondent stated that, 'teaching duties mean I can only travel in the summer months'. The following two cases are illustrative:

This British researcher is registered on a part-time basis in the UK. She holds a full-time lectureship in another proximate university. As a result her ability to exercise mobility is very much constrained by her teaching and administrative responsibilities.

This Portuguese researcher is also registered part-time in the UK but lives in Portugal where she works on a full-time basis for a private research organisation (an NGO). This situation limits her ability to exercise mobility in connection with her PhD in two respects; firstly she has significant commitments connected to her work and, secondly, was not eligible to apply for many funding schemes (which only fund university-based doctorates). In practice she said that she would prefer to spend, 'short periods abroad. A couple of months not longer'. Having said that, this person travelled regularly abroad as part of her European research projects. It was not so much that she lacked international experience but that she had limited time to undertake mobility directly beneficial to her thesis (to meet her supervisor in the UK, for example, or attend relevant workshops).

In other cases, doctoral candidates that registered on a part-time basis in the UK are not always granted the same access to departmental or competitive funding to attend conferences or training courses (even where funds are pro-rata).

In many of the countries studied doctoral candidates hold employment positions within the university. These positions can vary significantly in length and terms. The following examples illustrate how the system works in Germany and Norway respectively:

It works here that you get the acceptance as a PhD student from your supervisor and with this you get some grants and benefits and then I have half a position, so I'm employed for twenty hours a week… I do some teaching and some research assistance -of course you work a bit more than half a position and it's expected that you do so ... and this half position is for a six year contract.

13 A recent UK study found a particularly high number of career returnees or career 'switchers' in business schools (Ackers et al, 2006).

14 In 2005/06 12,950 doctorates were awarded to full-time students in the UK, 56% of which were domiciled in the UK prior to their doctorate, 13% who were domiciled elsewhere in the EU and 31% who had been living elsewhere internationally before their doctorate. In contrast 3,565 doctorates were awarded to part-time students the majority of whom had been domiciled in the UK prior to their study (74%), 9% who had lived elsewhere in Europe and a further 16% that had been domiciled elsewhere in the world (HESA students and qualifiers data 2005_06)

15 It is also worth noting that a minority of part-time doctorates in the social sciences are completed through distance learning – e.g. Leicester University offer a Doctorate in Social Science by 'distance learning'.

I have an employment contract. I'm funded by the Norwegian research council but I'm employed by the University of Oslo. And that's a 4 year engagement but you are supposed to spend 25% of your time teaching.

In the UK, the development of a new model known as the 'Graduate Teaching Assistant' position is similar in many respects. However GTAs are generally seen as 'students' who are paid for the teaching they do rather than as an integral member of the university staff.[16]

3.5 'Linked' Doctorates

An alternative, but similar approach to working in the university sector as a doctoral researcher is to secure a position at a research institution or within a research team and then 'link' a doctoral research project into the work that is being carried out in that institution or team.[17] This approach is very popular in the natural sciences but remains relatively unusual in the social sciences. The following respondent spoke very positively of this approach:

My funding and my job are very much linked to the Centre here and I very much enjoy working in a team. I've also worked on other projects, not just that one (linked to her PhD) and that has given me a lot of really good opportunities. What I didn't want to do is move to another country just for the sake of it and not be integrated into research teams there.

In the example above the researcher had registered in the first instance on a part-time basis combining her doctoral research with clerical work (in order to finance her position). After a year she became a full-time researcher on an EU-funded comparative project which involved extensive visits to partner countries and was directly linked to her doctoral research. She then applied for and obtained research council CASE award which requires the researcher to spend a proportion of her time working with a body outside of the university sector (in this case in the UK). Finally, during the writing up phase she was able to secure a research fellowship which required her to combine doctoral research with other projects. This case illustrates the issue of non-linearity rather well showing how situations can change quite dramatically even during a doctorate. At each stage the opportunities and ability to exercise mobility were shaped by the nature of her funding and her position. Although researchers working in this kind of way and linked into research projects are also effectively working part-time on their thesis, this method of working can encourage a high degree of mobility (if the projects involve cross-national teams). Indeed this kind of situation arose in a number of cases and stands out as an example of highly effective mobility and internationalisation as doctoral researchers become fully integrated in international teams. In the case above, although the research has not lived abroad the projects she was working on involved active engagement with cross-national teams.

3.6 Portability of funding to complete doctorates abroad[18]

The Eurydice report into Higher Education in Europe contains information on financial support and contributions at doctoral level. This information indicates that in most NORFACE countries financial support is not portable to another country. Denmark and Iceland seem to be the exception with fully portable salaries or grants for doctoral students (Eurydice 2007: 215-226). The following respondent got Icelandic funding for his studies in the UK, first for his Masters and then for his PhD:

I had an Icelandic student loan, which covered everything except £5,000 I had to cover.

Portugal is a slightly different example where academic staff, under the 'old' system of 'licences'

[16] The growth of the 'doctorate by publication' for academic staff is also worth mentioning. In these cases the person in questions holds a full-time academic post.
[17] Research councils in the UK are now specifically encouraging this approach by allowing applicants for research grants to add research studentships into grant applications. The ESRC allows research grant linked studentships providing the project is 3 years in duration and the applicant or co-applicant will act as primary supervisor
[18] For further background information on this issue see European Commission (2007)

could take 3-4 years as a sabbatical to complete their doctorates effectively giving them the chance to register elsewhere as a doctoral candidate while still being on full pay at home. The new system of individual awards, referred to above, supports the portability of grants.

3.7 Systems in Flux: The changing nature of doctoral studies

As we have noted, the 'Bologna Process' is beginning to stimulate marked changes in the structure of doctorates in Europe.[19] One of the Bologna 'action streams' has the specific objective of, 'promoting mobility by overcoming obstacles to the effective exercise of free movement'. Recent changes in the structure and organisation of doctoral research were commented upon by a number of interviewees mostly from outside the UK. The following two Norwegian respondents refer to the changing nature of their system:

The PhD system is rather new in the field of law as previously the system was built on the degree if dr.jur./dr.philos. In general the time for this was stipulated at 5 years, while the PhD system is built on a 3 year study and the programme is much more structured.

When I started I was quite young for a PhD student (28 or 29) because people used to work as researchers for 5 or 10 years before they got the [doctoral position]. Now they have changed it and they tried to become more like rest of the World.

Several respondents in Portugal expressed concern at the transition process. A representative of the British Council in Portugal said quite simply that, 'People are caught in the middle of Bologna'. The following respondent explained her own fears about the evaluation of her thesis:

We are in transition in terms of PhDs in Portugal. It's getting more normalised in Europe and the process of Bologna is done on the English tradition. At the same time we value our older PhD because they were very solid – sometimes it represented 20 years' work. …but at this moment of transition and I feel it specifically I really don't know how my thesis will be evaluated – in what paradigm.

3.8 Joint and Multi-site 'International' PhDs

The Bologna Process specifically encourages, 'significant increase in the number of joint programmes' and multi-site or 'international' doctorates (London Communiqué 2007; p2). Interestingly, none of our respondents were engaged in either of these forms of doctorate although some supervisors were aware of these schemes[20]. We were given an example of a doctoral candidate who had spent a year each in Italy, the Netherlands and the UK. A Portuguese supervisor also had some experience of a student working in this way and suggested that:

A lot of Portuguese universities are now beginning to try and build up international PhD's on that sort of basis, you know, 3 different universities, Spain, Portugal, UK and the students spend one year in each country.

Having said that, there was some scepticism about the value of this form of 'obligatory' mobility and its 'fit' with the doctoral process:

The LSE have an arrangement where you stay in each place for a year or so. There's one problem with that sort of thing, with these students going around, it's useful to you when you are searching for the best fit, what you want to study, but that scheme forces you to go around. Some people have withdrawn from that scheme because they didn't want to keep going on around.

In the final case, a Portuguese supervisor suggests that, for these schemes to work effectively and not interrupt supervision during the empirical phases, the mobility would be best undertaken during an initial structured period at the start of the PhD. Of course this assumes that training programmes can be effectively harmonised:

[19] For more detail see Appendix 4.
[20] An example being the 'European PhD. in Socio-Economic and Statistical Studies'. During the typical four year duration students have to spend at least two periods abroad in partner institutions attending courses or doing supervised research

Almost all PhD's are now beginning to have an initial programme which is more structured so most of these international PhD's will probably distribute during this initial programme. And they'll either spend 3 months in each university [and will] be probably based on this initial training and not so much on the last 3 years of the PhD where you're expected to do empirical work in one country to focus on one problem and for that you can't be travelling around.

Models involving co-supervision across countries were also identified in the course of the study and are discussed in more detail in Section 4.3.

3.9 Funding Short Stays

Although many researchers might be unable to spend long periods abroad due to other commitments they are nevertheless often able to contemplate shorter visits to research groups or conferences. Their ability to do so is often shaped by access to funding. Doctoral candidates often identify several agencies that fund mobility including national research bodies and charities. The first port of call for most students would be their own University but there was substantial variation in availability of funding at departmental level. A response to our survey identified the supervisor as 'holding the purse strings' as a barrier to mobility whereas other respondents describe the supervisor as central to their mobility decisions and access to opportunities. In general the awareness of local and national funding for mobility in the social sciences was higher than pan-European or international funding bodies. The DAAD was widely identified as a source to support mobility from Germany. In Portugal, the Foundation for Science and Technology and the Gulbenkian Foundation were identified. In the UK and Norway the research councils and host institutions were most often cited as sources for funding mobility. The Research Council of Norway has a number of schemes and bilateral agreements with other countries allowing the exchange of researchers e.g. the E.On Ruhrgas German- Norwegian programme within economics, law and political science. DASTI provides research fellow grants to Danish nationals to undertake PhD training in Denmark or abroad and also has a specific scheme allowing for short term visits of 1 month or more. Some respondents identified complex and rigid application procedures as a barrier to spontaneous mobility:

Application processes are often quite rigorous and may only be available at certain periods of the year, hence, not available for more on the spur of the moment, short term mobility.

It is too limiting to suggest that mobility should be applied for only at the initial project submission stage. Funding bodies should be flexible and allow applications during the doctoral period as it may only become relevant in the course of the project. Funding levels should be equal regardless of the stage in the doctorate that a mobility period is applied for.

Access to funding for shorter term stays, such as attendance at international conferences, generally proved more problematic than sourcing and applying for longer-term stays. Doctoral candidates complain that this is partly down to a lack of information and advertisement by funding bodies:

I intend to study abroad during my doctorate. I discovered that the ESRC does fund short study trips abroad and I hope to apply for such funding. However, I only heard about this by word of mouth from another ESRC-funded student – it could be good if this scheme was promoted more.

Often the ability to attend conferences is dependent on the availability of resources and support from the researcher's immediate research group and supervisor.

Easier access to funding to top-up research council grants / enable unfunded students to afford to attend conferences abroad. I have attended two international conferences (one funded personally at great expense and difficulty, one funded by a European research institute after having to argue that they should cover doctorate students as well as established researchers) but without this funding / independent income, I could not have attended.

Students with supervisors that have international projects are often 'privileged' in access to mobility:

We have had project funding by the European Science Foundation so students can do a 'stage' (placement) abroad – they can be 3 months in several of the university partners.'

3.10 Summary

- The study identified a great diversity in the structure of doctoral programmes and approaches to doctoral research. Researchers do their PhDs in so many different ways that it is not possible to generalise and talk in terms of 'the doctorate' at least in terms of process.
- Different approaches present different opportunities and challenges in terms of mobility. In some cases researchers with full-time individual scholarships are, in theory at least, more able to exercise autonomy in their decisions about whether or where to move.
- Some concern was voiced over eligibility criteria (based on nationality) which might restrict access to funding at all and access to specific funding for mobility.
- In many cases doctoral researchers are combining their doctoral research with other forms of employment. The nature of this employment will shape the degree of flexibility they have when making decisions about mobility. In some situations, especially when researchers are employed outside of the university sector on a full-time basis, they have very limited ability to be mobile as part of their doctoral research.
- Diversity in the nature of career progression systems in the academic sector, amongst other things, also results in a high proportion of 'returnees' to doctoral research after a period working in another sector. Nearly half of our respondents had spent some time in employment before commencing their doctorate. These people are more likely be at a stage in their life-course when moving becomes more problematic (Section 6)
- The study identified little concrete evidence of the development of joint or multisite doctorates. The Bologna Process was beginning to have a significant impact on the structure of doctoral programmes in the case study countries (with the exception of the UK).
- Flexible funding for short stay mobility to support research visits and conference attendance etc. as quite difficult for many researchers to obtain particularly if they were not in receipt of research council awards (or the equivalent)

Section 4 Diverse Motivations

4.1 Introduction

There as many motivations for mobility as there are mobile researchers. In the overwhelming majority of cases the decision about whether, where or for how long to move involves a complex weighing up of professional and personal considerations (Ackers, 2008; Jons, 2007). Equally, mobility must be seen as a process and not a 'onetime' event; decisions are constantly under review and subject to change (Ackers, 2005b). It is nevertheless important to identify specific motivational factors in order to understand the processes and identify ways of facilitating those forms of mobility that add value to researchers and the research community and discouraging those that detract from efficient and effective research. The following section considers a range of factors that have emerged in the course of the study and appear to play a major role in shaping the form that social science doctoral mobility takes in the NORFACE countries. These include:[21]

1. Recruiting in Global Markets: Employment Opportunities
2. Accessing Expertise: Supervision
3. Time, Productivity and Mobility
4. Mobility and Networks
5. Discipline and Topic Specific Concerns (fieldwork and comparative research)
6. Language Opportunities and Constraints
7. Mobility and Career Progression: The Valuation of Mobility and Internationalisation

4.2 Recruiting in Global Markets: Employment Opportunities

A powerful factor shaping doctoral mobility, unsurprisingly, concerns the availability of and competition for positions. We are in the main talking here about people who move for the whole of their doctorate. The 'pressure' here comes both from 'would be' doctoral researchers seeking out opportunities that may not exist in their home country due to lack of positions, the relative quality of positions or problems in accessing positions[22] but also from supervisors seeking to fill positions with high quality researchers. In some countries and disciplines, supervisors are experiencing serious recruitment difficulties due to skills shortages. In the past few years the ESRC has commissioned a number of detailed studies designed to improve its overall understanding of this situation.[23] One of these studies identified high levels of foreign recruitment in doctoral research (with just under half of all doctoral researchers coming from abroad). Specific concerns were identified in some areas of the social sciences including quantitative methods, economics and management and business studies (Ackers et al, 2006;16)[24] . The ESRC-commissioned review of the social sciences (Mills et al, 2005) identified three areas suffering severe recruitment problems (economics, management and business studies and education) but also lists law as a concern.[25] Staff responsible for doctoral recruitment in these areas explained the difficulties they were having in recruiting 'home' applicants[26]:

[21] Section 4 focuses on 'professional' factors; more personal considerations including family are considered in Section 5. It is interesting to note that one of the main 'drivers' of mobility in the natural sciences is the quality of scientific infrastructure. This did not emerge as an issue in the NORFACE study reflecting the different nature of social science research.

[22] Other research has identified concerns over the persistence of patronage and corruption in recruitment systems (Ackers, 2008).

[23] See for example Mills et.al. (2005), Machin and Oswald (1999) and Bell (2004)

[24] Annex 4 to this report focuses on internationalisation in the UK.

[25] The category 'law', as in other disciplines masks enormous variation in recruitment with some subjects (such as business law, for example) experiencing far greater problems than say European law which continues to attract high quality applicants (many from abroad).

[26] These excerpts are taken from the UK study (Ackers et al, 2006)

The situation is pretty dire in terms of getting UK students to come here… international students, we get those sufficient – we don't need to do a great deal in terms of publicity, they are knocking at the door to do PhDs. The problem is we don't get UK students wanting to do PhDs in sufficient numbers and I guess you need to say of sufficient quality.

The big problem [in doctoral recruitment]is economics. The problems in government, anthropology and sociology are not shortages of PhD candidates, but shortage of PhD candidates with funding and the problem in economics is there's a shortage of PhD candidates, especially domestic PhD candidates.

The interviews with supervisors and doctoral researchers in the NORFACE study did not identify some of the pronounced problems that researchers have found in trying to gain access to doctoral positions that we have come across in our other work. This perhaps reflects the choice of case study countries and NORFACE partners and recent growth in funding in countries such as Portugal.[27] Neither did we find significant concern expressed about the diversity in the level of funding and quality of positions that we have seen in other contexts where researchers are 'shopping around' to find higher levels of remuneration or better working conditions and research opportunities.[28] The following Norwegian researcher say he will only consider moving abroad if the position is better than the one he currently holds:

I only want to go abroad if I can get a position at a university better than what I have in Norway, and preferably in an English speaking country. Competition is tough.

Both supervisors and researchers in the NORFACE sample alluded to the reputation of the UK as a factor encouraging competitive international recruitment. The following comment by a German supervisor (an economist) is indicative:

Competition in Britain is very high. Many German or foreign students like to go to Britain, the British education system and British economics departments have a very good reputation and so many Germans or other students like to go to Britain so they have a chance to have a wider selection.

One of the Portuguese supervisors, on the other hand, recognises that they are only likely to host mobile doctoral candidates from abroad in Portugal for a short period or for a specific reason:

When we have [foreign doctoral researchers] they may be co-supervised on specific issues so maybe come here for 2 or 3 months but not making their PhD here. They come for specialised advice here. We do have maybe 4 people in the last 2 years coming in this way. Most of our PhDs are Portuguese nationals.

This last comment by the Portuguese supervisor not only tells us something about the relative attractiveness of different locations and how this shapes the kind of mobility that takes place, it also draws attention to one of the most important factors encouraging mobility; namely the pursuit of expertise.

4.3 Mobility and Supervision

One of the strongest arguments in favour of encouraging doctoral mobility concerns the issue of supervision. The very notion of a 'European Research Area' rests on the basic idea that creating a European-level labour market (or recruitment pool) increases the opportunity for a more effective matching of resources supporting both competition (excellence) and specialisation. This issue emerged as one of critical importance in the evaluation of the Marie Curie scheme where both supervisors and doctoral researchers spoke of the value of the scheme in terms of supporting an optimal 'matching' of opportunities to the benefit of those researchers in search of opportunities,

[27] Our recent work has focused on Italy, Bulgaria and Poland where students are finding it very difficult to access positions and the positions that do exist offer very poor remuneration and conditions.

[28] This is not to say that researchers were generally content with the quality of their positions or, more importantly their future career prospects. Many expressed concerns at their contractual status and career progression but it was not clear that this, in itself, had a major impact on mobility at doctoral level. It is also important to point out that we did not interview people who had been unable to secure positions at all.

employers in search of researchers and Europe as a whole. Marie Curie fellows and supervisors used the language of 'match-making' to emphasise the effect this mobility scheme has on the effective 'coupling' up of excellent human capital with prestigious host institutions and supervisors:

The trick is just to match the person with the right skills to the project. The advantage of the Marie Curie fellowship is precisely that: your search domain is much more broader.

Individual European countries may have quite small science bases in particular disciplines, leading to a lack of training potential if researchers are not mobile between European countries. The Marie-Curie fellowships are an important way to facilitate mobility and thereby maximize the human potential in European science

…good scientific match-making between senior and junior researchers in specific fields

Similar views were expressed in the NORFACE interviews. In the case of Portugal some respondents spoke of the difficulties they had experienced in the past, under the old political system, when social science remained under-developed.[29] This meant that for some time there was a lack of experienced supervisors within Portugal:

In the past most sociologists had foreign contacts – they made their PhDs abroad because there was no sociology in Portugal.

The general view was that this 'migration dynamic' was reducing as Portugal was building a strong reputation in social science research. In some cases researchers relocated to another country in order to do their PhD with an established expert:

This was a very interesting time for educational psychology and he had a new theory and his ideas were absolutely fascinating.

The following case is reported in some detail as it illustrates a number of issues about the relationship between mobility and supervision. This researcher's decision to do her whole PhD in the UK reflected her interest in a specific methodological approach which remained undeveloped in Portugal. She also refers to the different style of supervision which she regarded as 'more democratic and less hierarchical':

I felt I had more opportunities. It was more the methodology and the kind of learning I would get there that I wouldn't get from here. In the UK it is more focused on the individual. I was more interested in the quality of the supervisor, the academic resources and the very specific [ ] specialism that didn't exist in Portugal. I would never have had that kind of training in Portugal.

Although the researcher moved to the UK for her doctorate she nevertheless selected a Portuguese case study and is currently spending extensive periods in Portugal during her fieldwork. Towards the end of her first year the supervisor she was so attracted to moved to work in Australia. Despite his move, he continues to supervise her 'at a distance'. Asked whether this has proved difficult she replies:

No, not at all – we will manage through email and webcam etc. I am keen on new technology and I think we have to make the most of it. There was a conference in Australia and we met there recently and at another conference abroad in Mexico and then we met in Portugal at a conference.

Fortunately she received a fairly generous travel allowance as part of her scholarship and is clearly making the best of this both in terms of attending conferences abroad but also using these as opportunities to see her supervisor.[30]

In other cases, researchers actively sought out second supervisors who were experts in their field and remained registered and primarily located in the home country. This was a particularly common approach in Portugal and appeared to work extremely well. The following researcher did her PhD in a relatively new field of sociology

[29] Similar concerns were expressed in the course of our recent work on scientific mobility between Poland, Bulgaria, the UK and Germany (Ackers, 2008).

[30] She referred to 'an allowance of about 700 € per trip outside of Europe – maybe twice a year.'

and was informed by her Portuguese supervisor of a leading expert in the UK. She made contact with this person who then became her co-supervisor:

It was simple because I didn't need to register [there] I just needed a declaration from her saying she would be a co-supervisor. So they registered me here with her as my co-supervisor. Yes, it was very good -she was a specialist in that field. I related very well with her and she was really my best supervisor academically and personally; she gave a lot of attention and time. Something that would not have happened here – it's the system – because as a PhD student employed as a teacher – they expect you to manage.

Another researcher used the 'co-supervision' strategy also with great success. She said she searched for a supervisor in the UK via the internet, 'because I couldn't find anyone here who was interested in my subject;'

The first meeting was quite informal but then I had to go through a bureaucratic procedure. I was registered here in Portugal. The university here accepted him as a cosupervisor and they paid him. I think we arranged 2 meetings per year and those were paid for but of course we had other meetings that were not paid for.

She spent various periods in the UK but usually for no longer than a week at a time which she described as, 'quite enough – quite Ok for what I needed'. I went there to discuss my findings, the progress of my work and to have access to the library to older publications that I didn't have access to here.'

It is not clear in this case what level of financial disbursement was made although it appears that the University paid the fee. In the previous example the respondent told us that, in her case, she paid the fee herself out of a research fund she held and that she paid about 1000 € for 18 hours formal supervision per year (although she also said she received a lot more than that). She also made visits usually of 1 or two weeks duration which she described as 'enough'.

These kinds of arrangements appear to work extremely well but vary a lot in practice and degree of formality. The apparently informal and flexible approach in Portugal perhaps reflects the lack of structured supervision in general and the fact that supervision is not formally regulated or recognised in workload allocation systems.

It is not clear that the system would work quite as well the other way around. In the case referred to above whereby the researcher was registered in the UK (on a part-time basis) but remained living and working in Portugal a co-supervision arrangement had been achieved informally (with a second supervisor in Portugal). Both the 'student' and the UK-based supervisor regarded this configuration as optimal but the UK institution refused to recognise this relationship in any formal sense requiring a second supervisor in the UK and unwilling to provide any remuneration for the supervisor in Portugal. In practice this meant the supervisor effectively operating on a voluntary basis with no formal recognition or remuneration.

The study also uncovered concerns that mobility may damage optimal supervisory systems. This concern was most marked in the UK where, as we have seen above, doctoral supervision has become increasingly regulated, structured and above all, monitored. Although this could be seen as a specific national feature affecting the UK in the main, it is important to note that policy developments at European level are encouraging the adoption of this more structured approach. The European Charter for Researchers and Code of Conduct for the recruitment of researchers, for example, advocates more structured supervision:[31]

Researchers in their training phase should establish a structured and regular relationship with their

[31] The European Charter and Code together describe a series of general principles specifying the roles, responsibilities and entitlements for researchers, the employers and funders of researchers. The Charter and Code were put forward in a European Commission Recommendation in March 2005 as part of the EU's policy to create an internationally competitive European Research Area by 2010 and realise the Lisbon objectives of recruiting an additional 700,000 researchers.

supervisor(s) so as to take full advantage of their relationship.

The following UK supervisor felt that encouraging mobility during the doctorate could lie in tension with this policy and, as a result preferred more organised reciprocal schemes:

There is an expectation that you have 6-weekly meetings with your PhD students. So everything's much more closely monitored and I'm not sure that that is for the better but I think you'd have to be fairly sort of organized about how you structured your supervision. I think probably the best type of mobility would realistically be to have a good link in an institution and to be able to send your students over to a supported environment. So that you could be sure that they had access to all of the materials that they need and do it on a sort of reciprocal basis. I think you'd have to have good academic links there so that you could really take advantage of the time. But I think with the PhD students unless they've got a real history of working and living in that country or they have a very specific project and very good links already they might spend a lot of time just finding their feet.

She added that initiatives such as the Marie Curie training sites provided a 'protected link supporting reciprocal supervision' and this was an ideal means of encouraging mobility and internationalisation. The same supervisor also spoke of the developments in information technology which supported 'at distance' supervision but felt that this did not fully replace traditional approaches. Interestingly, she also noted the importance of the wider research community as part of the supervision and mentoring process and the risks that spending time abroad might dislocate the researcher from this important source of support:

I suppose with communications the way they are now, I think you can do it fairly easily but I don't think you can really replace face to face contact either and the sort of culture of PhD was that you need a bit of contact with other PhD students and I think it's good to make links with other PhD students in your field, in your country.

The approach to supervision associated with certain countries also shaped attitudes about where to register for a doctorate. The following respondent was thinking of starting a PhD in either Germany or Canada and was weighing up her options:

The first element is the way the PhD programmes are structured. It's both an advantage and a disadvantage because [in Germany] they tend not to involve a lot of coursework, simply a dissertation. So it's a case of finding someone who's willing to supervise you and enrolling yourself in the university and you're off. …. On the other hand, it's also a disadvantage because the coursework, comprehensive exams, integrated teaching, things that are part of Anglo-Saxon PhD programmes are in the long term perhaps more beneficial even though they take up a lot of time, say between 3 and 4 years extra time. I think they do make you fitter for the job. But it's a significant time investment if you're already in your 30s, married and thinking about a family. And it's also a cost issue. In Germany tuition is free and in Canada it's certainly not although as a Canadian citizen I'd only have to pay domestic fees but still that's 3000 dollars a semester that I wouldn't be paying here.

In practice many students that went abroad on 'ad hoc' short term visits often received little or no supervision in the host institution. This was particularly true of those students who went abroad in order to conduct fieldwork. Although fieldwork and comparative analysis was perhaps one of the strongest motivations for mobility in this sample of social scientists, the nature of the fieldwork often determines the level of interaction with the universities abroad. In many cases students have no formal links or rationale for specific engagement with university sector (although one would imagine that this could provide the basis of a fruitful exchange). Some researchers built stronger links with organisations of direct relevance to their fieldwork:

Id like to visit volunteer centres and have a look at some of the schemes in action.

Q; So it's about your actual research and not building networks in universities or experiencing academic systems?
No, probably not

4.4 Mobility and Networks

The issue of networks and connections emerged as a major factor shaping doctoral mobility. On the one hand, the findings support the conclusions of previous work with natural scientists that, 'networks-make-migrants lubricating and channelling migratory outflows with a multiplier effect.' (Ackers, 2008; Jons, 2007). On the other, the establishment of and integration into networks and particularly 'international' networks is a key motivation for mobility (in other words researchers use mobility in order to support network-building). This is of particular importance to those researchers working in less international or highly networked institutional or national contexts. Puustinen-Hopper's research on doctoral mobility concludes that *'personal contacts play a central role in the recruitment of researchers and PhD students'* (2005: 21).

Doctoral supervisors play a critical role in encouraging their students to seek opportunities abroad and enabling them to move through their own *international* networks. Avveduto's research emphases the role that a PhD candidate's networks plays on subsequent migration and location decisions (2001).

Supervisors play a major role in generating opportunities to gain international experience and mobility and often provide the initial 'trigger' for an outward move. The influence of this relationship increases with the seniority and status of the supervisor. Where supervisors held senior or leadership positions their networks were often more highly developed and influential both abroad and in the home labour market (increasing the potential for return).

As part of the Marie Curie Impact Assessment, fellows were invited to rate the value of networks to their career development. The majority of fellows (58%) rated networks, in general, as 'very important' to their career development with a further 33% stating that contacts were 'rather important'. The survey furthermore invited fellows to consider the importance of international national networks. Whilst just over 36% of all respondents regarded transnational networks as 'very important', some disciplinary diversity emerged. Social and human scientists, economists and environment and geoscientists in our sample showed higher figures (over 44%) and mathematicians, lower (25%). Female fellows were more likely than their male counterparts to rate international networks as 'very important' (44%) compared to 32% of male respondents (Van de Sande, Ackers and Gill, 2005:25).

In addition, over 70% of fellows reported that their stay abroad resulted in the development of connections that were 'influential to their subsequent career progression.' It is interesting to note the effect that networks had on subsequent mobility. While doctoral researchers were less likely than post-docs to report a prior link with the host institution (33% of doctoral researchers compared to 46% of post-docs), the importance of prior links varied by discipline and nationality group. Social and human scientists had the fewest institutional links to the host at early stage.

The importance of prior networks also varied by nationality. Doctoral researchers from the UK and Eastern Europe and the Baltic countries were the least likely to have a prior link with the host institution .

The work with researchers in the NORFACE study would support these general findings: supervisors or senior researchers play a critical role in promoting and directing mobility and identifying suitable opportunities and hosts:

Practically most of the information I had about studies, grants, conferences was spread via the network I had. It is like a snowball, which gets bigger every day.

Where researchers either had fewer links with such mentors or where mentors themselves were less networked, researchers face greater difficulties in planning and executing moves:

I want to travel abroad but I am not sure where to go. I do not know too many people working on gender and the professions, and I am not sure which university is best when it comes to this subject.

Networks are probably key. I mean sure it matters whether or not you can get into the country and whether or not you are allowed to work but you have to be in a position to get a job first.

In some cases respondents emphasised the role that more formal schemes played in enabling researchers who are not so well networked to become mobile in the first place:

Real, objective "exchange programs" (like Erasmus for regular students) for PhD-students wanting to visit a research institute in another country for a few months or so are lacking: one has to find the place through contacts at the university or that the supervisor has. If one is appointed a supervisor without international contacts, it can be difficult to find a suitable place to visit abroad. The possibility to go abroad should be open to all and not depend on external matters, such as having/not having the right contacts.

This issue was raised in our previous work with early career scientists in Poland and Bulgaria. In many cases these researchers did not have established networks and relied more heavily on formal schemes at undergraduate and doctoral level to enable them to establish their own networks (and mobility channels) (Ackers, 2008). A Polish respondent in the NORFACE study made a similar point emphasizing the role that 'Exchange programs (even very short trips for one week)' played in enabling them 'to get some contacts with other researchers.' One Finnish survey respondent proposed the development of some form of 'portal':

Some search portal for courses around Europe would help in identifying my needs and opening up possibilities which I am now unaware of.

The European Researchers' Portal is a Europe-wide resource for training and job opportunities. None of the respondents identified the portal as a point of reference when looking for mobility opportunities.

4.5 Time, Productivity and Mobility

When researchers discuss mobility, time emerges as a critical issue in a number of respects.

4.5.1 The Length of Doctoral Research

The issue of time as a factor encouraging mobility and also determining location decisions reflects the persistence of marked national diversity in the time it takes to complete a doctorate. Section 3 outlined the varied structure and 'ways of doing' doctorates both between and within countries. The ability to complete a doctorate within 3 or 4 years emerged as one of the key attractions of the UK, Ireland and the US in a number of recent studies (Ackers, 2001; Van de Sande et al, 2007). The length of doctoral research reflects a range of factors including the structure of doctorates, funding systems, academic culture and the nature of career progression systems in different national contexts. The UK, Ireland and the US are widely viewed as locations in which doctoral programmes are more structured and regulated and therefore 'quicker'.

[In Portugal] it used to take about 4 years (from graduation) to get a Masters and then another 6 to do a PhD (with 3 years' leave). So it took a long time to get a PhD – so now a PhD is needed to get into an academic post -and a primary motivation for going abroad is to speed things up.

I had the impression of this -what was the expression a 'life work' that to do a PhD in Portugal used to be such a large thing and I knew from the beginning that I could never do such a thing. I had the impression that in UK things would not be so [difficult] not in terms of rigor but in terms of it was more feasible.

Another Portuguese respondent had spend 6 years doing her PhD and explains the 'different expectations' that exist in Portugal:

What we are expected to do here is quite different to what you are expected to do in England. Of course this also depends on the field. People still believe here that the PhD is a kind of masterpiece in your life – our projects are very extended and it is very difficult

to accomplish that in 3 years. And also there are other things concerning the supervision process. We have another belief that you should leave your PhD student at ease and allow him to be completely autonomous in his work – so you are not exactly supervised.

I got the feeling that it is MUCH more directed in the UK. We had schedules, dates for parts of the work which is something we don't do here – there was more structure and focus – those are the essential advantages – of course you could contact other people too and have access to other realities – knowledge and ways of doing things – but I think primarily the big advantage is time.

Of course this does not imply that doctorates from these countries are necessarily seen as superior or even of equivalent quality. Although the UK and the US have an established international reputation (see below/above) the pressure to complete within a shorter timeframe is sometimes viewed as implying less intellectual rigour.

To the extent that these concerns play a major role in shaping mobility decisions they will primarily affect those researchers prepared to contemplate registering abroad and, in the main, spending the whole of their doctorate living abroad. One exception emerged in the study involving a doctoral researcher resident and working in Portugal but registered in the UK on a part-time basis as an 'away' student. This type of arrangement is becoming increasingly popular in the UK but is currently predominantly restricted to students resident in the EU.

4.5.2 Research Productivity

For many other researchers, it was not so much the registration period as the value of being able to concentrate on their research. This ability to focus reflects the benefits of extrication from other professional and personal commitments or 'distractions'. From a professional perspective, it typically implies release from other duties or expectations such as teaching or administration. From a personal perspective, it enables many mobile researchers to work extended hours in the absence of family and social commitments. Put simply, during periods abroad, researchers can work solely on their doctorates during working hours and can augment this with extensive additional hours, often at weekends and in the evenings. This ability to work '24/7' is not without its disadvantages of course. It means that, in practice, many mobile researchers fail to develop active social lives in the host country or to engage in the wider life of the host institution. The 'opportunity' to work in such an intensive fashion is also not open to everyone. Those researchers who move with partners and children are less able to 'benefit' in this way (see below) (Ackers, 2007).

A recent evaluation of the impact of the European Commission's Marie Curie Fellowship Scheme which provides funding to both doctoral and post-doctoral researchers identified access to 'dedicated research time' as one of the 3 most critical impact factors, 'enabling fellows to work effectively, increase their research productivity and place them at a competitive advantage in their careers' (Van de Sande, Ackers and Gill, 2007:7). An evaluation of academic mobility funded by the German Alexander Von Humboldt Foundation scheme (Jons, 2007) similarly identified time as one of the most significant motivational factors. A further breakdown indicates marked disciplinary diversity; social scientists rate time far more highly than other disciplines (Table 2, p.111). These sentiments were echoed in the NORFACE interviews:

Of course they say they are doing it abroad because it is better, supervision is better but at the end they admit it is because they can do it faster -they don't have teaching or kids – there I am only doing my PhD -I don't go to the cinema so I have to use that time.

When you go abroad for academic purposes you focus on our work in a different way. It didn't mean that they didn't have some social life but they really focus on work and so progress in a faster way. The whole situation of leaving family and friends and the fact that sometimes being abroad is a kind of sacrifice in financial terms. I believe in that condition people tend to concentrate and focus and dedicate all their time to the PhD.

I could have done it [abroad] much quicker because I wouldn't have other solicitations …you are there primarily for work so it is less likely that you are interrupted with other things.

Some respondents were concerned that their inability to move due to family responsibilities (see below) would have implications on their productivity for this reason:

For me, any possibilities for being mobile depend a lot on possibilities to take my family and children with me, which increases, I guess, the costs of the project and significantly also might make it as a whole less effective than for those with no family obligations.

Mobility fellowships often buy research time as much as international experience. One respondent expressed concern that the ability to focus on research reflects the lack of integration into research groups and institutions leaving them 'out on a limb'. Another describes internationalisation as;

'a kind of political principle …. [which says] nothing about the quality of the experience abroad because people go to places to do things with no networks and [although] it sounds very pompous -to do a 'visiting scholarship' -it might mean in practice that you go to the library and talk to one or two professors but in your CV this sounds like you were a very internationalised person.'

The quality of the researcher's relationship with the host institution turns both on their personal objectives and the resources and support available. In some cases the experience had failed to meet expectations. The following respondent was disappointed to find that his office was located in an annex, the key people in his area were absent and there was no support in finding accommodation. As a result, he found his time abroad unproductive and cut short his visit:

I intended to be there for longer [than three months] but I didn't get very much work done so I headed back. There were a few people at the department who were working [in my area] but they were not there that semester.

One supervisor referred to the 'artificial' quality of some mobility experiences where doctoral researchers move into situations where they;

Don't have many contacts, they go into a research centre or university where they're not even working very much on that theme, well then it would be negative rather than positive. Maybe an important personal experience but it probably wouldn't bring very much into his PhD. So it has to be mobility in view of enhancing the work he's doing in terms of his PhD. [Otherwise] it's rather a waste of public funds to go abroad just to be away from your family (in order to have more research time) and receive double the amount of money which you would normally use in Portugal. It seems rather a waste of public funds.

This raises the question of whether using mobility as a means of freeing-up research time is an effective and efficient way to utilise scientific resources or whether it may be more efficient to fund systems of research leave at national level (to realise this specific objective). In Portugal, the additional stipend payable during periods abroad vastly increases the costs of research leave.[32]

Although most national career progression systems tend to privilege research outputs over performance in other areas (such as teaching and administration), marked variation persists both between countries and disciplines. In some cases, respondents expressed concern that spending extended periods of time abroad might disadvantage their career progression to the extent that it makes it hard for them to become integrated in teaching teams and gain the necessary experience for progression into permanent lecturing positions. Evidence of this concern was seen in interviews with legal researchers in the UK reflecting the specific nature of career progression in this discipline area where doctoral researchers tend to move directly into junior lectureships rather than undertaking post-doctoral positions (Ackers, 2005a). Research council funded 'students' in the

[32] We were informed that the stipend for a doctoral scholarship in Portugal is set at 950 € per month for periods spent in Portugal and 1,700 € per month during periods abroad.

UK are permitted to teach for up to 6 hours per week. Whilst this 'rule' was initially introduced to encourage students to focus on their doctoral research and complete on time, it is now often viewed as a positive and even necessary element of the doctoral 'process.' One supervisor in the UK explained the increasing pressure for doctoral students to demonstrate in a broad spectrum of areas in order to increase employability. Although the 'thesis' remains important in the UK, doctoral researchers are expected to gain teaching experience, present their work at conferences and publish:

[Spending time abroad can be a distraction] because I think that, you know, no sooner do you start your PhD and you have to start thinking about conference presentations and publications because you need to have 2 publications now don't you to get an academic post as well as your PhD and I think there's so much more emphasis on that now and I think you don't get the same exposure if you don't go to conferences [in the UK] from a fairly early stage. I think you do need to develop links with academics in your own country if that's where you see your future career.

Although many respondents talked of the ability to focus on their work during their stay abroad (as we have noted above), others argued that spending time abroad might distract them from their primary concern – namely with their doctoral research. Moving and settling in another country and research institution often takes a considerable amount of time and this may delay progression with the thesis. The extent of this 'distraction' will vary according to personal circumstances and the degree of support offered to the mobile researcher.

A researcher funded under the Marie Curie scheme explained how he had moved from the US to France with a partner and new baby and sorting out basic issues like accommodation and healthcare meant that it was 3 months into his fellowship before he was able to work effectively (cited in Ackers, 2001, p.89).

Although the process of settling, socialising and communicating in a foreign country is both interesting and character-building, it may restrict professional engagement. The following respondent argues that these 'life experiences' are important but are best undertaken at an earlier stage:

At PhD level it's too much. There isn't time. This is a different thing. Just to get experience abroad you can do this through ERASMUS. But at PhD level it's only [important] when people have specific results.

Some supervisors also expressed concern that doctoral researchers should 'sit tight' and focus on completing their research rather than spending time abroad during their PhDs. In a number of cases Portuguese respondents said that their supervisors even discouraged them from attending conferences abroad during their doctorates for this reason, preferring them to engage in this form of activity after completion:

My supervisor told me, you have to focus on this and only after that you will be able to go to conferences.. only after the PhD. So I really don't have that stimulus to [go abroad]

For students that are not completing comparative study, mobility may be perceived as irrelevant to the topic or as jeopardising timely completion of their doctorate (and increase the time it takes to secure employment):

And now at the end [of the doctorate] it's a decision between pitching for some money which you may or may not get to go overseas for 6 months or finishing and getting a job, well you know I can't take that kind of risk.

Conversely, in the UK, there is a strong and growing expectation that doctoral researchers will attend and present their work at international conferences during their doctorate. However, spending longer periods of time abroad can be viewed as a distraction unless the substantive scope of the research requires it.

These concerns are rarely witnessed in interviews with natural scientists and to some extent reflect the specific nature of social science research.

Research in many areas of the social sciences requires much more careful attention to linguistic competence and cultural nuance involving work with ordinary citizens – human actors -as opposed to inanimate materials. Whereas natural scientists require a level of competence (usually in English) to communicate with their colleagues in the lab., social scientists face a more significant linguistic challenge. One respondent expressed concern at the time it would take her to achieve the level of linguistic competence necessary to conduct sensitive social science research;

I suppose it depends where it was and what the environment was like – if I was attempting to speak in a non-English speaking context I would be set back a couple of years whilst I tried to learn the language.

Unless the host country becomes the 'lab', in the sense that it is central to the fieldwork, mobility may generate 'diseconomies'. Even where mobility was used primarily as means to undertake fieldwork in the host country the above respondent urged caution:

It's also important to remember – what are you going to learn in one year? It is slightly dangerous to delude yourself that you will get an in-depth understanding and think you are an expert – you need to be very conscious of your own cultural limitations.

The following researcher echoes these concerns emphasising the importance of spending longer periods abroad and receiving effective support in the host context:

If you're going to use foreign material you have to have someone familiar with the system who can really lead you to the right sources. It's much easier to misunderstand things when you're studying foreign stuff'.

4.6 Discipline and Topic Specific Concerns (fieldwork and comparative research)

The concern expressed by the previous two respondents leads us to consider the question of fieldwork. When interviewing researchers for the NORFACE study we were struck by the tendency for many to immediately assume we were asking them about their fieldwork and whether they were engaged in comparative research. Our 'surprise' at this perhaps reflects our focus on natural sciences in previous studies where the subject of research is rarely context-dependent to the same extent as social science. Clearly the most 'obvious' reasons for going abroad during a doctorate often concerned the substantive focus of their research although this is also influenced by the methods they are employing. More anthropological or qualitative research usually requires some physical presence or very close collaboration within cross-national research teams. More quantitative work involving secondary analysis of national and European data sets places less pressure on researchers to spend time in the countries concerned although arguably even this kind of research needs to pay greater attention to national context in order to avoid empiricism (Ackers, 1999).

Jons' research identifies critical 'field specific cultures of academic mobility and collaboration' which mean that, 'the expectation of mobility varies in different fields of academic work' (2007;88). One reason for this lies in the highly contextualised (or 'physically embedded') nature of much research in the social sciences and humanities. He argues that the, 'mobilization of researchers in the arts and humanities is more difficult because 'language skills and cultural knowledge are often necessary for conducting research projects'. Jons contrasts this kind of 'strongly contextualised' and 'lowly standardised' empirical research – which is tied to a specific location – together with work in new and developing fields with mush experimental research in the natural sciences which is 'highly standardization, low contextualisation and high materiality'. Such forms of research, he argues are most rarely tied to one site and more facilitative of mobility (2007: 98).

The following Norwegian supervisor identifies disciplinary differences affecting mobility:

It differs between the various disciplines, so anthropologists would typically go to do field

work. Less frequently sociologists but I think there's something about sociology being a particular science. Many of the topics are in one way or another related to them, Norwegian welfare state and Norwegian research council, you know, what kind of research programmes are they running at the time and so on. Of course there are some people that have certain international topics.

Although the language is a little difficult in this excerpt, the respondent appears to be drawing attention to the influence that research funding priorities have in different disciplines and suggesting that funding priorities in the discipline of sociology (and perhaps social policy) are more likely to reflect specific national concerns.

Doctoral candidates also highlighted sub-disciplines that had less of a tradition of mobility. A social historian undertaking her fieldwork abroad made the following comment:

Many historians only work on their own country; it is uncommon to study the history of another country.

Many of the doctorates being undertaken by the questionnaire respondents had an international dimension or focus in the study, with 44% completing a comparative study[33], just less than a third completing fieldwork abroad, and a quarter using transnational data-sets (Table 4).

Different approaches to comparative study are evident between the disciplines. For example, 78% of respondents in law and juridical studies were completing comparative research but only 29% were planning fieldwork abroad, whereas in sociology, only 34% of respondents were completing a comparative study but 26% were doing fieldwork abroad. Psychology tends to be studied within a single country context, with just 18% of doctorates being comparative and 14% doing fieldwork abroad. Many political science and administration doctoral researchers were doing cross-national work, with 43% doing fieldwork abroad and 59% completing a comparative project. Around half of all respondents in business studies were doing comparative research and 40% were doing fieldwork elsewhere internationally.

Although fieldwork was a powerful motivator for mobility, both supervisors and doctoral candidates expressed some concern about the level of understanding that may be achieved in comparative studies conducted through secondary analysis or fieldwork in a different country. The challenges of researching 'foreign' legal systems was raised on a number of occasions:

It would be extremely difficult to study (parts of) Norwegian law without staying in Norway at least for some period. That does however require that the Norwegian contact with the visiting PhD students is good. To a certain extent that is a question of resources but first of all a question of personal attitude (on both sides).

Different legal systems require not only language, but also legal skills in the foreign legal system.

As we have noted, comparative research involving secondary analysis of statistical sources is

Table 4. *International components in doctoral projects*

	M/D	Undecided	No	Yes	Total
Comparative component (focus on more than one country)	.7%	8.9%	46%	44.3%	548
Involve empirical research/fieldwork in more than one country	.7%	9.7%	59.9%	29.7%	548
Analysis of trans-national data-sets	7.1%	9.3%	58.9%	24.6%	548

Source: NORFACE Survey

[33] As mentioned previously, the sample may be skewed slightly in favour of doctoral candidates who were doing comparative research (as they may have been more interested in participating in this study).

generally considered achievable in the absence of mobility especially when the researcher is based in a well-resourced environment. The following UK-based researcher explains why mobility is neither 'necessary' for him but could also constitute a risk in the UK context (which places considerable emphasis on timely completion)[34]:

Most of my research is based on statistical analysis of cross-national datasets so I don't need to collect data abroad and I have excellent facilities where I am, plus my college and department are filled with experts in my field and methodologies. In addition, since my project is funded by the ESRC, I am under high pressure to submit within the 3 year deadline and therefore do not have much free time to spend going to conferences.

The following Canadian researcher based in UK also alludes to certain perceived risks of researching a country they are not based in – even though she is Canadian and has spent significant amount of time their during her doctorate:

I am scared that I will never be fully recognised as someone who knows about Canada because I studied Canada in a foreign university so there's the credibility aspect. I'm a bit worried about it but I do have access to the data that Canadian based researchers could have access to and some of my results were quite similar to the results in the previous literature which is a good thing.

One of the survey respondents also expressed concern at the valuation of her doctorate because she had completed it in Sweden where the field is relatively small:

The field is small in Sweden but large in many other countries, which means that I have difficulties competing for jobs since the level of my PhD might not be as advanced or as desired as PhD from these countries.

Although we have noted the influence of disciplinary differences on mobility, it is important to recognise the growth in inter-disciplinary approaches. The comment abut history (above) is a case in point as the respondent was in fact engaged in an interdisciplinary social history study and her decision to register for her doctorate in the UK was directly related to the development of this kind of approach in the UK. Sixty-three per cent of survey respondents classified their doctoral project as interdisciplinary. Doctoral candidates in education, law and media studies were most likely to classify their doctorate as interdisciplinary, while those in economics and psychology were least likely (Table 6, Appendix 2).

4.7 Language and Mobility

Language can impact on mobility of doctoral candidates in a number of ways. Language often determines the destination of mobile researchers by either encouraging people to move to a particular country or by putting them off. The following respondents explain why their own language skills influenced their decisions about where to spend time during their doctorates:

Because we had lived in Germany when I was a child for a total of 4 years and I remember being able to speak the language and I picked it up again during my bachelors …so I signed up for an 8 week course in Berlin.

Q: I just wondered why those particular countries were of interest to you?

Well mostly because I speak English. Nothing really more than that.

In some cases researchers were keen to exercise mobility in order to improve their linguistic competence to specifically enhance their doctoral research:

The most difficult problem for the PhD students from abroad is the language problem. To quite an extent books and articles on Norwegian law are written in Norwegian.

That time it was to learn German. I was interested in

[34] Institutions in receipt of research council awards are penalised for poor completion rates. As a result considerable pressure is placed on candidates to compete on time.

German philosophy, so I wanted to read the original so that was the motivation. And also during my PhD I went to Dublin, to an exchange programme. And that was also to try to use my English. I mean, I'm writing in English but I don't use it orally.

In many other respects respondents spoke of the importance of developing oral and writing skills in English as a more general transferable skill. Research leaders, such as Sweden's new university chancellor, Anders Flodström, argue that English has become the 'lingua academica'[35]. Many researchers (in common with the following respondent) therefore use mobility to allow them to improve their command of English:

The main point in going to the UK was to improve my English and gain that 'capital' not only for working in the academy – but you need that linguistic capital. To go to congresses etc – I need to practice English.

Our previous work with natural scientists would very much support this view. Not only is much of the scientific publications in English but so too is the 'language of the lab' partly reflecting the much higher levels of internationalisation is some science labs. Nevertheless scientists often find it difficult to integrate more socially in the host countries outside of their work. The NORFACE study identified more serious communication problems within the workplace. Although many said they were able to speak in English and did so at formal meetings, they continued to use their national language for more general purposes at work and in more informal activities. The following German supervisor suggests that the continued use of German as the 'working language' may deter potential doctoral researchers:

German [is the working language of the group]. That might be a problem for attracting more foreign PhD students but we all speak English and our seminars are in English often but the main working language is German. There are some universities and departments where the working language really is German. It might change but we are very much concerned with German economic policy so most of our writing is also in German.

[35] ACA newsletter Sept 2007

The following German researcher, based in Denmark was experiencing some unanticipated difficulties as a result of language:

I am facing a language barrier. Where I am now, English is not at all the working language so in order to become integrated and to fulfil my teaching obligations I have to learn Danish.

Two other respondents said that although the 'formal working language' was English, more informal communication took place in the mother tongue. This is likely to restrict the social integration of mobile researchers:

When I present my work I will present in English – we do that also here because we have English speaking staff and some guys that don't speak Norwegian at all. [But] when taking coffee with the guys at Copenhagen I will speak Norwegian.

Seminars are taught in English and PhD courses are usually also taught in English but communicating with colleagues it's mainly German…

One quite specific problem that emerged, mainly in the Portuguese cases involving cosupervision concerned the language of the thesis and viva. Although there is a growing trend in Portugal permitting researchers to present their theses (and conduct the viva) in English this is not yet universal. This not only affects non-Portuguese researchers (and may deter applicants) but also nationals whose supervisors do not speak Portuguese and therefore have problems assisting with the thesis and understanding the viva:

Nowadays PhD's can be done in most universities in English or in two different languages. I would have had to do mine here in Portuguese which means that my supervisor wouldn't have read it.

A further factor distinguishing social scientists from natural scientists were concerns, quite commonly expressed, that the level of language competence required to undertake effective social science research abroad was very high and the time taken to achieve this level of linguistic

competence could delay the thesis. The following UK researcher speaks of her desire to learn another language but feels that getting to a standard of language proficiency that would allow her to work effectively in a language other than English would take considerable time:

I've attempted to learn several languages and I've been to evening classes for French and actually I am really keen and I think that would be the one thing that could really tempt me to go abroad. You know to really spend some time there and immerse yourself in the language and try and learn it properly. But that's not really work related and it would be hard to do that while also working, you'd have to either work in English which defeats the object or know a lot of the language before you go.

4.8 Choice or Constraint? The 'Expectation of Mobility'

Previous sections of the report have considered some of the factors shaping doctoral researcher's mobility. Although the emerging picture is complex and nuanced some clear 'benefits' of mobility are evident. Mobility in various forms may free-up research time, improve access to specialist knowledge and supervision or physical resources such as archives and libraries and help to build research networks and collaboration. On the other hand, the study has shown how mobility may prove a distraction perhaps delaying the research, it may interrupt optimal supervision programmes or the experience may be artificial or result in a level of isolation.

Academic careers, especially in the natural sciences, have long been associated with high levels of physical (geographical) mobility. Over time this 'practice' of mobility has become deeply embedded in career structures to the point at which it has become an 'expectation'. The fact of mobility has been divorced from the objectives associated with it to become almost a rite of passage; a convenient, independent, indicator of excellence rather than a means to an end (Guth

Table 5: *Perceptions of the Importance of international mobility to career progression by discipline*

	How important do you think international mobility is to the individual career progression of researchers in your field? (1 not at all, 5 very imp)						
Main social science discipline	**[No Answer Entered**	**1 Not at all important**	**2**	**3**	**4**	**5 Very Important**	**Total**
Business Studies	11.3%	1.6%	8.1%	14.5%	35.5%	29.0%	62
Cultural Anthropology	7.1%		7.1%	14.3%	28.6%	42.9%	14
Economics	6.6%	.8%	4.1%	9.9%	41.3%	37.2%	121
Education and Didactics	6.3%	6.3%	18.8%	37.5%	31.3%		16
Law and Juridicial sciences	3.6%	3.6%	10.7%	25.0%	32.1%	25.0%	28
Media, Information and Communication Studies	13.3%		6.7%	6.7%	53.3%	20.0%	15
Other	15.5%	3.1%	4.1%	22.7%	30.9%	23.7%	97
Political Science and Administration	10.7%		1.8%	17.9%	42.9%	26.8%	56
Psychology	11.1%	1.6%	1.6%	28.6%	31.7%	25.4%	63
Social Policy	9.1%		27.3%	27.3%	27.3%	9.1%	11
Sociology	7.7%		9.2%	21.5%	29.2%	32.3%	65
Total	**9.9%**	**1.5%**	**5.5%**	**18.4%**	**35.6%**	**29.2%**	**548**

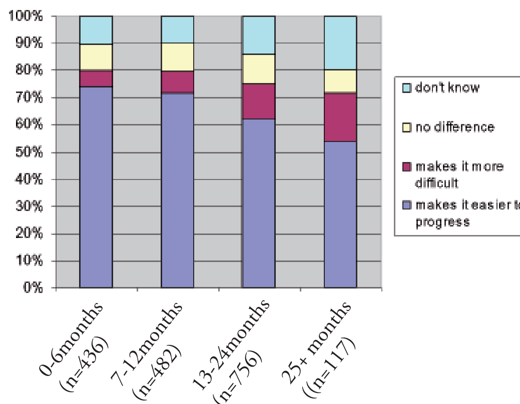
Source: NORFACE Survey

and Gill 2008; Ackers 2008). Historically, high levels of mobility in some areas of science, particularly where experimental scientists needed to physically access large scale facilities (which are increasingly clustered geographically) were the bi-product of other scientific objectives. These clusters of high quality infrastructural resources were also closely linked to human capital attracting established and renowned researchers. Mobility was, and continues to be, an important mechanism to access scientific resources and the 'know-how' and 'know-who' critical to scientific success. Mobility in itself is not an outcome, however, and the success of the 'project' should be judged according to specific scientific outcomes and not migration as such. The NORFACE study has identified similar trends in the social sciences as mobility increasingly becomes an 'expectation'. The following section outlines some of the concerns that respondents expressed. Firstly, it is important to note that disciplinary differences are apparent in relation to the 'expectation of mobility' and perceived links between mobility and career progression. (Table 5)

Respondents in some situations raised concerns that the pressure on institutions to 'appear international' was leading to a degree of discrimination against nationals and sometimes also returnees. Previous work with natural scientists in Poland, Bulgaria and Italy found similar forms of discrimination against returnees but in these cases this often reflected a preference for 'insiders' (and a level of patronage and corruption) rather than the apparently tokenistic employment of foreign researchers. The Marie Curie Impact assessment study (Van de Sande et al, 2007) asked respondents to identify the impact that mobility had on their ability to return and re-integrate in their home country. The finding were quite interesting. Although there was a general view that mobility facilitated progression in their home country (indeed in some cases it was seen as essential), longer stays created greater difficulty in re-integrating:

Figure 2: *Impact of Mobility to Progress in Home Country on Return*

Impact of mobility to progress in home country on return, by duration of MC



Duration of MC fellowship

Source: Van de Sande et al, 2007 :9

When doctoral researchers in the Marie Curie scheme were asked to indicate the 'optimal' length of fellowships abroad they tended to support the idea of shorter to medium term stays:

Table 6: *Optimal Length of Doctoral Mobility Stays*

1–6 months	29.5%
7–12	33.9%
13–24	18.7%
25+	17.9%
Total	100%

Source: Van de Sande et al, 2007, p9

Views about the optimal duration of early stage Marie Curie fellowships was related to scientific discipline: natural sciences are generally associated with longer stays with the actual duration clustering around 2 years. Economists and social scientists generally stayed for shorter period with around two-thirds staying for 1 year or less. 39% of economists stayed for less than 6 months.

Respondents in the NORFACE study expressed similar concerns. A key informant in Portugal acknowledged that there were certain risks associated with mobility. The risk of losing contacts or not gaining work experience in the national context could potentially mean that researchers returning to the home country following an extended stay abroad find it difficult to compete with local candidates in competitive recruitment markets.

It depends what you want to do after – if you want to teach here you need to keep a strong foot here and make sure there is recognition – if it is totally done abroad you will find it difficult because it is so competitive especially now because of Bologna they are giving to lose staff – cutting courses from 5 to 3 years – means that they have to restructure and fewer staff are needed.

Respondents were also concerned that the pressure to recruit 'foreign' researchers in order to appear international (and therefore competitive) might actually disadvantage even those nationals who have been mobile:

Another problem for Portuguese people went to other countries and then try to get positions back in Portugal – the faculty is prejudiced towards the Portuguese because one of the criteria for the evaluation of the centres is the degree of internationalisation or, the number of people from other countries so more and more foreign people will get positions. When you make the candidature the Portuguese can lose out – even the ones that studied in the centre. So people that do their PhDs here they can't stay. They see people come from other countries to take the positions. This is most problematic in big competitive prestigious centres – less so in more regional institutions -we don't feel that pressure (to recruit foreign people) so much yet but it is coming.

Another Portuguese doctoral research expressed very similar concerns suggesting that the pressure to internationalise not only made it hard for her to progress without going abroad, it also made it harder for her to progress in Portugal as foreign applicants were, 'privileged -the level is very unequal, you know … foreign researchers are here because they are foreign and not really for the quality.'

Although these respondents suggest that the pressure to internationalise is encouraging to recruit researchers from abroad simply in order to appear international in many cases they linked this to the perception that research degrees in some countries (and the UK and US in particular) were viewed as inherently superior. Whilst some respondents accepted this logic others were critical of the elitism underlying these assumptions and concerned about its impact on the valuation of their doctorate:

The Portuguese look at the UK education system and put it on a pedestal, the opportunities, the level, the research that goes on there.

I think the Portuguese have an inferiority complex – anything that is Portuguese is not as good especially as Northern European countries. People assume if something comes from another country it is better. I think someone who has come from abroad would be privileged. Unless there is the typical Portuguese corruption and they try to recruit someone they know.

It's as if it was better to do a PhD in a very small university in England – imagine which not even English people want to go to, you know. It's kind of a statutory logic and not really a contents logic.

In practice this privileging of some locations influenced researchers' decisions about mobility and doctoral registrations:

In Portugal a foreign degree is more valid than a national degree Does it matter where you go? Yes, it matters, if it is a good university, it's reputation, that's important but some countries are almost automatically good. If you go to England or France or Germany well even if you don't know the concrete work of the person if you know that she has a PhD in English university, you value that more than if it was done here or in Lisbon or Trieste. It's not that its [value] is translated … it's not a fact, it is something implicit.

But now when it comes to evaluations – if you have a PhD awarded outside of Portugal you will get a good point. In synthesis, for people from the academy doing their PhDs out of the country – they are conscious that they can do the same here in terms of quality but internationally – to be evaluated at international level – this is positive. I think we can do the same thing here in Portugal – we have the conditions. It should not be 'forced' but there is no alternative.

The respondent in the last example went on to recount her colleagues experience of doctoral mobility. Her colleague had spent most of her time during her doctoral research abroad but had registered in Portugal and received a Portuguese qualification. In retrospect she felt that her qualification would have been significantly more valued had it been formally registered abroad.

A researcher resident and registered in the UK argues strongly that foreign accreditation is more important than the actual mobility experience:

Even if you want to go back to Portugal you need to spend sometime abroad – whether you do a comparative study or not.

Q: Do you need to do a whole degree there or just spend some time there?

Get a British degree. It's the qualifications.

Q: So its not about accessing a particular supervisor or centre?

No, its because the British systems is seen to be excellent – irrespective of where you go – they have a basic knowledge of places like Oxford – but they don't have much detail – so if you are in a queue for a job .. its better to have a British degree.

They also attached less 'symbolic' importance to mobility in general but nevertheless referred to the continued valuation of 'reputational' capital associated with prestigious institutions (rather than countries):

I can't really see any major [intrinsic] benefit [to mobility] because … from a UK perspective maybe we're just too comfortable because I think we're fairly highly regarded internationally. If you ask somebody in another European country they might feel that there is more to be gained from coming to the UK but in the UK we don't really value international experience as such in law -unless it's institution-specific like say Florence [the European University Institute] or Fulbright – one of those really prestigious institutions or fellowships [but then] I think the prestige is the fellowship or institution not necessarily the quality of the work that you do while you're there.

Researchers and supervisors in the other case study countries gave the impression that the expectation of mobility is less strong, particularly in some disciplines such as law. One of the researchers in Norway (a German national) spoke of a 'strong suggestion that you should stay at least for 2 months abroad in our PhD programme [but] it's not mandatory.' A study on Internationalisation in Sweden found that in some cases mobility had become an assessment criteria:

> Study plans for postgraduate students at one of the larger institutions [required]… that each student must have completed at least three months of study abroad and also participated in and presented a paper at an international conference. These requirements must be fulfilled before a PhD is awarded and are monitored carefully by the institution. (Högskoleverket 2005: 60)

This Norwegian supervisor in sociology spoke of the benefits that different types of host institution may provide, pitting critical mass against specialisation:

I wouldn't say always go to a very famous place, you know …a very established place is good because there are many people but then it might also be good to go somewhere where there's one academic who is sort of very well established in that particular research and that may not be a very prestigious university.

This concern about the quality of the host institution was echoed in our work with Marie Curie Fellows. Although some institutions clearly have an inherent internationally appreciated

'prestige' and spending time there brings some reputational capital to the researcher, in practice it is the quality of the relationship with the supervisor that is of utmost importance and this bears no direct relationship with institutional prestige. Indeed smaller host institutions often have more time to spend with the incoming researcher.

This idea is echoed in other comments that the quality of the mobility experience is more important than mobility itself. The following British researcher explains the potential value of mobility:

I would like to meet people and establish a sort of genuine collaboration that could be ongoing so that maybe I could go and visit for a year or even two years but then keep on working together and build up a proper network because I think that would yield some really interesting and useful research. At the moment without a genuine research partner it seems almost a bit superficial and like I would be going abroad just for going abroad and not really because that's what's the best thing for my research.

This Norwegian supervisor echoes these sentiments:

I don't think [the fact of mobility] is important compared to what they have done abroad. It's more about … publications and oral contributions at home. What do they know? It doesn't matter so much Oxford or Cambridge or Harvard -it's presentations and what do they know when they come home. Permanent positions are given in open competition and the assessors read all the applicants work and there's a presentation and that's more important than where they have been.

These concerns that the fact of being abroad and obtaining your doctorate abroad is viewed as inherently superior, irrespective of quality were part of a wider and growing concern that mobility (and its implicit association with internationalisation) was becoming 'a metric'[36] .

Academic work is getting more and more mechanical. Sometimes we say that our work is evaluated on a metric system – ok 5 posters, 3 articles, supervising PhDs; it's getting too quantitative – we feel that they have turned internationalisation into a metric – to be mobile, that's another factor. The fact is that no one is watching what we are doing. No one is interested if we do work with quality or not – that's the tyranny of numbers.

The tendency of evaluation system to conflate mobility with internationalisation was remarked upon by a number of Portuguese respondents. It is clear from their comments that it is not only receiving a foreign qualification but also attending international conferences and being involved in international teams that appears to have some inherent value. One Portuguese researcher said that, 'internationalisation was becoming a metric you have to go to international conferences' which she described as a 'lottery' and often of little concrete value. Furthermore, 'Involvement in international teams is also specifically valued even if the quality of the networks is poor.'

People are concerned that mobility is a criteria for evaluation -you have to have your curriculum and 1 of the criteria is the degree of internationalisation. People don't know exactly what this means – what internationalisation can be.

4.9 The Relationship between Mobility and Internationalisation

The tendency to use the language of mobility and internationalisation inter-changeably generates the impression that being mobile, automatically increases exposure to internationalisation. This is by no means always the case. Of course it does mean spending time in another country but the quality of that experience in terms of its contribution to doctoral research varies significantly depending on the location and context. One of the principle attractions of the UK to foreign researchers is the level of international recruitment. One of the key informants interviewed in the course of the research explains the value of the UK as a location:

I tell them that if you go to the UK you won't only meet English – it's international. The UK is a wonderful

[36] Other research has shown that valuation of doctorates from abroad depends on where the host is with 'known' or proximate countries often being favoured over qualifications from developing countries (OECD 2001: 95).

melting pot for different nationalities to get together -it draws from a global market – that's the wealth of the UK really.

For researchers based in internationally networked institutions this still offers vital access to the global research community. Doctoral candidates in the UK and Germany in particular felt less pressure to be mobile when they were in 'international' research groups or departments. There were also more personal reasons for not moving abroad:

I simply feel at home in Berlin. I've so many friends in all kinds of extra curricular activities that I've done at the university like organising an annual seminar so that's why I stayed here during the diploma studies. And afterwards currently I can exactly do the kind of research that I wanted to do. So there are four universities in Berlin and many extra university research institutes … one of the reasons, why I started my PhD in Berlin was because I thought there is many reasons for maybe opportunities for cooperation with other universities and that was exactly what's happening right now.

One of the researchers interviewed in the UK (an economist who has not been mobile himself) describes the composition of his research group:

A couple of UK, a Bulgarian, Greeks, Chinese and some Turks I think. The tutors … a Greek, a Turk and 2 Brits or something like that. That's the only sort of overseas international experience I've had but in the School here I think there's only about 3 British PhD students.

Of course these examples illustrate the danger of national stereotypes as levels of internationalisation within the UK vary enormously between institutions and disciplines.[37] In another example, the respondent described how moving out of Brazil to Portugal actually reduced her exposure to international contexts. In Brazil she worked in a highly international environment reflecting the national policy commitment to internationalisation. She was attracted to move by the development of a 'new line of research in Portugal' but 'got a bit frustrated after coming here because I realised that in terms of internationalisation and international contact I had much more possibility [in Brazil] than here. I used to have contact with the world and now I don't. In Brazil people are more culturally oriented to international contacts than here in Portugal. I am the only non-Portuguese researcher in my research centre.

These examples underline the importance of understanding the specific context within which mobility takes place in order to understand the value it adds to research and researchers. The following respondent describes the relationship between internationalisation and mobility:

Internationalisation is not the same thing as mobility – you may have a lot of mobility and not be exactly internationalised. I think internationalisation has much more to do with having access to certain networks, which for all purposes are considered the state of the art – it means that you have access to publish for instance in top journals – access to joint projects with experts in a certain field – that is internationalisation as I see it – of course mobility may help you internationalise because you gain contacts – there is also a political dimension to having access to journals and certain networks – there is a political arrangement let us say because there are closure processes both here and abroad so mobility may give you access to certain people which makes it easier to have access to the journals and projects and networks and so on.

One of the unintended consequences of this specific valuation of mobility as an indicator of internationalisation referred to by many respondents from across the partner countries concerned its influence on the selection of substantive research topics.

One British researcher argued that, *'not everyone's research depends on that kind of insight particularly if you are not dealing with experiential research or quasi anthropological observations – it should be possible to recognize the value of research that doesn't involve country comparisons'.*

[37] The levels of international recruitment in the field of economics is very high. For further details see Ackers et al (2006).

One of the Norwegian supervisor expresses some cynicism at the pressure to look abroad for research topics:

Instead of going to Harvard it might be a good thing for Norwegian social scientists to spend some time in a northern Norwegian town and maybe he will find out something that surprises him.

The following two Portuguese doctoral researchers were engaged in more localised anthropological research in a specific rural area and expressed concern that this kind of work could become more difficult to justify or attract funding for:

Sometimes our work is very grounded in a local basis ..But that kind of work is not very open to internationalisation. So maybe we are losing some research opportunities because there are these pressure for… mobility and to internationalisation.

The themes – what is going to be studied – is more important than where people are from. The pressure to internationalise makes people choose international topics and ignore regional or culturally relevant research.

To the extent that the selection of research questions (and the funding to support research) is skewed in favour of topics that lend themselves more naturally to crossnational comparison and mobility, this could lie in tension with measures designed to increase policy encouragement and promoter the relevance and impact of social science research.[38]

Mobility and the Carbon Footprint: an emerging concern?

Finally, it is worth noting the emergence of some 'ethical concerns' about travelling abroad repeatedly, particularly from respondents in the UK, who voiced a 'Concern over carbon footprint' and a disinclination to travel 'because of the environmental implications.'

4.10 Summary

There as many motivations for mobility as there are mobile researchers. In the overwhelming majority of cases the decision about whether, where or for how long to move involves a complex weighing up of professional and personal considerations. Equally, mobility must be seen as a process and not a 'one-time' event; decisions are constantly under review and subject to change.

Recruiting in Global Markets

International recruitment in global labour markets has a major impact on patterns of mobility. Competition for doctoral positions, coupled with skills shortages in some areas of social science (quantitative methods, economics, management and business studies and law) results in high levels of foreign recruitment in countries such as the UK and, to a lesser extent, Germany. Other countries, such as Portugal, recruit far fewer doctoral researchers from abroad.

Accessing Expertise: Supervision

One of the prime factors motivating mobility reflects the highly specialist nature of doctoral research and the quest for expert supervision. Researchers in smaller and less prestigious institutions, in particular, will be inclined to seek out specialist supervision outside of their own institution and often, abroad. A desire to engage in research in new or emerging areas or new approaches increases the pressure to seek supervision. The demand for effective, specialist supervision is met both through registration abroad but also through mechanisms such as co-supervision involving short stays. Co-supervision in the Portuguese context appears to be a highly effective and successful way of undertaking doctoral research. In other countries, such as the UK, this approach is less common and where it does take place, this is generally on an informal (unregulated) basis.

[38] It is interesting to note that similar concerns were expressed in our work with Polish and Bulgarian scientists although the focus was not so much on the choice of topic as loss of sustainable approaches and techniques that they could employ in their country of origin on return (Ackers, 2008).

The study also uncovered concerns that mobility may damage optimal supervisory systems. This concern was most marked in the UK where doctoral supervision has become increasingly regulated, structured and above all, monitored. Encouraging mobility during the doctorate could lie in tension with this policy. In some cases, especially when doctoral researchers spent time abroad undertaking fieldwork, they received little if any supervision 'on the ground'. This concern lead to a preference amongst supervisors for more carefully organised reciprocal schemes providing a 'protected institutional link'.

In other cases researchers felt that the tendency towards more structured partnerships and established groups introduced something of a 'strait jacket' limiting their autonomy to choose where they would like to go and might privilege more established Centres.

Time, Productivity and Mobility

The issue of time as a factor encouraging mobility and also determining location decisions reflects the persistence of marked national diversity in the time it takes to complete a doctorate. Many researchers were inclined to register in countries, such as the UK, where they could complete their doctorate n a much shorter time and achieve accelerated career progression as a result. The Bologna Process is beginning to iron out some of the major discrepancies in doctoral programmes and we would anticipate a gradual decline in this important motivating factor.

For many other researchers, it was not so much the registration period as the value of being able to concentrate on their research. This ability to focus reflects the benefits of extrication from other professional and personal commitments or 'distractions'. From a professional perspective, it typically implies release from other duties or expectations such as teaching or administration. From a personal perspective, it enables many mobile researchers to work extended (and often anti-social) hours in the absence of family and social commitments. As a result, mobile researchers are often quite isolated in the host institution and country. Funding for mobility is used to buy research time as much as international experience. This raises the question of whether using mobility as a means of freeing-up research time is an effective and efficient way to utilise scientific resources or whether it may be more efficient to fund systems of research leave at national level (to realise this specific objective).

In other cases, the difficulties of 'settling' and establishing themselves in the host country made time unproductive. Mobility in these contexts could delay doctoral research and completion rates. Greater assistance with finding accommodation, better support in the host institution and improved funding during stays abroad were cited as ways of improving productivity during mobility episodes.

Some respondents expressed concern that spending extended periods of time abroad might disadvantage their career progression to the extent that it makes it hard for them to become integrated in teaching teams and gain the necessary experience for progression into permanent lecturing positions.

To the extent that mobility had a wider experiential effect in terms of increasing awareness of other cultures and generally, 'character building', researchers and supervisors felt that it is better undertaken at undergraduate level. At doctoral level its value must be evaluated in specifically research terms.

Discipline and Topic Specific Concerns (fieldwork and comparative research)

One of the most 'obvious' reasons for going abroad during a doctorate concerns the substantive focus of their research although this is also influenced by the methods they are employing. More anthropological or qualitative research usually requires some physical presence or very close collaboration within cross-national research teams. More quantitative work involving secondary analysis of national and European data sets places less pressure on researchers to spend time in the countries. Many of the survey respondents had

an international dimension or focus to their work with 44% completing a comparative study, just less than a third completing fieldwork abroad, and a quarter using trans-national data-sets. Some disciplines, such as law for example, were viewed as generally less conducive to comparative analysis.

Language Opportunities and Constraints

Language can impact on doctoral mobility in a number of ways. Language often determines the destination of mobile researchers either because they are encouraged to move to places where they can communicate effectively already or because they are keen to develop their language skills. The desire to improve skills in English commonly expressed as a factor encouraging doctoral researchers to spend time in the UK.

Whereas natural scientists require a level of competence (usually in English) to communicate with their colleagues in the lab., social scientists face a far more significant linguistic challenge should they seek to achieve the level of linguistic competence necessary to conduct sensitive social science research.

The time taken to achieve this level of linguistic competence outweighed the potential benefits of mobility in some cases and particularly when researchers were under pressure to complete in a given time frame (as they are in the UK).

Mobility and Career Progression: The Valuation of Mobility and Internationalisation

Academic careers, especially in the natural sciences, have long been associated with high levels of physical (geographical) mobility. Over time this 'practice' of mobility has become deeply embedded in career structures to the point at which it has become an 'expectation'. The fact of mobility has been divorced from the objectives associated with it to become almost a rite of passage; a convenient, independent, indicator of excellence rather than a means to an end. The NORFACE study identified similar concerns among the social science community, particularly, but not exclusively, in Portugal. Respondents in some situations raised concerns that the pressure on institutions to 'appear international' was leading to a degree of discrimination against nationals and sometimes also returnees.

The risk of losing contacts or not gaining work experience in the national context could potentially mean that researchers returning to the home country following an extended stay abroad find it difficult to compete with local candidates in competitive recruitment markets.

Respondents were also concerned that the pressure to recruit 'foreign' researchers in order to appear international (and therefore competitive) might actually disadvantage even those nationals who have been mobile.

Although researchers ascribed value to established Centres of excellence or with prestigious supervisors there was some skepticism as to the accuracy of some of these value judgments which tended to ascribe an inherent superiority to some academic systems and, in particular, the UK. The value attached to 'reputational capital' (which underpins much mobility) was considered damaging in some cases and devalued the work of those who did their doctorates elsewhere.

These concerns that the fact of being abroad or obtaining your doctorate abroad is viewed as inherently superior, irrespective of quality, were part of a wider and growing concern that mobility (and its implicit association with internationalisation) was becoming 'a metric'. The tendency to use the language of mobility and internationalisation interchangeably generates the impression that 'being mobile', automatically increases exposure to internationalisation. This is by no means always the case. In some cases moving abroad for doctoral research reduced their exposure to international research environments quite markedly. In others, remaining 'immobile' seemed unproblematic as the researchers were embedded in strong and active international teams.

One of the unintended consequences of this specific valuation of mobility as an indicator of

internationalisation reflected its influence on the selection of substantive research topics. There was concern that the pressure to be mobile might discourage researchers from engaging in topics of important local or regional significance effectively privileging comparative research. To the extent that the selection of research questions (and the funding to support research) is skewed in favour of topics that lend themselves more naturally to crossnational comparison and mobility, this could lie in tension with measures designed to increase policy encouragement and promoter the relevance and impact of social science research.

Finally, it is worth noting the emergence of some 'ethical concerns' about travelling abroad repeatedly, particularly from respondents in the UK, who voiced a 'concern over carbon footprint.'

Section 5 Diverse People[39]

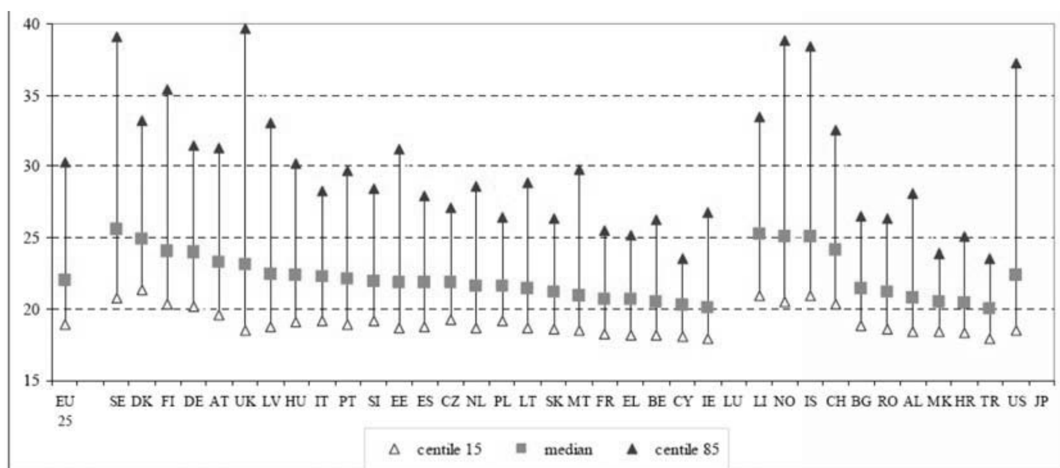
5.1 Introduction

The level of diversity identified in previous sections is compounded by the fact that the researchers themselves are individuals who respond to the opportunities and challenges that doctoral research and mobility offers to them in a wide variety of ways. Traditional migration (and labour market) theories tended to assume a rational, profit-maximising response and generally failed to take into account the fact that individuals are connected to families and friends and to that extent are not making decisions in a vacuum. Individual researchers are not equally footloose and their ability to respond to the range of opportunities in offer is mediated by their own personal situation. Previous research has identified a range of distinguishing characteristics including personal financial status, life-course and family status[40], disability and race/ethnicity[41]. Language competence could perhaps be added to these as a key factor shaping decisions about whether, where and for how long to move.[42] There are numerous reasons why researchers may not be mobile at any point in time. These might include a simple desire to remain at home, a fear of flying, limited language competence or confidence and personal or family responsibilities. Life-course is a major factor here and we must remember that the individual life-course does not always coincide with career stage. Many 'early career' researchers are not in the early stages of their lives and many of them will therefore have significant ties and responsibilities (Ackers, 2007).

5.2 Life-Course and Mobility

The age at which researchers commence and complete doctorates varies markedly between countries and by discipline reflecting the length

Table 7 *Tertiary Students' Ages in 2002/2003*



Source: Eurostat (2005) '17 million tertiary students in the European Union Enrolments 2002/03-graduates 2003 in tertiary education' Statistics in Focus, Population And Social Conditions, 19/2005

39 The impact of professional commitments on mobility, including the situation of part-time doctorates is discussed in Section x above.

40 Previous research suggests that gender, is not in itself a key determinant of mobility at doctoral level. However, responses to the presence of caring responsibilities and children may impact on men and women in different ways.

41 This is not an issue we have researched directly. We have, however, gained the impression that some ethnic groups could experience some prejudice or racism in different national contexts even if this arises out of lack of awareness. This was certainly the perception of one of our doctoral researchers from Kenya interested in conducting empirical in Poland.

42 The issue of language is discussed in more detail in Section x.

and structure of undergraduate programmes and different career paths. Eurostat figures show differences in the age profile of tertiary level students with Sweden and Norway having the highest median ages from the Norface countries (Table 7)

A European Commission Report[43] provides data on average age at PhD entry and completion.

Table 8: *Average ages at entry to doctorates, by Country*

Belgium	1994–97	23.5
Denmark	1989–95	31.5
Germany	1992	28.4
Ireland		23
Italy	1989	26.5
Portugal	1990–93	27.7
Sweden	1996	31
UK	1995-96	27

Source: (1998) Strategies and Policies on Research Training in Europe, European Commission44

The figures show a level of diversity in the age at which researchers commence doctorates ranging from 23 in Ireland to 31 in Denmark. A breakdown by discipline shows marked age differences at completion. In the UK, for example, the average completion age for exact and natural sciences is 26, compared with 31.5 for humanities, languages, education and arts. In the Nordic countries, where the average completion age is high for any subject, this reaches over 40 in some subjects. For example in Sweden, the average completion age for natural sciences is 32 compared with 42 for humanities. As the social sciences have a high proportion of doctoral candidates who have returned to study following life and work experience they are often anchored to the home country through their immediate and extended families and friendships.

The Marie Curie Evaluation included a question about future plans in terms of mobility. Although these figures include post-doctoral researchers they are presented here in order to illustrate the decline in planned mobility with age and specially during that part of the life-course when young children are likely to be present. (Table 9)

Table 9: *Marie Curie Fellows' plans for international mobility by age group*

	% Move country in next 5 years			
Age group	**Definitely not**	**Possibly**	**Definitely will**	**N=**
22 –29	4%	65%	31%	409
30–34	15%	66%	19%	794
35–39	21%	70%	9%	527
40–44	20%	70%	10%	105
over 45	9%	74%	17%	47

Source : Van de sande et al, 2007

Respondents to the NORFACE survey were invited to specify their age. The results suggest that the majority (90%) were under the age of 40 including 75% that were under 35, 50% that were under 29 and 25% that were 27 or younger. Taken together this data underlines the importance of recognising that the age of doctoral researchers varies by country and also by discipline. A significant proportion of them will be aged 30 or over and reaching a time in their lives when they are establishing partnerships and having children.

Partnering and Mobility

Partnerships often act as a strong anchor to the country in which the partner is residing. Of the

[43] European Commission (1998) Strategies and Policies on Research Training in Europe.
[44] Belgium -French Community only; Danish figures reflect the situation before changes were introduced in 1993; Portugal data for Ciência programme only.

respondents who completed questions about their personal relationships 69.6 per cent of women and 75.4 per cent of men were partnered. Of these, 60.8 per cent of female respondents partners and 65.8 per cent of male respondents partners were living in the same country as them. This indicates that around a third of all doctoral respondents who were in a relationship were living in a different country to their partner. Previous research suggests that parenting has a complex impact on mobility, in some cases precipitating moves and in others, restricting mobility. The situation depends on a number of factors including the partner's occupation (Ackers, 2003; 2005)

Parenting and Mobility

A fifth of both male and female respondents had children. The following case illustrates the challenges that this woman faced in contemplating mobility during her PhD. Although she is relatively young (26) and has no children, her partner has serious health problems which make it difficult for him to be left on his own. She explained that she envisaged remaining in the UK for her PhD and future academic career:

More because of my family and caring commitments to my partner than a career choice. I see leaving the UK as an option that is ruled out anyway. All other things being equal I probably would be exploring taking my academic career to other EU countries but.. the added value of that is not as important to me as the things outside of it.

Q; So can you go to international conferences or visits?

I can't do anything at the drop of a hat -it depends on me being able to organise respite care. I would not plan to go away for long periods; what I am thinking of is small periods of say a month or 3 weeks where I spend a large amount of time beforehand planning it rigorously so I know exactly what I need and where I need to go and gather materials. Splitting it would be good as I could then go for fairly short times. It's more accessible and probably more efficient than just going once – you would be conscious of trying to fit everything in – if you could go back and process what you've done as part of an iterative process. It might be more productive too.

Q: So can he go with you?

No.

In this case it is the partner who suffers health problems but there will be many situations in which the researcher themselves has a disability or health problem that restricts their ability to be mobile. In another case, a Portuguese woman who is now aged 45 and doing her PhD in the UK explained how she was unable to commence at an earlier stage as her ex-husband discouraged her from studying at all whilst their two children were young. Eventually, following their divorce she moved to the UK when her two daughters were aged 14 and 17 leaving them in Portugal. Since then one of them has joined her in the UK. The family situation resulted in a delay both in commencing doctoral research at all and also in her ability to move. Other respondents with children (20% of our survey sample) indicated that the presence of children very much coloured their attitude towards mobility and, in particular, length of stay:[45]

It's not that I didn't like to move. I would like to have had that experience but for family reasons it was not very convenient so I will wait until I have the familial conditions to move. I have a nine year old and a four year old so it is a priority to be there while they are children. So I never thought in a very serious way about living and spending some time abroad for my PhD. It was not possible. My husband has an old and she needs our support and it would be difficult mother for him to stay with his mother and the children too. [I could go] in about 7 or 8 years perhaps. Well maybe for short periods, about a week or 2 maybe I will make it sooner but for longer periods of time, no, not until they are old enough. It is like it is compulsory, there is pressure for us to do it, yes I feel it yes. Yes, yes each year with my colleagues because some of my colleagues did it [but] most of

[45] For more discussion of the impact of children on scientific mobility see Ackers, 2001; Van de Sande, et al 2007; Ackers and Stalford, 2007.

them are single so it's easy for them. And that fact added value to their careers.

This case illustrates the various ways in which life course can shape mobility; it is not only her decision that she should not move when her children are young but also the presence of caring responsibilities for elderly relatives that ties her to home. Although these situations do tend to impact more markedly on women, it is by no means only women who are restrained by care. The respondent goes on to add that her husband, who is also a social science researcher is even less inclined to spend time abroad:

My husband is even more reluctant; I would like to go abroad and I feel relatively restrained from that because of my familial conditions but he feels it even more. Sometimes I say, 'ok I will go' but he never puts that situation. He really feels very attached to his family and won't leave even for 2 days…

The presence of children often delays both doctoral research and mobility as we have seen above. The following Brazilian woman also moved for the first time aged 45 when her marriage broke down and her children left home (also choosing to migrate but to different locations). One British supervisor said she had a number of mature PhD candidates and said that, 'there's no way that they could go because they've got young families and one is a single parent.' In many cases, the reluctance to move reflects concerns about childcare and the impact on children's education and partner's employment (Ackers and Stalford, 2007). In other cases researchers would be happy to take family with them but were concerned about the financial costs of doing so. The following researcher argued that the pressure to move at doctoral level was 'a form of discrimination;;

Because if you go, you have to maintain your house here and these are people who are talking about on the, on the top of the scale with big salaries and comfortable lives and they don't really see that for us it is very difficult to imagine. What will I do with my house, my family, you know. I have a child and I don't want to leave him here and my husband also has a job, you know, it's very difficult in perspective. Maybe it will [disadvantage me] some day I don't know because one of the criteria for post-doc grants is mobility and it is one of the most important. Mobility is an explicit criteria. I had colleagues who were criticised for their lack of mobility.

5.3 Financial Barriers

These specifically financial barriers were raised by other researchers. The report has already discussed issues around the specific funding of doctorates and the impact that different schemes have on mobility. The response to these structural considerations is mediated by personal financial status. In some instances respondents had managed to become mobile despite limited funding through recourse to personal or family support. One Brazilian woman had built up resources prior to moving which enabled her to finance the first year of her PhD during which time she received no funding at all. The person was in her 40's and divorced and her children were both working abroad which, she suggested, enabled her to take this decision. In other situations respondents spoke of the compromises they had made in deciding whether and where to move. In one case the researcher was working full-time in a nonacademic position. Although she was very enthusiastic about mobility and committed to registering outside of her home country, she was forced to choose a university in a neighbouring country and close to her home town.

Financially, it would be unfeasible for me. I need money and I have to pay for my daughters – my children and partner are not a worry – they can study anywhere but it is the need for money and to retain my permanent job. But I didn't want to do it here, not even in Portugal but I have this limitation. The furthest place I could go was Santiago de Compostella (Spain).

Although the previous cases make reference to children, it was by no means only people with children who faced financial barriers. The issue of housing and accommodation is perhaps one of the single most important financial concerns

affecting people interested in undertaking part of their PhD abroad:

The major problem is funding. If you don't have funding it is a major problem to be mobile. In my case I have an apartment which I have to pay whether I am here or abroad so if I go abroad I have to have 2 apartments and it is hard to have access to funding especially in social science.

It would be great if offers for renting houses or flats would exist abroad. For example, finding a room in The Netherlands was really complicated even when I was going on my own, and I think it will be even more complicated when I'd need room for three people. Information about possibilities for family to work/ study and for childcare should be provided clearly.

I couldn't really afford to go to Sweden to attend a conference. So I tried basically to just focus on Germany. Even if I go to a conference in Southern Germany it's so much money already.

It is important to recognise to that relationships outside of the family also shape mobility as the following woman explains:

I am not married and have no children but I am very close to my friends and I would really miss them. I missed them when I was in Brussels (during ERASMUS) and I found it really really hard to stay there for four months because you can't just pick up the phone and meet up.

The discussion above raises questions about the compatibility of mobility with more general concerns to achieve a work-life balance and combine 'work' with other responsibilities and social pursuits. It is not so much that mobility is not possible in such circumstances but rather that the circumstances might lead to different approaches to mobility (and internationalisation). In common with some of the respondents above the following mother argues that she can achieve a level of international engagement through short stays and conferences:

I am the mother of a two-year old and therefore have family responsibilities in Denmark. I seek my international network through short term trips such as visiting other universities and attending conferences. Despite not working abroad I see myself as very international and already have a broad international network.

Policy Tensions: Quality and Equality

The 'tension' between the desire to promote mobility (of all forms) and 'internationalisation' and the commitment to diversity and equality in scientific labour markets is immediately apparent in recent ERA policy.[46] The European Charter and Code of Conduct for Researchers states that:

Employers and/or funders of research must recognise the value of geographical, intersectoral, inter-and trans-disciplinary and virtual mobility as well as mobility between the public and private sector as an important means of enhancing scientific knowledge and professional development at any stage of a researcher's career… they should fully value and acknowledge ***any mobility experience*** *within their career progression/appraisal system.*

However, the Code and Charter also underline the ERA's commitment to the nondiscrimination principle:

Employers and/or funders of researchers will not discriminate against researchers in any way in the basis of gender, age, ethnic, national or social origin, religion or belief, sexual orientation, language, disability, political opinion, social or economic condition.

The Charter and Code go on to make specific reference to the issue of work-life balance and the promotion of gender equality:

Employers and/or funders should aim to provide working conditions which allow both men and women researchers to combine family and work, children and career. Particular attention should

[46] These issues are explored in greater depth in a paper by Ackers to be published in Minerva (2008) 'Internationalisation, Mobility and Metrics : A New Form of Indirect Discrimination?'

be paid, inter alia, to flexible working hours, part-time working, teleworking and sabbatical leave, as well as to the necessary financial and administrative provisions governing such arrangements.

Employers and/or funders should aim for a representative gender balance at all levels.

It is important that policy-makers ensure that measures are in place to promote the compatibility of the 'mobility' objective with the non-discrimination provisions. The recent UK response (to the European Code and Charter) recognise these 'policy tensions' and potential barriers to mobility[47]:

Disabled researchers should not be penalised because they are not always able to be geographically mobile. However, every effort should be made to ensure that disabled researchers are given the same opportunities to work and study in as many different locations as their non-disabled colleagues.

Furthermore:

Where it has not been possible for a researcher to gain any mobility experience, for example, due to a disability-related reason, or experience has been limited due to pregnancy, maternity leave and subsequent child care responsibilities, it should not prejudice the application.

The Charter and Code also cautions against the adoption of more quantitative approaches to 'judging merit' and argues that:

The selection process should take into consideration the whole range of experience of the candidates. This means that merit should be judged qualitatively as well as quantitatively, focusing on outstanding results within a diversified career path and not only on the number of publications. Consequently, the importance of bibliometric indices should be properly balanced within a wider range of evaluation criteria.

5.4 Summary

- Doctoral researchers' respond to the range of opportunities and challenges associated with mobility in a variety of ways reflecting their personal and family situation.
- Key factors shaping decisions about whether, when, where and for how long to spend time abroad include: life-course and family status, personal financial status, language competence; health status/disability and ethnicity.
- Doctoral candidates vary in age both between countries and disciplines. PhDs in the social sciences and humanities tend to be older on average than in the natural sciences with many reaching their late thirties and forties by the time of completion. The older a researcher is the more likely they are to have developed professional commitments (such as employment), partnerships and caring responsibilities for children and other family members. These life-course considerations will shape individual's willingness and ability to exercise different forms of mobility.
- Personal financial status and access to 'informal' resources, such as family support mediate any direct relationship with formal funding systems. In some cases researchers are able to rely on private resources both to support their doctoral research and their mobility. In others, the costs associated with mobility are prohibitive.
- To the extent that the 'expectation of mobility' is becoming a 'standard feature of a research career' (as the European Commission's Green Paper (European Commission 2007) proposes) it may compound existing forms of indirect discrimination (on grounds of age, gender, nationality, disability, ethnicity and economic status). The relatively high levels of feminisation in social science research raises specific concerns over the tension between the policy drive to promote mobility and concerns over the 'under-representation of women' (European Commission, 2007:12).

[47] RCUK (Research Councils UK) The European Charter for Researchers and Code of Conduct for the Recruitment of Researchers. A UK HE Sector Gap Analysis, http://www.rcuk.ac.uk/rescareer/rcdu/internationalconnections/gapanalysis.htm. The UK is cited here by way of illustration. Other countries may have adopted different approaches.

Section 6 Conclusions

This was an exploratory 'pilot' study undertaken over a very short period of time. As such it provides indicative findings only. The research has identified some interesting examples of how social scientists are exercising mobility and operating on an international level. Mobility is one means of achieving the kind of cross-border research collaboration and co-operation that NORFACE seeks to promote. It is not an end in itself and the concept masks a whole range of 'approaches'. The traditional view that equates mobility with living abroad for extensive periods (perhaps the whole doctorate) is neither the most common, nor necessarily the most effective, approach. In some contexts people may exercise high levels of mobility and effective knowledge transfer through repeated very short term stays including research visits and conference attendance. This 'approach' enables researchers to remain deeply engaged with their professional communities at home and also with their personal and family lives. In most cases, researchers augment the physical dimension of mobility with other forms of 'virtual' communication enabling networks to evolve and deepen. Whilst some of our respondents clearly enjoyed and benefited very much from registering and living abroad during their doctorate, extricating researchers from this home context is not necessarily productive. The pressure to increasingly 'measure' academic outputs and develop metrics for this purpose was raised by many respondents. It is important that mobility in itself does not become a metric as some suggested. It should neither be specifically privileged nor penalised although in practice both of these things are happening in different contexts. The challenge is to understand the relationship between mobility, internationalisation and research excellence and reward the outcomes associated with these processes – the 'added value' that different forms of mobility bring to the process of doctoral research. On the basis of the NORFACE study it would seem that mobility (during the doctorate) works best and offers greatest added value when it operates through existing scientific networks and relationships. This enables early career researchers to draw on the social and human capital of their supervisors and mentors and reduces the risks of them being left in marginalised and isolated situations. The system of co-supervision also appears to work extremely well. Once again this may develop through existing networks with supervisors proposing potential supervisors abroad. In other cases, perhaps reflecting the relatively established nature of many doctoral researchers in Portugal (where this practice is most evident) candidates are able to make their own links and build on these over time. Registering for a doctorate abroad often builds on similar relationships perhaps developed during ERASMUS stays or masters level mobility. The level of diversity is significant and each form of mobility or international engagement has its benefits and risks. The challenge is to ensure that policy recognises and celebrates that diversity augmenting what exists in a cautious, incremental fashion (Rannveig Agunias and Newland, 2007) rather than attempting to impose a 'one size fits all' approach. The following excerpt is taken from an interview with Professor Karin Wall, a senior Portuguese sociologist:

Mobility has to take very different forms. It has to be very variable, it has to be able to be adapted to different types of careers, different disciplines and different types of family and lifestyles. Mobility has to adapt to that diversity.

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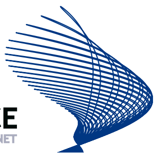
Doctoral Mobility in the Social Sciences, (2007) NORFACE Group

Further details of all these projects can be obtained by contacting Professor Ackers at European Law and Policy Research Group, The Law School, Liverpool, L69 7ZS or by emailing her at louise.ackers@liverpool.ac.uk



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