Collaborative project Seventh Framework Programme
Grant agreement no: 613468

TEMPER

Temporary versus Permanent Migration

Deliverable D4.4

Report on drivers, policies and impacts of mobility among international students and academics

Submission date: **14/08/18**
Project month: **54**

Start date of project: **1March 2014** Duration: **4 years**
Partner in charge: INED
Coordinator: **CSIC, Spain**

Project funded by the European Union

Report on drivers, policies and impacts of mobility among international students and academics

Lama Kabbanji, Antonina Levatino, Sorana Toma and, Sara Lrhmou[1]

Abstract: This research, conducted within the framework of the Temporary vs Permanent Migration (TEMPER) project, aims to contribute to the understanding of current student and academics mobility trends and dynamics in the EU. We analyse sociodemographic characteristics and migration trajectories of international students and academics in France, Spain and the UK, using a new dataset from the Academic International Migration Survey (AIMS), conducted in 2016-2017 by Lama Kabbanji (IRD/CEPED), Antonina Levatino (INED/UAB) and Sorana Toma (ENSAE/INED). Biographical information on key points in our respondents' trajectories allows us to overcome the dominant static view when studying international student mobility adopted in previous research. We have taken a longitudinal perspective and explored the diversity of trajectories of international students (IS) and academics with the help of sequence analysis. Comparing three contexts of reception allows us to relate these trajectories to the immigration policy framework in each country and its recent changes.

Keywords:

Acknowledgement: The research leading to these results has received funding from the European Union's Seventh Framework Programme (FP7/2007-2013) under grant agreement no. 613468 for the research project TEMPER.

[1]Andrainolo Ravalihasy, Statistician at CEPED (IRD) contributed to section 6 on International students' profiles in France, Spain and the UK by doing the sequence analysis, and Eric Opigez, Cartographer at CEPED (IRD) did all the maps in this report.

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1 Introduction

While the importance and magnitude of academic migration and the increasing interest in the issue have been recognized, research devoted to the study of this type of mobility is still scarce. International students and, especially, academics are probably the least studied among the major categories of migrants even though they represent a crucial human resource for research and innovation and the development of scientific communities (Auriol 2010). King and Raghuram, in a special issue of Population, Space and Place insist on the need for more theorization and empirical studies on academic mobility (King and Raghuram 2013). Also, existing research generally separates the study of students' mobility patterns, on the one hand, and those of scientists, on the other. Yet previous research has shown that studying abroad increases the likelihood of working in the destination country (Ackers 2005; Gaule 2011; Lu and Zhang 2015).

This research contributes to the understanding of students and academics' mobility trends and dynamics in the EU. France, Spain and the UK were selected because they constitute three relevant contexts for comparison. Europe hosts 48% of students enrolled at the tertiary level of education outside their country of birth (OECD, 2014), and the large majority of them reside in these three countries. Nonetheless, the three countries present different degrees of internationalization of their higher education systems, which renders the comparison very relevant and allows going beyond the Anglo-Saxon focus in previous research on academic mobility. France and the UK have two of the most internationalized higher education systems in the world. They are among the five first destinations for international students, ranking second and fourth respectively in 2014 (UNESCO/UIS, 2016). France and the UK also attract a large proportion of foreign doctorate holders within the EU (Auriol 2010). Spain, in contrast, does not appear among the most attractive destinations of international students or academics worldwide, despite being one of the top destinations for intra-European academic moves (European Commission, 2014) and also for Latin-American students (UNESCO/UIS, 2016; MORE 2). Interestingly, in the last decade, Spain has made efforts to become more attractive and has promoted specific initiatives to attract foreign talent (students and academics) to its higher education institutions, of which Estrategia Universidad 2015 can be considered the most important (Spanish Ministry of Education, 2011). These contextual differences make the comparison of student and academic mobility policies, patterns and trajectories in these three countries particularly relevant.

In Section 2, we briefly summarize the academic literature pertaining to students and scientists' mobility, and Section 3 discusses the main recent changes in migration policies in the UK, France and Spain that affected the conditions of entry and stay of foreign students and academics coming to these countries. In section 4 we analyse changing trends of students' and academics' mobility to the three countries in the context of changing migration policies.

Analysing trends and dynamics of students and academics' mobility into European countries is not an easy task. We reviewed a multiplicity of data sources, both international (UNESCO, OECD, Eurostat) and national-specific ones, that led us to identify major difficulties in establishing common statistical categories that allow, first, proper cross-national comparisons and, secondly, an adequate within-country assessment of the outcomes achieved by policies aimed at promoting internationalization of the tertiary education and research system[2]. These limitations affect data availability for all the main students' categories (Undergraduate, Master and PhD. Students), but are particularly remarkable as we move up in the academic career trying to examine the extent to which academic and research positions have become more (or less) permeable to internationalization dynamics. In order to overcome these difficulties, we designed a web-based survey that was launched in 2016-2017 in France, Spain and the UK.

The Academic International Migration Survey (AIMS), conducted by Lama Kabbanji (IRD/CEPED), Antonina Levatino (INED/UAB) and Sorana Toma (ENSAE/INED) in 2016-2017, is presented in section 5. AIMS builds upon earlier research on international student and academic mobility and provides a new extensive dataset containing data collected among international students and academic staffs in France, United Kingdom and Spain. The dataset allows us to reconstruct individual Master and PhD students' and academics' educational, professional and geographic trajectories. Semi-biographic information on key points in our respondents' trajectories allows us to overcome the mainly static view of academic mobility adopted in most research. In contrast, we adopt a longitudinal perspective and examine the diversity of trajectories with the help of sequence analysis and optimal matching techniques. We also relate these trajectories to individual characteristics such as class, gender, generation

[2] See TEMPER deliverable 4.1

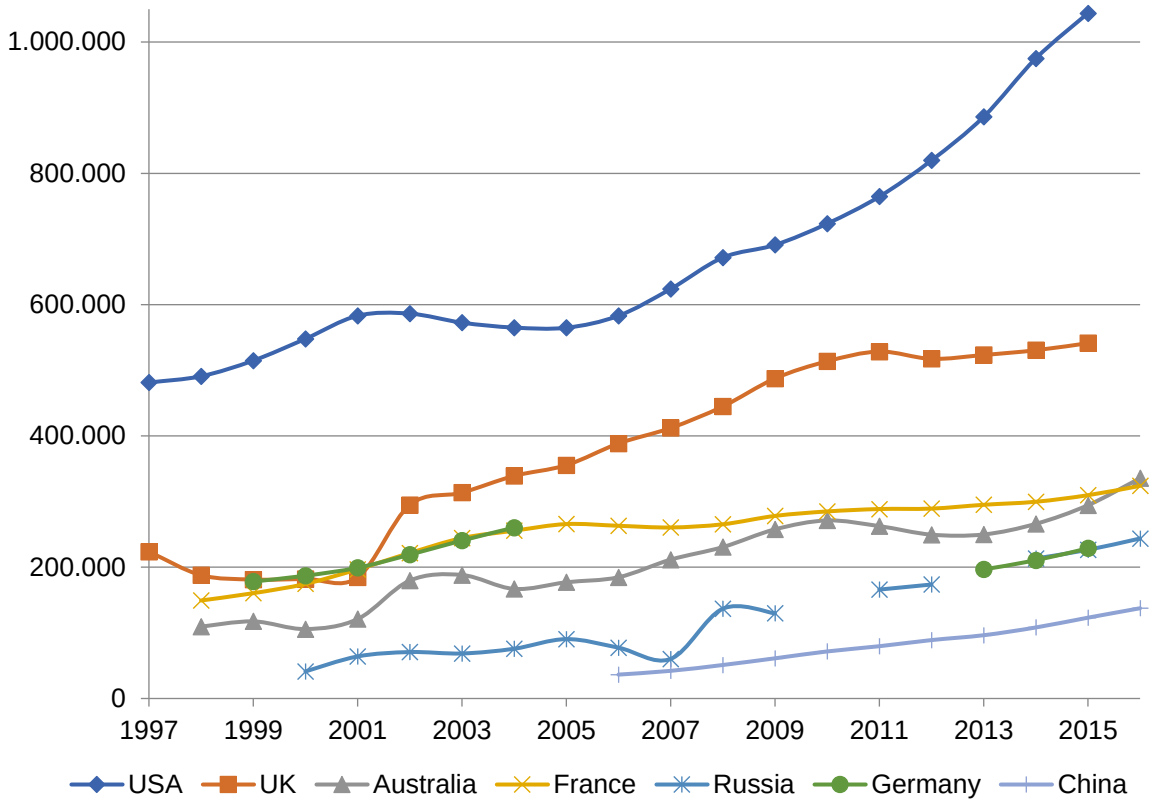
and country of birth. Section 6 and 7 presents the first results of this survey. In particular, we will focus on summarising some of the most relevant findings concerning:

- Differences and similarities in the characteristics of current international students and academics
- Effects of migration policies on trends and composition of international student mobility
- Main factors associated with the choice of country and academic institution
- Description of the educational and mobility trajectories of students
- Timing and underlying factors explaining international mobility, with attention to different individual/contextual factors such as social class, gender, discipline, country of studies, region of origin.
- Links between international academics and their origin countries.

2 Researching students and scientists' mobility: a state of the art

Recent decades have been characterized by an increase in the volume of international students and scientists' migrations as well as a diversification of dynamics and patterns. Governments as well as higher education institutions and research centres are competing globally to attract the "best and the brightest" (Kapur and McHale 2005) thus encouraging and stimulating the international mobility of students and researchers. While countries such as the United States, France, Germany, the United Kingdom and Russia continue to attract a significant number of foreign "talents", other countries such as Australia, China, India and Brazil, as well as Cuba, South Africa and Korea, have also recently become important centres of attraction for this same category of migrants (Freitas, Levatino, and Pécoud 2012). Europe represents the top destination region of students at the tertiary level of education enrolled outside their country of origin, hosting 48% of them (OECD, 2014). The UK and France are among the five main destinations of foreign students worldwide (see figure 1).

Figure 1. Main destination countries of foreign students (1997-2016)



Source: MESRI-SIES / SISE (France), HESA (UK), IIE (USA), UNESCO (Australia; Russia; Canada; China)

2.1 Students' mobility

Research on students' mobility has mostly focused on the identification and analysis of the determinants of the decision to study abroad as well as the choice of the country of destination and the higher education institution. Available quantitative studies, in particular, mostly tackled with the structural determinants of these decisions. Several studies (Lee and Tan 1984; Agarwal and Winkler 1985; McMahon 1992; Davis 1995) have paid special attention to factors related to the characteristics of higher education and economic development in origin countries (push factors) and in destination countries (pull factors), from a push-pull approach. However, the role of migration policies and programs in shaping students, and academics, trajectories - such as the existence of university partnerships between countries of origin/destination; the availability of scholarship programs; the recognition of diplomas and

skills acquired in the country of origin; and the entry and work conditions in the country of destination - have been rarely investigated.

Some studies also explored individual factors behind the choice of studying abroad, highlighting the complexity of the decision making process and the importance of several reasons explaining the choices made by students and their families such as the knowledge of the destination country and its language; recommendations by parents and friends; the cost of studying abroad; geographical proximity and social networks (Mazzarol and Soutar 2002; Maringe and Carter 2007). Li and Bray (2007) propose a push-pull model that they qualify as bidirectional, in which the various motivations are classified into four groups: academic, social, cultural and political. They highlight the need to take account of micro-level variables, that they call "internal forces" (socioeconomic status, academic capacity, personal motivations, etc.) to explain why different student groups do not respond to push-pull factors in the same way. They conclude that student migration flows are extremely heterogeneous and that among groups of respondents, some emigrate because they cannot enrol in an institution in the home country (excess demand), while others emigrate to access better-quality education. Their research shows that the decisive variables in the choice of a destination country and higher education institution are linked either to education (quality, resources, curriculum and programmes, degree of internationalization) or to economic factors (access to funding, employability after graduation, etc.). Despite the premises of their study, little information is available on the individual characteristics and the socioeconomic status of the respondents.

The literature on international student mobility tackled to a lesser extent the outcomes and consequences of this type of migration, as well as return intentions and experiences. According to Riano and Piguet, three main topics have been explored concerning the outcomes of student mobility: employment outcomes, social inequality and urban transformation (Riaño and Piguet 2016). The authors underline the lack of research examining how gender relations, ethnicity and class influence the decision to migrate, the direction of these moves as well students geographic and educational trajectories (Riaño and Piguet 2016).

2.2 Academics' mobility

The international mobility of academics has so far received less attention/ than that of other high-skilled professionals such as physicians or IT workers. Academics, however, are increasingly expected to be mobile[3] (Ackers 2005), perhaps to a larger degree than other professionals (Franzoni, Scellato, eandStephan 2014).

Some efforts have been made in recent years in order to tackle the international mobility of scientists, particularly in the EU and the United States. The OECD/UNESCO Institute for Statistics and Eurostat launched in 2004 a project on Careers of Doctorate Holders (CDH) in 25 countries[4], showing that doctoral population is highly mobile with a predominance of intra-European flows and the importance of the United States as a destination country for doctorate holders from all surveyed countries. In Europe, flows are particularly oriented towards France, Germany and the United Kingdom. This project also showed that the labour market for PhD graduates is more internationalised than for other tertiary-level graduates.

International experience has become necessary for career progression in many academic labour markets, though to a different degree across national contexts and disciplines (Ackers 2001). According to Chompalov (2006), natural scientists are more likely to emigrate than social scientists. On the one hand this may be due to the fact that their knowledge is more readily convertible; on the other, it may reflect the higher importance of physical access to high-quality infrastructures. However, it has been argued that social sciences and other disciplines outside the hard sciences experience a similar trend, though perhaps international experience is still less essential to their profile than it is to natural scientists (Ackers 2001, 71).

The importance of the expectation of mobility also varies by national context. Students and researchers from countries at the core of international knowledge systems, such as the US or UK, are less pressured to move abroad; for the others, including continental Europeans, a "foreign stint is seen as a feather in a postdoc's professional cap" (Balter 1999). For the latter, the pressure to move abroad comes both from reduced education and employment opportunities at home – a situation that academic migrants share with other categories of

[3] This "expectation of mobility" that increasingly characterizes academia may be seen as a sector-specific form of a "culture of migration" (Cohen 2004).

[4] 25 countries covered: Belgium, Bulgaria, Croatia, Denmark, Finland, Germany, Hungary, Iceland, Israel, Latvia, Lithuania, Malta, Netherlands, Norway, Poland, Portugal, Romania, Russian Federation, Slovenia, Spain, Sweden, Switzerland, Chinese Taipei, Turkey and the United States.

migrants – and from the premium attached to international exposure, which is more specific to the academic profession (Ackers 2001). Thus, geographical mobility is not so much a choice as a necessity to be embraced by those who want to progress in research and academic careers, blurring, to some extent, the boundary between "voluntary" and "forced" in the case of international academic mobility (King 2002).

Analyses of international academic mobility mostly examine the motivations triggering such moves, and, to a lesser extent, the enabling or constraining factors. Some recent studies contextualise academic mobility by situating it within the larger macro-economic context (Findlay 2011) or within the broader life-course of the individuals (Sage, Evandrou, and Falkingham 2013; Carlson 2013). Previous work has primarily focused on the motivations underlying mobility choices and argued that academics can best be described as "knowledge migrants" rather than "economic migrants" (King 2002; Ackers 2005). According to these studies, researchers are primarily attracted by centres of research excellence, which combine high quality infrastructure, facilities and top-quality researchers. The prestige of the institution is an extra pull factor, as well as the level of autonomy academics can achieve in their work. While not the primary motivation, economic factors remain influential in academics' migration choices (Ackers and Oliver 2007). Better salaries (which also signify higher social status), increased research funding, and more generous social benefits each exert an important influence in attracting academics to a particular destination.

Furthermore, social and professional networks are found to influence mobility decisions (Bauder 2015): on the one hand, information circulated through family members, peers and supervisors' networks located abroad may increase both the aspiration and the ability to move among students and academics (Brooks and Waters 2010; Waters and Brooks 2011; Korys 2003; Millard 2005; Carlson 2013). On the other hand, the social and academic networks accumulated *in situ* may attach people to particular places and discourage mobility – a phenomenon that Williams et al (Williams, Baláž, and Wallace 2004, 41) conceptualise as "location-specific insider advantages".

2.3 The role of migration policies in academic mobility

The international academic mobility is generally regulated by the migration policies that target students and highly skilled migrants, with a few policy initiatives designed specifically for scientists (e.g. the European Blue Card). These migration policies generally aim at attracting highly skilled workers by easing restrictions to entry (in comparison with those applicable to low-skilled migrants) and granting more generous post-entry rights, but also at retaining foreign students by facilitating their study-to-work transition. It was argued elsewhere that these skill-selective policies have become more common in the last decades in OECD countries (Czaika and de Haas 2013), with two thirds of OECD nations having implemented - or in the process of implementing - them (Artuc et al. 2015). Governments are not the only ones engaged in this global competition for "the best and the brightest" (Kapur and McHale 2005). Higher education institutions are also pro-actively trying to attract talent from abroad, both international students and academic staff, in an attempt to increase their revenue, their ranking[i] and their cultural diversity.

Despite their growing importance, the role played by migration policies and higher education practices in shaping geographic mobility choices along academic careers has not been extensively researched. Prior studies focused predominantly on supply-side explanations of academic mobility, exploring the motivations and class-based resources of mobile students and researchers (Findlay 2011). Overseas education has been analysed as a mechanism of social reproduction, a means for privileged groups to maintain their social advantage (Brooks and Waters 2009; Findlay et al. 2012). The social embeddedness of international academic mobility also received extensive attention, with studies pointing out the complex roles that family and peer networks play (Ryan and Mulholland 2014; Carlson 2013; Brooks and Waters 2010; Williams, Baláž, and Wallace 2004). Prior work further emphasized the crucial role of perceived quality and prestige of institutions in attracting students and researchers (King 2002; Ackers 2005; Mahroum 2002), while material aspects (e.g. wage differentials, tuition fees and the availability of scholarships) were also found to be important in triggering mobility (Bauder 2012; King and Ruiz-Gelices 2003).

In contrast, demand-side forces shaping international academic mobility have so far been given insufficient consideration (Findlay 2011). Yet, according to Findlay (2011), states as well as higher education and research institutions are powerful players in the global education

sector, structuring the patterns of academic mobility. Macro-level economics studies have examined the role of immigration policies in attracting highly skilled workers, with contrasting findings. Some found that such policies are relatively ineffective in comparison to other social, economic and political determinants (Czaika and de Haas 2013; Doomernik, Koslowski, and Thranhardt 2009; Antecol, Cobb-Clark, and Trejo 2003). Other studies find that 'pro-skill' policy changes have a noticeable effect on the skill-composition of immigrant flows (Boeri et al. 2012). These effects seem however to depend on the degree of those changes (Green and Green 1995) and of the type of pro-skill policies implemented (e.g. point-based systems more effective than shortage lists and labour market tests) (Czaika and Parsons 2015).

These studies, mostly quantitative, make an important contribution to the literature by focusing on the "forces lying well beyond either the "choices" of students or the social class interests of the sending society" (Findlay 2011, 165) and thus compensating the supply-side bias of prior work. Yet, we also need to link these overarching structures to agents' decision-making processes and understand how they come to shape their behaviour. The objective of the next section of this report is to consider how migration policies shape the volume and selectivity of academic mobility flows.

3 Comparative perspective: three contexts of destination, going beyond the Anglo-Saxon focus

France, Spain and the UK constitute three distinct hosting contexts. This becomes clear if we look at data on their capacity of attraction and on the geographical composition of international students in the three countries. According to the *QS's international surveys of grad school applicants*, about countries they would most like to study in, prospective grad students systematically chose the US and UK, in first and second place followed, at a considerable distance, by Canada. Although these first three countries in the ranking of most preferred destinations have not changed since 2008, according to the results of the survey, the three of them seem to have lost global attraction power over time (up to 2013). This declining trend in its attraction power seems to have been particularly strong in the case of the UK.

The decreasing attractiveness over recent years of these three (still) most preferred countries may have to do not only with their own policies, but also with the growing number of countries and HEIs investing in gaining international visibility and recognition in the global student market and offering attractive post-graduation rights. Also, many countries often offer relatively lower tuition fees compared with the above-mentioned Anglophone countries. In this sense, France, where no differences between tuition fees of EU and non-EU students are applied, appears to have an advantage. Maybe because of this, France has managed to keep growing as a competitive global destination for tertiary education students. The QS Survey for Spain, whose Ministry of Science and Innovation under the Socialist government (2008-2011) mentioned the internationalization of the higher education system as one of the primary goals, displays rather disappointing results. Spain appeared ranked 6th in 2008-9, but lost positions up to the 10th in 2012-13. It is difficult to interpret this drop, but it may be also be seen as an effect of the economic downturn, which has been particularly hard in this country.

The higher education systems of the three selected countries present different degrees of internationalization, with France and the UK having two of the most internationalized higher education systems in the world. Recent large-scale, cross-country surveys allow us to further compare our three-case studies to each other and to other major academic mobility destinations. The results of the MORE Survey conducted in 2011-2013[5] among researchers working in a higher education institution in Europe and outside Europe, show that 15% of the researchers employed in the EU in 2012 are employed in a country different from their current country of citizenship[6]. Among the TEMPER destination countries, the UK is particularly attractive with 26.5% foreign researchers working in the country, France comes next with 13.5% and Spain with 4.4%.The GlobSci Survey[7] conducted in 2011 arrived at relatively similar estimations of the share of foreign researchers : 32.9% for the UK, 17.3% for France and 7.3% for Spain (Franzoni, Scellato, and Stephan 2012).

[5] The *MORE* survey was carried out first in 2010 and then on the 2011-2013 period (*MORE 2*) by IDEA Consult in consortium with the Austrian Institute of Economic Research (WIFO), the Institute for Research Information and Quality Assurance (iFQ), the Center for Higher Education Policy Studies (CHEPS), La Sapienza (University of Rome), the Danish Center for Research and Research Policy (CFA, Aarhus University) firstly in 2010.

[6] Absolute numbers are not available in this dataset. These proportions include both EU and non-EU researchers.

[7] This survey was conducted among scientists in 16 countries who published articles in journals classified by ISI Web of science in 2009 in biology, chemistry, earth and environmental sciences and materials. The selected countries were: Australia, Belgium, Brazil, Canada, Denmark, France, Germany, Italy, India, Japan, Netherlands, Spain, Sweden, Switzerland, UK, USA.

Regarding the geographical composition of student mobility flows, it is possible to remark how the flows of mobile students often reflect former colonial relations (Garneau and Mazzella 2013). Certainly, the existence of cooperation programs and linguistic proximity also matter. This explains, for example, why Spain still represents the main destination for many students from South America. As shown by previous research on the determinants of international student and skilled mobility, geographical distance is also important (Beine et al., 2013; Bessey, 2010; Czaika and Parsons, 2015). Neighbour countries are very likely to be a main source of migrant scientists (this is the case for Italians and French in Spain or Italians in France). In this respect, for example, the case of Moroccan students, the most mobile in the whole Maghreb and one of the most mobile in the whole African continent (with an outbound mobility ratio of 8.6%), is emblematic. For these students, France constitutes the first destination country, whereas Spain is the second one (UIS/UNESCO 2016), arguably due to its proximity. However, geography and language do not always dominate the decisions, as illustrated by the case of Germans in the UK.

These differences in contexts make the comparison of academic mobility policies and patterns in these three countries particularly relevant.

3.1 Migration policies for international students and academics in France, Spain and the UK[8]

Despite a European-level effort to regulate academic mobility in the form of directives, on student migration policymaking, the policy approach towards international students and academics in these three European countries are quite different. Though some of these directives have triggered the adoption of specific policies favouring student migration and/or increasing international students' rights in Spain and France (the UK did not adopt these EU Directives and is thus not bound by them), no clear convergent trend is appreciable.

While in the UK migration policies became overall more restrictive since 2010, France adopted a more selective approach with the aim to diversify the geographical origin of

[8] For more details on the evolution of policies in these three contexts, see these two publications: Levatino et al. 2018; Kabbanji et al. 2016.

students and academics and select more thoroughly those who are allowed to stay in France after the completion of their post-graduate studies. Spain is trying to promote the internationalisation of its higher education and research system with the adoption in 2008 of the « Estrategia Universidad 2015 » - which includes measures to attract more foreign students and academics – while coping with the limited resources due to the effects of the economic crisis.

In the 1990s, the logic of the knowledge-based economy generated and diffused an overall favourable attitude toward student migration. International students were considered an essential component of economic competitiveness: foreign graduates could become key actors in economic development and growth. These global trends engendered dynamics that in turn led to offering particularly favourable receiving conditions to graduates. However, though international students are perceived as both a resource that may positively impact on the receiving country's economic development, they remain foreigners whose admission must be controlled and regulated. The result of these contradictory forces is the continuous oscillation between restriction and openness mentioned, making foreign students' policies one of the best examples of the "liberal paradox" characteristically shaping migration policy, as theorized by Hollifield (2004). The paradox lies in the opposition and tension between internal security concerns, which induce states to control their borders, and international economic forces, which drive the free movement of goods, services and people.

Some particularities are observed in the nature and magnitude of those oscillations, and their timing, by country's institutional context and migration history. Major changes in student migration policy often result from a change in political power. While progressive parties tend to see increased student immigration as beneficial, conservative parties tend to restrict student immigration. This is most flagrant in the United Kingdom, which has set up restrictive eligibility conditions in recent years and reduced the rights granted to international students. In Spain as well, the past conservative government made it more difficult for foreign students to enter, though there has been no corresponding reduction of the rights for those already there. This difference might reflect the respective positions of these two countries on the international higher education market, and their different migration histories. Spain opened to immigration quite recently and does not yet receive many non-EU students. Consequently, it has relatively few international students and they are not perceived as a potential security

threat or a phenomenon that must be "controlled," contrary to the attitude in the UK. Though similar trends may be observed in France, foreign student admission policy there from 1999 to 2014 seems less related to changes in political power than in the other two countries and has remained fairly constant throughout the period. France has a policy of selective immigration: contrary to other types of migration, student migration is generally encouraged; however, it involves selection based on social class, country of origin and students' field of studies.

4 Trends and dynamics of academic mobility in the context of changing migration policies: comparing France and UK

As discussed in the previous section, governments are increasingly implementing policies aimed at attracting or retaining highly-skilled migrants – by easing restrictions to entry and granting more generous post-entry rights, but also at retaining foreign students by facilitating their study-to-work transition. Despite their growing importance, the role played by migration policies in shaping geographic mobility choices along academic careers has not been extensively researched.

This section of the report examines whether migration policies shape the trends and composition of international student mobility. It addresses this question in the case of France and the United Kingdom, drawing on macro-level, aggregate administrative data going back several decades[9]. We interpret the evolution of these trends in light of the evolution of immigration legislation – particularly dealing with students and highly skilled migrants – in France and the UK, which was the focus of the previous section. We are further interested in unpacking some of the mechanisms through which these policies may play a role, particularly in the selection of candidates for migration.

In order to achieve our objective, it was necessary to go beyond localized case-studies by employing national-level aggregated data and by multiplying the types of data used (e.g. stock and flow data, residence permit and university admission data). Furthermore, we go beyond prior work by adopting a long-term perspective and putting together time-series data going back as far as 1970 for France (with a shorter time-span for the UK: 1997). Whereas this

[9] We do not have time series data for Spain, so we restrict the comparison to France and the UK.

extensive data collection effort was possible for international students, data on international academic staff is much more limited. This section will therefore focus exclusively on international students.

The United Kingdom and France offer an interesting comparison: they both rank among the main destination countries for international students, in second and fourth position respectively, after the United States (which holds the first place) and in tight competition with Australia, Germany and Russia, regarding France (see Figure 1 in the report). Both France and the UK are trying to attract increasing numbers of international students since the mid-1990, through the adoption of specific policies targeting this group, the creation and restructuring of State agencies in charge with managing this population, the promotion of their educational systems abroad, but also through important legislative changes aiming to facilitate entrance and residence for students in comparison with other types of migrants. However, as we discuss below, these measures will be implemented at different moments and with contrasted effects.

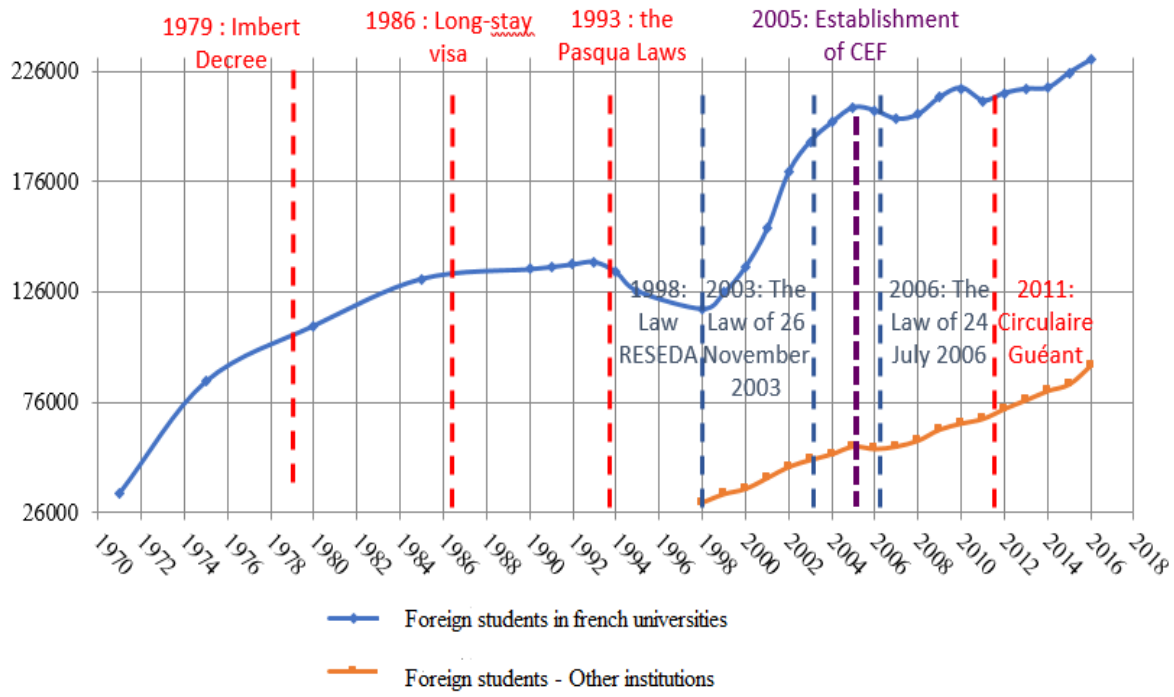
4.1 Trends in France

We start by examining trends in the stocks of foreign students in French universities from 1971 to 2016, which we interpret in light of major shifts in migration policies observed over the period (and discussed in the previous section). To obtain such a long time-series, we centralize data from different reports published by the French Ministry of Higher Education[10] (Fig 2). The long time-frame is available for stocks of students by nationality: we therefore measure foreign students, not international students.

The trends illustrate an overall rise in the numbers of foreign students in French universities. A substantial increase takes place in the first period – between 1971 and 1985 – which is mainly due to the arrival of students from the former French colonies and particularly from North Africa.

[10] Ministère de l'enseignement supérieur, de la recherche et de l'innovation (MESRI).

Figure 2. Total number of foreign students in France – Universities (1971-2016) and other institutions (1998-2016)



Source: MESRI-SIES / SISE

A period of stagnation starts around 1986, followed by a decrease in the numbers of international students up to 1998. The progressive adoption of restrictive policies towards international students may be responsible for this deceleration of trends. These restrictive measures include: the adoption of the Imbert decree in 1979, conditioning the admission of foreign students to their pre-registration in a French university and introducing language tests, the introduction of visas for students, including those from previous colonies. As discussed by Borgogno and Streiff-Fénart (1999), who analyse the political context prevailing in that period, the notion of migratory risk is introduced and foreign students are henceforth part of a category of migrants that requires special vigilance.

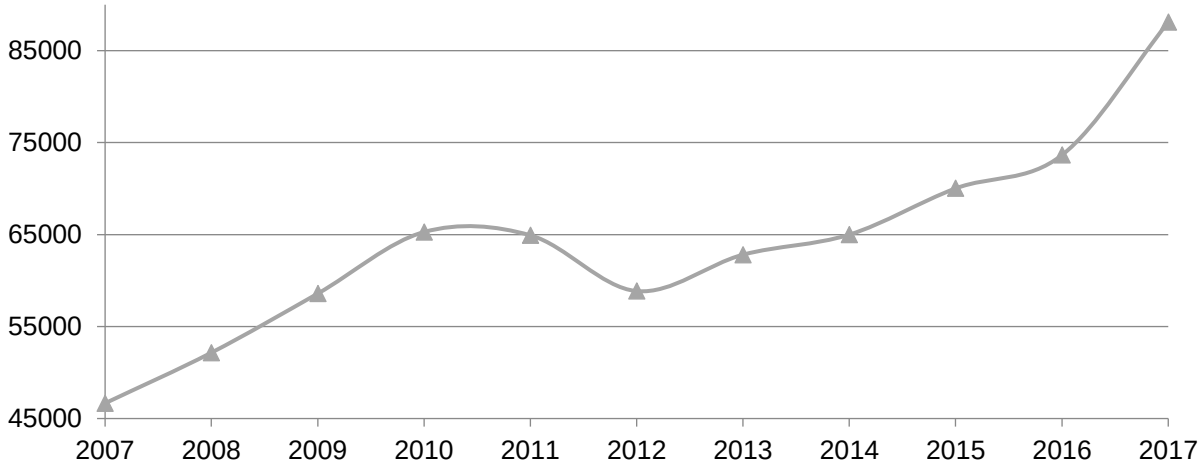
The number of international students picks up vigorously again at the end of the 1990s, and displays a sustained growth until the mid-2000s. The same period is characterized by the adoption of several policies facilitating the entry and stay conditions of foreign students in France, such as easing the process of obtaining a student visa and requiring border authorities to motivate all student visa refusals (Law RESEDA in 1998). During this period, there is also an increase in government fellowships for incoming students.

Starting in 2003, a general reform of the immigration system is gradually implemented in France, first with the law of 26th of November 2003, which targets mainly illegal immigration, then the law of 2006 which aims to select immigrants according to the economic needs of the country. Students and researchers are among the most sought-for categories and several initiatives adopted during that period aim to facilitate their entry and stay in France. Within the framework of these policy changes, the French government creates the Centres for Study in France (which will later become Campus France) in 2005. Henceforth, all foreign candidates wishing to pursue their studies in France have to apply through these centres. In an ethnographic study of the functioning of one such centre, Spire (2016) argued that they greatly increased the selectivity of the flows, and may be responsible for the decrease in the numbers of international students between 2005 and 2007.

It is further interesting to examine the impact of the highly-publicized *Guéant* bill, introduced in 2011 and which restricted the possibility for foreign students to work in France. Numbers of foreign students decrease indeed in 2011 (compared to 2010), which suggests that the bill sent a negative signal to potential applicants for studies in France, in addition to restricting the work opportunities of current students and graduates. However, the effect of the bill will be short-lived, and numbers increase again from the following year (2012), after the bill is abolished under the pressure of universities and student associations.

Flow data are better suited for capturing such short-term evolutions. We obtained data on the first-entry student residence permit between 2007 and 2017, from the Internal Affairs Ministry. These data confirm the discontinuity in the trend, with a decrease in the numbers of permits in 2011 and 2012, followed by an un-interrupted increase from 2013 onwards. (Fig 3)

Figure 3. First residence permits awarded to "students" in France



Source: MI - DSED 16 January 2018

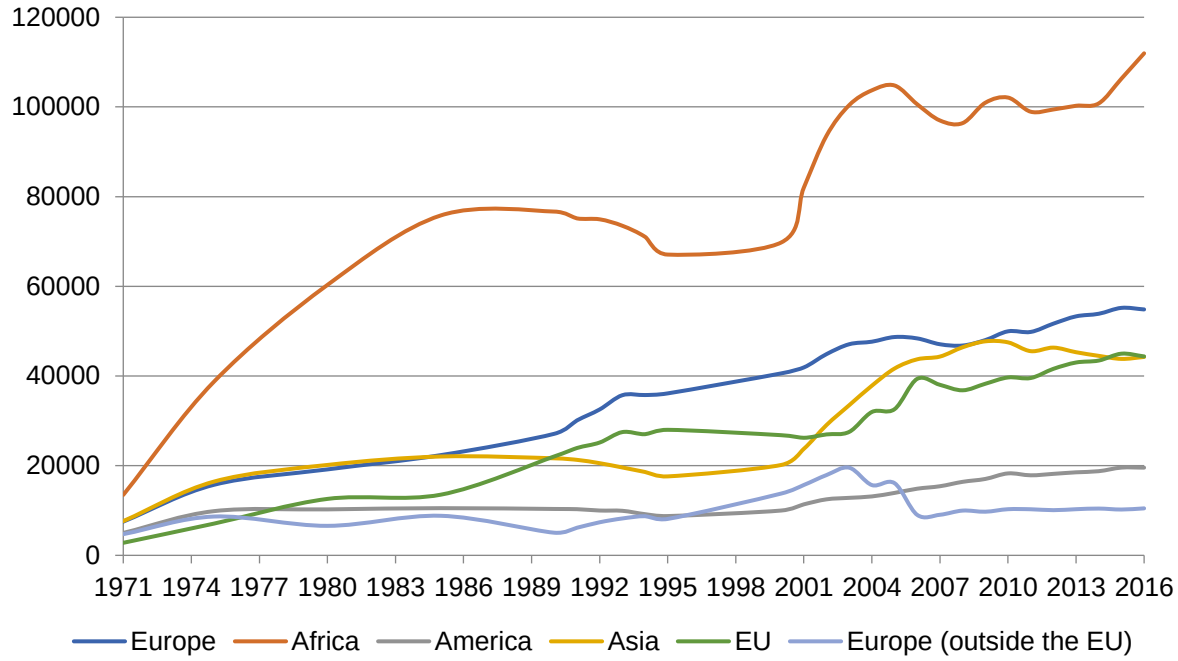
So far, we have only examined the link between migration policies and the evolution of aggregated stocks and flows of international students. It is however interesting to also investigate the influence of these policy changes on the *composition* of the flows.

First, the effect of these policies is not the same for students registered at universities and for those registered in other types of institutions, such as the *classes préparatoires*, *grandes ecoles*, the IUT or IUFM. Data for students outside universities is only available from 1998 onwards (red trend in Figure 2). The evolution of the two trends suggests that the law of 1998 had a larger effect on the growth of numbers of international students in universities, which is very steep between 1998 and 2005. In contrast, the 2006 shift in policy towards a "chosen immigration" seems to have favoured more students going to other types of institutions, whose number increases continuously from 2006 onwards, unlike numbers for international students in universities. The share of international students in other types of institutions out of the total number of international students in France also increases from 22% to 29% over this period. The French administration considers these students better than their peers going to public universities and more beneficial to the economic purposes of the country.

Second, this selective policy aims to attract more students from developed or emerging countries (such as China, Brazil or Russia) and to discourage migration from former colonies. Trends of international students by region of origin illustrate indeed an increase in numbers of students from Asia and the Americas, particularly from the 2000s, as well as a similar

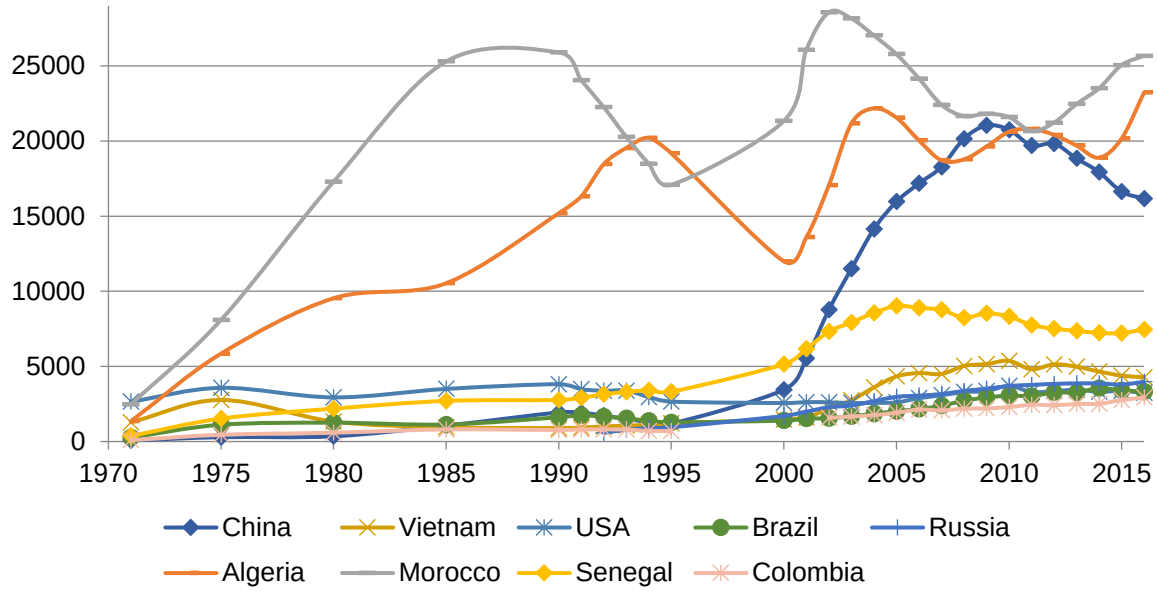
increase for African students, despite some fluctuations (Fig. 4). However, these data mask national specificities, particularly the impressive increase in the numbers of Chinese students from 2000 onwards, who reach similar levels as Algerian and Moroccan students by 2007, as the latter see their numbers dwindle over this period (see Figure 5). However, a reversal of trends can be observed since 2011, that is difficult to explain in the context of the policy changes discussed above. We can further note a stable though moderate increase in the numbers of Brazilian and Russian students since 2000.

Figure 4. Total number of foreign students by region of origin in French universities (1971-2017)



Source: MESRI-SIES / SISE

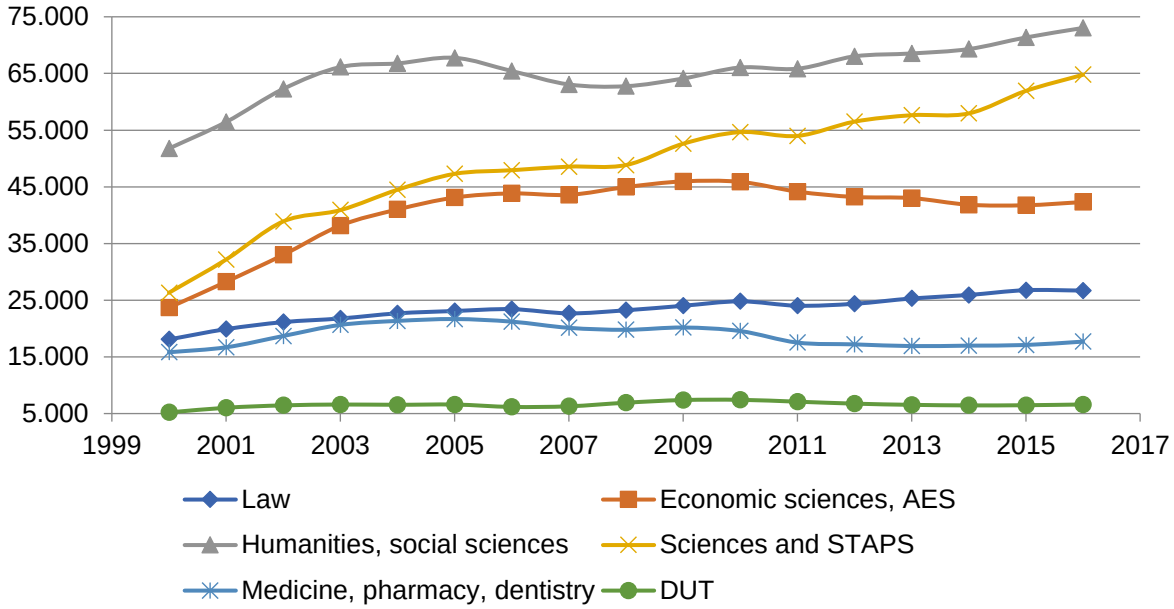
Figure 5. Total number of foreign students by country of origin in French universities



Source: MESRI-SIES / SISE

Finally, this selective approach on student migration, which responds to a market-oriented strategy towards the higher education sector, further aims to favour certain disciplines, such as the STEM, law, economics and management, to the detriment of social sciences and humanities. Indeed, we observe over the period an increase in the number of students registered in sciences (Figure 6). However, numbers of students in humanities and social sciences continue to increase as well, even if more moderately.

Figure 6. Distribution of foreign students by field of studies in France (2000-2017)



Source: MESRI-SIES / SISE

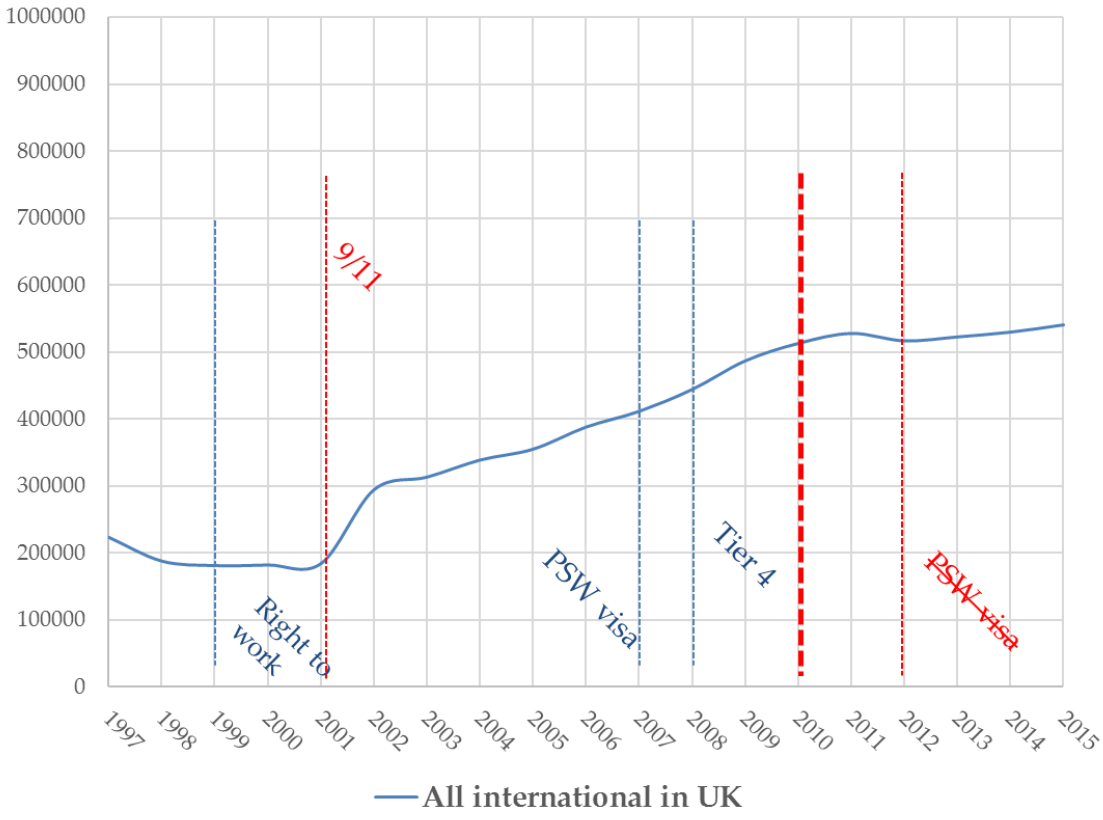
4.2 Trends in Great Britain

Data on numbers of foreign students in the United Kingdom can be obtained from the Higher Education Statistics Agency (HESA) for the period 1997-2015. Between 1997 and 2009 the Labour government aimed to increase the number of international students and highly skilled workers through several initiatives. Among the main ones we can mention: the abolition of the work permit for international students who work part-time, in 1999; the introduction of the post-study work visa in 2007; and the opening of an immigration channel dedicated to students within the point-based system (Tier 4), in 2008, in order to accelerate and facilitate the obtaining of the student visa. A major change in the political orientation towards migration in general, including that of students, came in 2010 as the Conservative coalition came into power. The "cut net migration" strategy was implemented, with a focus on the so-called abuses of the student route. A stricter legislation for foreign students, both with regards to their entry and stay conditions, was introduced almost immediately. The post-study work visa was abolished in 2012, illustrating a shift in how student migration was viewed by the government, henceforth as a temporary form of mobility.

Examining trends in the numbers of foreign students from 1997 (Figure 7), we observe first a stagnation of flows between 1997-2001, then an accelerated rise in 2001, followed by a more moderate but sustained growth up to 2010. This growth predates however the major changes in the migration policy implemented by the Labour government in 2007 and 2008. It may partly be due to the restrictive migration policies implemented by the United States following the 9/11 terrorist attacks in 2001. These may have pushed some students to migrate to the UK instead, one of the main competitor of the US on the international student market, in what de Haas (2011) calls "destination substitution effects" of migration policies.

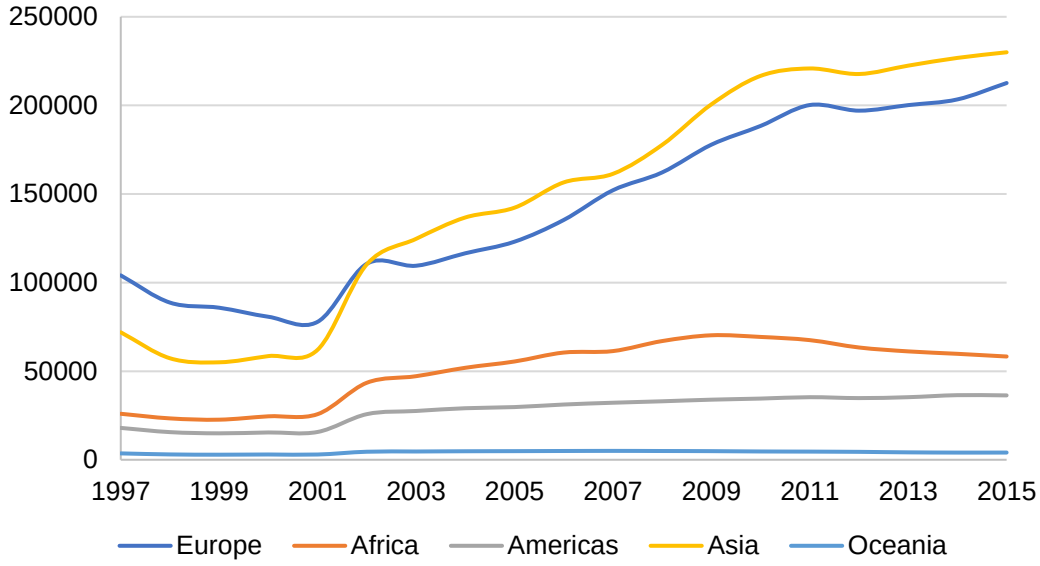
We further observe a stagnation of the numbers of international student's concomitant with the arrival of the Conservatives in 2010. This restrictive turn seems to have particularly affected African students, whose numbers display a continuous decline since 2009/2010. The decrease also concerns Asian students as well as, more surprisingly, European students (including EU citizens), that shouldn't be affected by changes in immigration legislation (Fig 8)

Figure 7. Trends in international students in the UK (1997-2015)



Source: HESA data

Figure 8. Distribution of foreign students in the UK by region of origin (1997-2015)

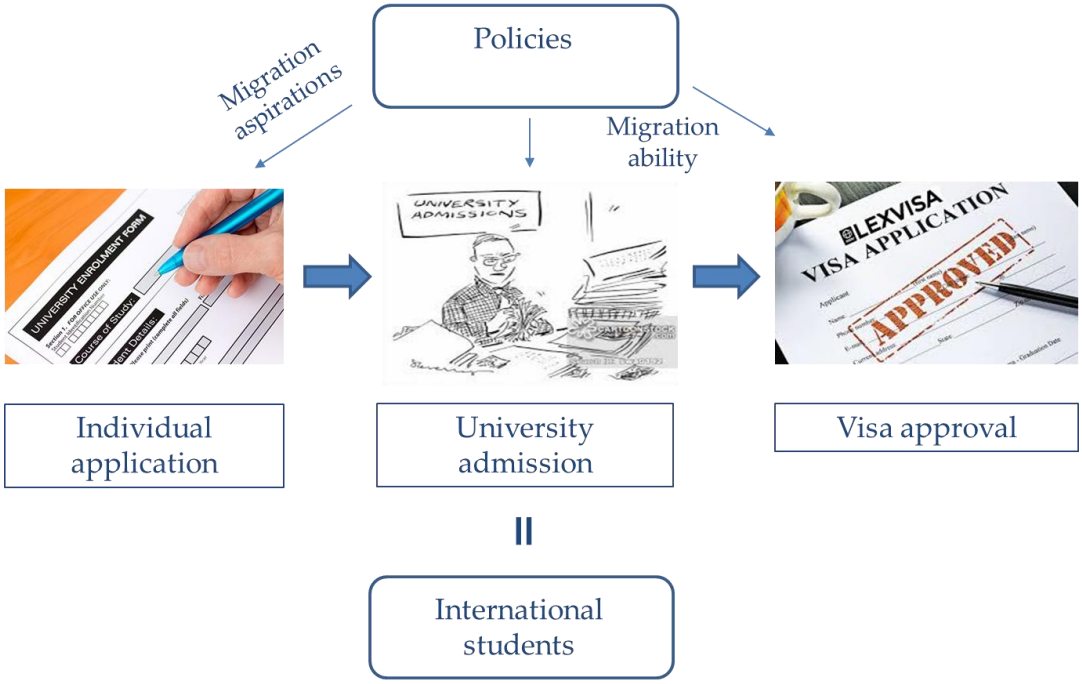


Source: HESA data

Mechanisms of policy influence

The international students stock we have examined so far hide in fact several different processes. For an international student to appear in our statistics an individual has first to apply to a particular university in a particular destination; she then needs to be accepted by the university admission and finally, if accepted, she needs to be granted a visa by the border agency.

Figure 9. Mechanisms of migration policy influence on international student mobility



Source: Own elaboration

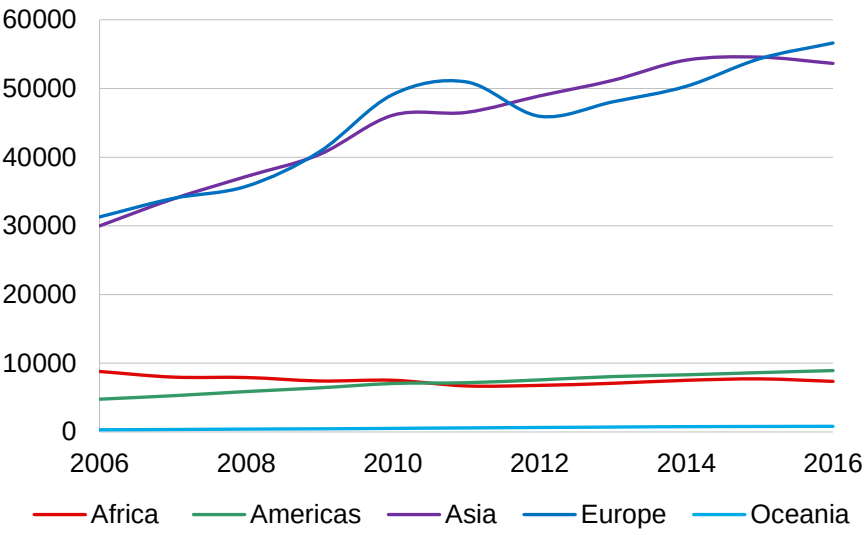
We argue that migration policies may shape all three levels – the level of individual (and family) decision-making, by shaping prospective students' migration aspirations (Carling 2002; de Haas 2010); the level of higher education institutions decision-making – who may translate migration policy in their admission criteria (such as the financial requirement) and finally (and most directly) they may shape the border policy authorities decision-making. The latter two would affect not the aspirations to move, but individuals' capabilities of reaching their preferred destination.

For the UK it is possible to get data on at least the first two of these stages. The Universities and Colleges Admissions Service (UCAS) is a UK-based organisation whose main role is to operate the application process for British universities. They collect data (the earliest we obtained so far were from 2006) disaggregated by country of permanent domicile on both individual applications and university acceptances. We can thus examine separately trends in application and in acceptance rates

The post-2010 restrictive turn in migration policies does not seem to have much of an effect on individual applications (Fig.10). The trend is rising uninterrupted for Asian students whereas we find a slow decline for African students (but starting before 2010). Examining

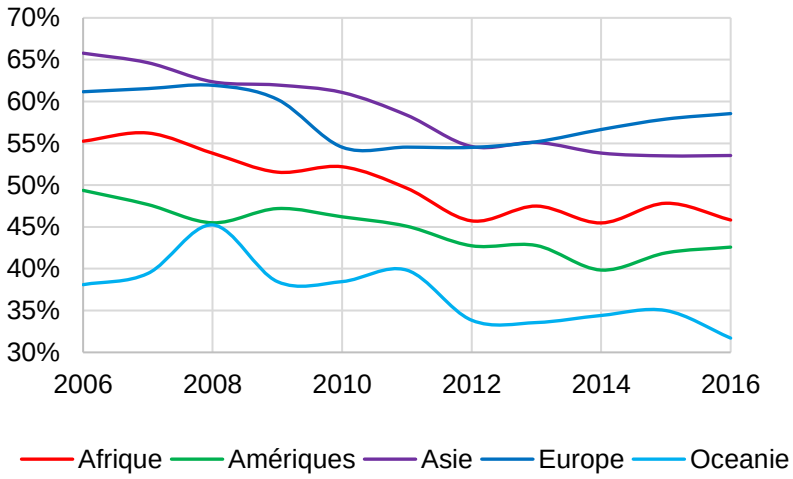
trends in admission rates (Fig. 11) we see a general decrease in rates, particularly so for Asians and Africans, although again this seems to have begun before 2010.

Figure 10. Total number of applications in the UK by region of origin (2006-2016)



Source: UCAS data

Figure 11. Admission rates in the UK by region of origin (2006-2016)



Source: UCAS data

4.3 Multiplying data sources to understand the effect of migration policies on academic mobility

Our results overall seem to suggest that negative shocks in migration policies do have an effect on the absolute levels of international student stocks as well as on their composition.

However, their influence does not seem to pass through individual applications or university admissions, as examined in the case of the United Kingdom, so perhaps it is enacted mostly at the visa-granting level. In contrast, the effect of positive shocks is less clear cut: we see rising trends in open political climates, particularly France, but these often pre-date big policy changes (as in the United Kingdom). Finally, we need more data – in particular data on visa applications and visa approvals by origin – to examine further mechanisms of policy influence – something that previous studies have rarely done.

Of course, this is just descriptive evidence and there are many factors that such an analysis cannot take into account, including factors related to changes in the country of origin (demographic, socio-economic changes; higher education infrastructure); in the destination country (economic, higher education infrastructure); to links between origin and destination countries (partnerships; specific funding channels); or, finally, changes in competing destinations (policies).

However, compared to large-sample cross country comparisons that translate policy changes into quantitative indicators, this type of analysis provides several advantages. First, it allows us to carry out a more in-depth examination of the national policy frameworks and their changes. Second, it allows us to triangulate our results by multiplying the data sources and by drawing on unique, national data sets that help us go further in exploring the mechanisms of policy influence.

In order to examine more comprehensively the role played by immigration legislation, alongside other factors, in shaping academic mobility flows and their composition, but also the geographic, educational and professional trajectories of students and academics, we need more than administrative data. Survey data, together with in-depth qualitative interviews, are required to obtain more fine-grained, detailed information on the mobility paths of students

and academics and to disentangle the mechanisms through which migration policies shape them. The next section presents the survey data collected within the framework of the project.

5 The Academic International Migration Survey (AIMS)

Administrative data are limited when it comes to analyse individual characteristics and trajectories of international students and academics in the three countries. Aware of these limitations, we decided to launch a web-based survey in autumn 2016, the Academic International Mobility Survey (AIMS). This survey targeted foreign born Master, PhD students and academics (post-docs, university professors, researchers…) residing at the time of the survey in France, Spain or the UK. In addition to socio-demographic characteristics, we collected information on respondents' residential, educational, professional and family trajectories as well as on the factors that are likely to have influenced their decisions of where to move and settle at different career stages[11].

5.1 Methodological challenges

Defining student and academic mobility in an unequivocal way is not an easy task. On the one hand, one of the greatest challenges of investigating student mobility is usually related to the different ways of defining student mobility in the national databases. On the other hand, the same kinds of difficulties affect the study of the mobility of academics even though the problem is normally not explicitly stated in this literature.

Concerning student mobility, there exists three main different definitions used: a) the first one takes into account all foreign nationals regardless of whether they were already living in the country before starting studying there; b) the second one considers only all non-citizens who are not permanently residing in the country of study or were not residing there before starting their university studies; whereas c) the third one takes into account exclusively those students whose prior education was in another country.

In their student mobility database, UNESCO, OECD and EUROSTAT (UOE) categorize students differently based on different criteria. The term "foreign students" is used to describe those who have a citizenship different from the country where they are studying. Meanwhile,

[11] The questionnaire is available on the Temper website.

"international mobile students" refers to students who are studying in a country different to that of their permanent residence and/or previous education (OECD 2010: 311-312).

We adopted this terminology and designed the questionnaire in order to be as inclusive as possible, but at same time to be able to clearly distinguish between "foreign-born students" (using the criterion of a different country of birth), "foreign students" (following the criterion of a different citizenship) and "international students" (using the criterion of prior education. The same sorts of distinctions are operated in the case of academics.

5.2 Survey design and implementation[12]

Available administrative data on international and foreign postgraduate students and academics in France, in Spain and the UK have been gathered with the aim to get a picture of this population in the two destination countries and to evaluate possible ways to select the universities where the survey could be implemented[13]. Some criteria have been determined in the three countries in order to guarantee a variety of type of institutions (universities, research centres and higher education agencies such as Campus France or Fundacion Carolina), of sizes with regard to the number of enrolled postgraduate students and academics, and geographical dispersion. Whereas in the UK, data on foreign students and academics by institution of studies/work are available and centralized by the Higher Education Statistics Agency (HESA), in France and Spain, available data are not disaggregated by institutions. Moreover, for the Spanish case, very few data are available at the national level on the numbers of foreign students/academics. For these reasons, in these two cases, the two criteria for selection have been the type of institution and the geographical dispersion.

A number of institutions in the three countries have been contacted in order to ask them for cooperation. The survey was shared among all foreign postgraduate students and all native and foreign academics working and studying in the institutions selected. This was carried out in cooperation with the universities and research centres that were in charge to send to all the target groups an e-mail with the invitation to participate at the survey with the link to access it

[12] For more details, see the methodological note on Temper website.
[13] For more information, see Report D4.2 of the Temper project: Lama Kabbanji, Tatiana Eremenko, Mélanie Jolivet-Guetta, Erica Consterdine, Amparo González-Ferrer, Yoan Molinero Gerbeau, 2015, Descriptive report on pre-existing data and research on International students and academics flows to the EU, D4.2 Temper report.

and at least two reminders. Respondents took between 20 to 50 minutes to complete the survey. 83.31% of the respondents who entered the survey also completed it.

Table 1 displays some key information on the fieldwork, showing details on its duration, the number of selected institutions and the number of institutions where the survey has been conducted.

Table 1. Details of AIMS fieldwork

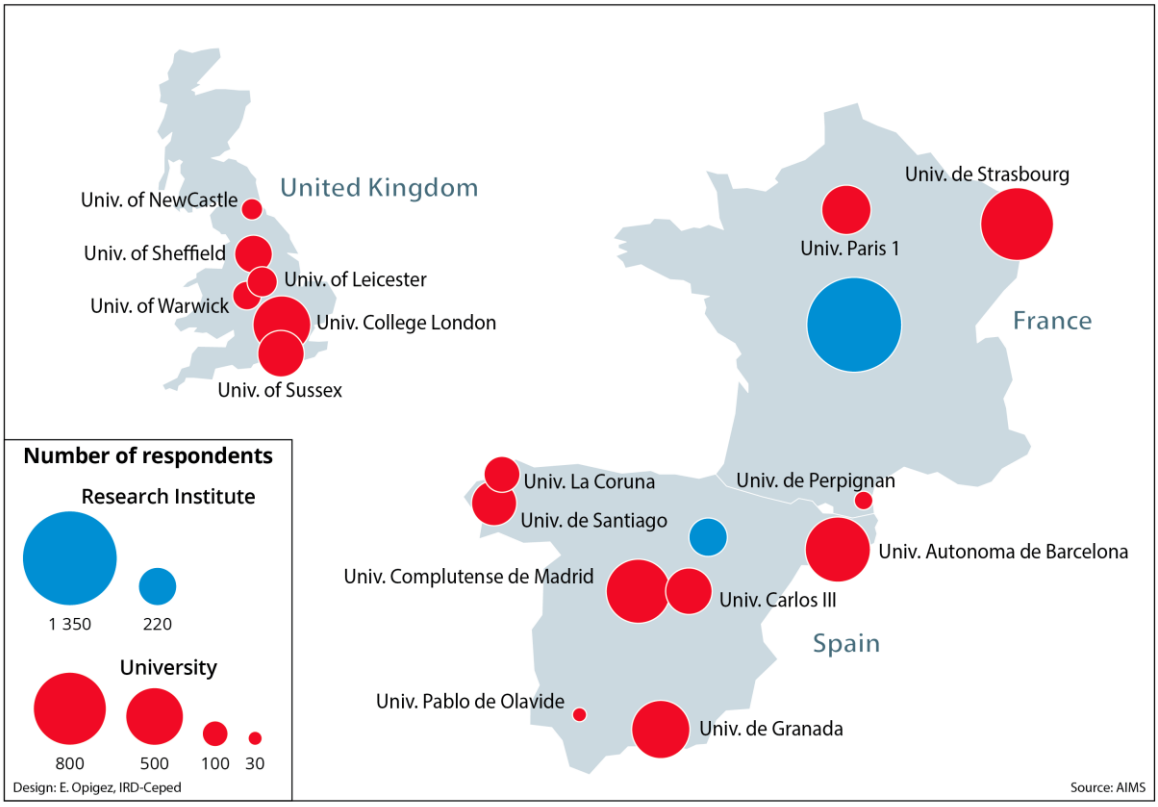
	FRANCE	**SPAIN**	**UK**
DURATION OF THE FIELDWORK	September 2016 – July 2017	October – December 2017	August 2016 – July 2017
SELECTED UNIVERSITIES	10 institutions (universities, Grandes Écoles, research centres) + Campus France	15 institutions (universities, research centres + Fundacion Carolina)	22 institutions (universities) + British Council
N. OF UNIVERSITIES WHERE THE SURVEY WAS LAUNCHED	6 institutions (3 universities, research centres[14]) + Campus France	7 universities + Fundacion Carolina	6 universities, but 5 of them did not send it per e-mail (but newsletters, apps, intranet)

Source: AIMS

Map 1 displays the number of responses obtained in the universities in the three countries. In the Annex, more details on the recruitment strategy and response rates for each institution can be consulted.

[14] In France, the survey was conducted among the following research centres: IRD, CNRS and INED as well as the following Mixed Research Units (UMR), CEPED, INALCO, URMIS.

Map 1. Number of Respondents (both populations) by university in France, Spain and the UK[15]

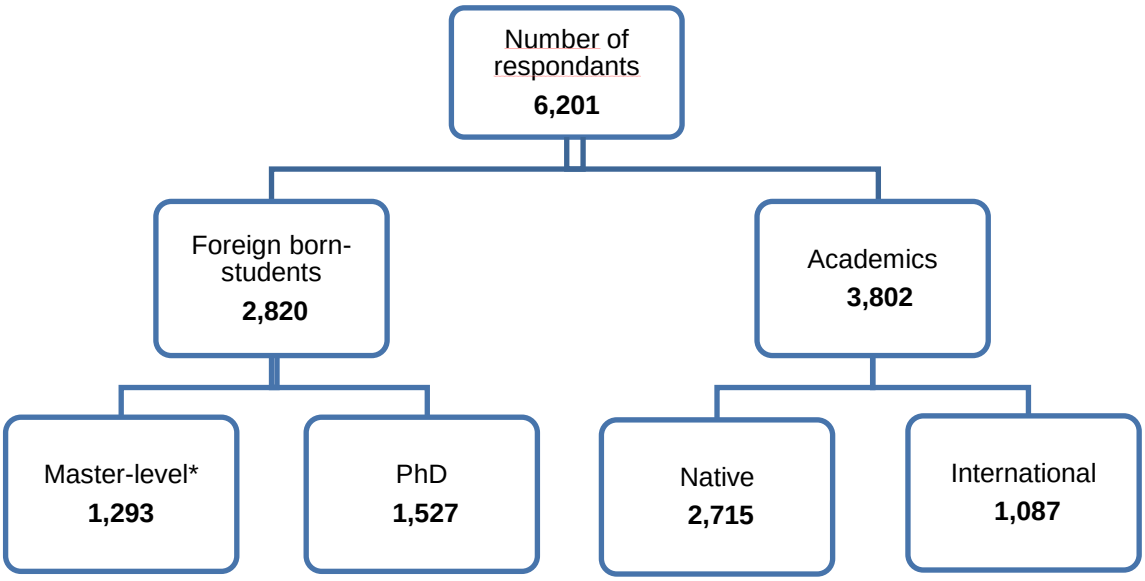


Source: AIMS

AIMS final dataset contains 6824 respondents. Of those, 6201 concern people who correspond to our target populations, 421 non-foreign-born PhD working as academics and 202 academics not residing in one of the three countries under study. The results presented in this report focus on 2 sub-populations: international students for data presented in Section 6 and native and international academics in Section 7.

[15] In France, some research centres were also included (see Table 1). In Spain, Fundacion Carolina was included.

12. Number of respondents – target populations



** Students with first university degree lasting 4 or 5 years and students with master's degree (or equivalent) are both included as Master's level Students.*

Source: Own elaboration

6 International students (Master and PhDs) profiles in France, Spain and the UK

This section presents the profiles of Master and PhD international students who responded to the AIMS survey. We first provide an overview of their socio-demographic characteristics and then discuss more specifically their education and mobility paths. However, before turning to the results, it is necessary to give some background information on the population of foreign students in the three countries.

6.1 The foreign student population in France, Spain and the UK

This section presents the main characteristics of foreign students in France, Spain and the UK. To do so, we rely on the most recent available administrative national data for each of these countries[16]. Data on foreign students in the UK can be obtained from HESA for the academic years 2015 or 2016. In France, information on foreign students is published by the Ministry of

[16] Administrative data provides mainly statistics on foreign students in France, Spain and the UK. Very few data are available on international students. Thus, we rely in this section on data on foreign students in order to compare the three countries.

Higher Education and Research (MENESR) for the academic year 2016-17; In Spain, data is provided by the Annual reports of the Education Ministry "Datos y Cifras del Sistema Universitario español", 2013.

In Spain, foreigners represented 18% of the total number of students enrolled at the master level, but almost 25% of the dissertations defended in Spain corresponded to foreign PhD students in 2013, indicating a larger degree of mobility at higher ranks of the educational career. We observe the same tendency in France, where the proportion of foreign students was lower among master's students (17%) than for PhDs (41%) in 2016. In the UK, we observe the opposite: 28% of foreign students are enrolled in a master's degree while only 9% are PhD candidates in 2015.

The composition of the foreign student population differs between the three countries, but also, within each country, by level of study. In Spain in 2013, students from the United States, followed by those from Latin America and Asia have a large presence at the Master levels, while Europeans and Africans largely concentrate in undergraduate programs. Furthermore, in 2013, 59% of foreign PhDs were Latin American nationals and 26% from UE-27. In the UK in 2016, 81% of students enrolled in higher education are from the UK; 6% are from the rest of the EU and 13% are from the rest of the world. Furthermore, 42% of students at postgraduate level are from outside the EU. In addition, the number of Chinese students far exceeds any other nationality; almost one third of non-EU students is from China. The next largest number of non-EU students is from India, followed by other EU countries. In a distant third position were students from Africa, followed by the Middle East and North America. In France in 2016, nearly one out of two foreign students were from Africa, of which 24% came from the Maghreb and 21% from the rest of Africa. 23% were from Europe, including 19% from the EU. Finally, 22% came from Asia or Oceania and 9% from America.

Moreover, it is also interesting to underline – as it is the case for Spain – that geographic origin also varies with studies' level in France. Thus, in 2016, more than half of Master international students were from Africa, 17% came from the EU and 16% from Asia, while only 8% were from America and 4% from Europe outside the EU.
Among PhD candidates, a third came from Africa, almost another third from Asia, and 25% were from Europe, of which 21% came from the EU. Finally, only 12% of international PhD students were from America.

There are also important differences in the fields of study: in France, in 2016, foreign students - all regions included - mainly opted for courses in languages, arts and humanities (32%), followed by sciences and engineering (28%) and economics (18%). African students are more concentrated than others in sciences and engineering (34%) or economics (21%).

Furthermore, female students in France are overrepresented (54%) among students from all regions except the African continent where they represent only 46% of students in 2016. In contrast, women represent more than two thirds of European students (66.7%). In the UK, the same distribution is observed: women dominate incoming student numbers from all regions in 2016 except Africa and the Middle East, the latter sending almost double the number of men than women.

The sources of funding and types of fellowships obtained by foreign students also differs between the three countries. The FPI and FPU[17] are the two largest general national programs for training of university human resources promoted by the Spanish Ministry of Education. The proportion of foreign beneficiaries represented 12% of total FPI and only 3% of FPU in 2013. In 2013, EU27 is the region that most concentrate both FPI and FPU fellows although FPU followed by Latina Americans at a large distance. The Carolina Foundation also offered in 2013 18 new PhD fellowships and 88 renewals from previous calls[18], aiming to attract more young researchers from Latin-American countries.

In France, the grants of the MENESR were the most important source of PhD funding: 32% of newly enrolled PhD students held a MENESR grant in 2013. Around one out of ten PhD candidates is financed through a CIFRE.11% received funding from other research institutions, such as CNRS. Regional authorities may also offer funding to PhD candidates enrolled in local higher education institutions. One out of ten PhD students received this type of funding. One out of six PhD candidates was funded through programs targeting foreigners.

6.2 The profiles of the AIMS student respondents

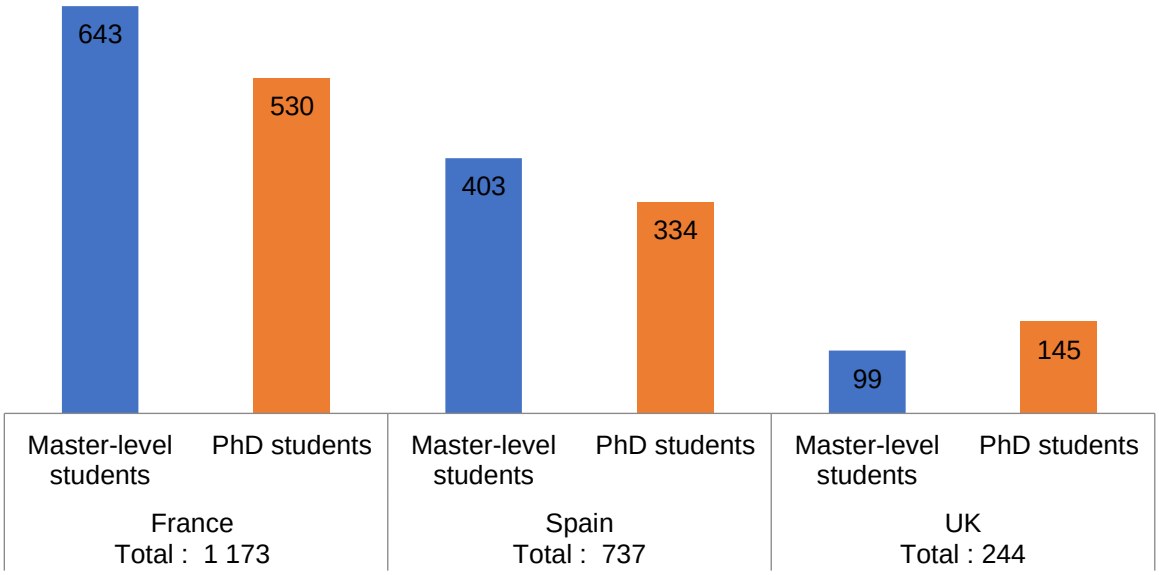
2,154 international students responded to the survey. As shown in the Figure 13, the greatest number of respondents are those who are studying in France, with 1173 students representing

[17]It refers to financial support for Training of Research Staff (Ayudas para la formación de personal investigador, FPI) and for Training of University Professors (Ayudas para la formación de profesorado universitario FPU).
[18] According to the last data available online on the webs' Foundation, for the academic course 2013-14

54.5% of the whole sample, followed by Spain with 737 students (34.2%) and then the UK with 244 students (11.3%). In both France and Spain, 54% of international students are currently enrolled in a master's degree, and 45% are in a PhD program; in contrast to the UK, where only 40.5% are currently enrolled in a master's degree, while 59.5% are doctoral students.

The mean age of the respondents in France is 26.3 years for Master students and 31.6 for PhD candidates. In the UK, the mean age is slightly higher: 27.2 years for Master students and 32.9 for PhD ones. In Spain, students are even older, with a mean age of 28.5 for Master students and 35.3 years for PhD ones.

Figure 13. Total number of Master and PhD international students by country of ongoing degree



Source: AIMS

Out of the total number of respondents, 45.5% are males and 54.5% are females.

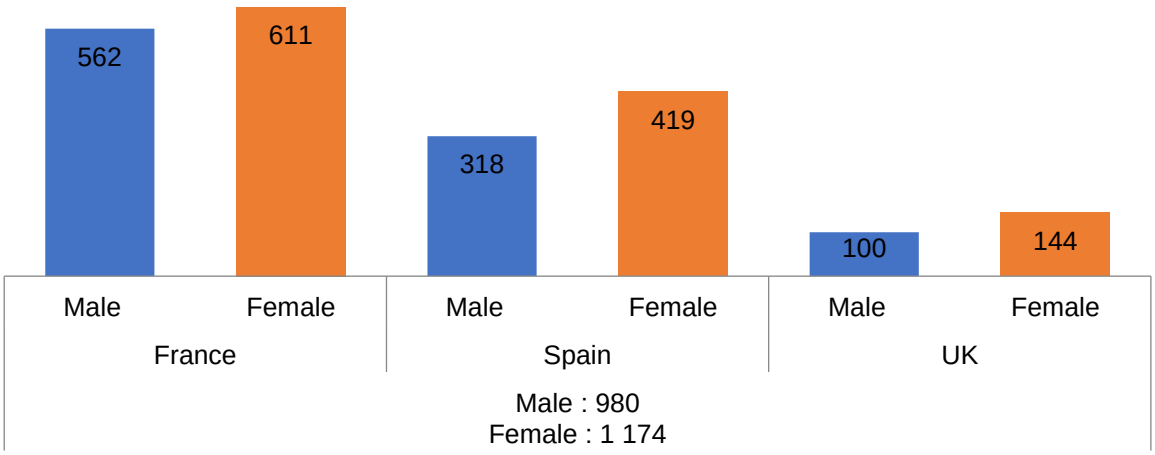
Besides, in the three Temper countries, women are overrepresented. The overrepresentation is strongest in the UK with 59% of female students, followed by Spain with 57%, and lastly France with 52%, which corresponds to the over-representation of women among foreign students documented in administrative data. The rank of France (3rd) may in part be due to

the origin of international students, since almost third of them are from Africa, where the share of women is only 43%.

Furthermore, if we analyse the repartition of international students by studies' level, we notice that for the three Temper countries, females are more likely to be enrolled in a Master program than men, particularly in Spain (61% vs. 39%), followed by the UK (57% vs. 43%) and France (55% vs. 45%).

A similar trend is observed for PhD candidates in the UK (61% vs. 39%), whereas the proportions of male and female PhD students are approximately the same in France (49% vs. 51%) and Spain (52% vs. 48%) (See Annex).

Figure 14. Total number of international students by gender



Source: AIMS

6.3 Place of birth of Master and PhD international students

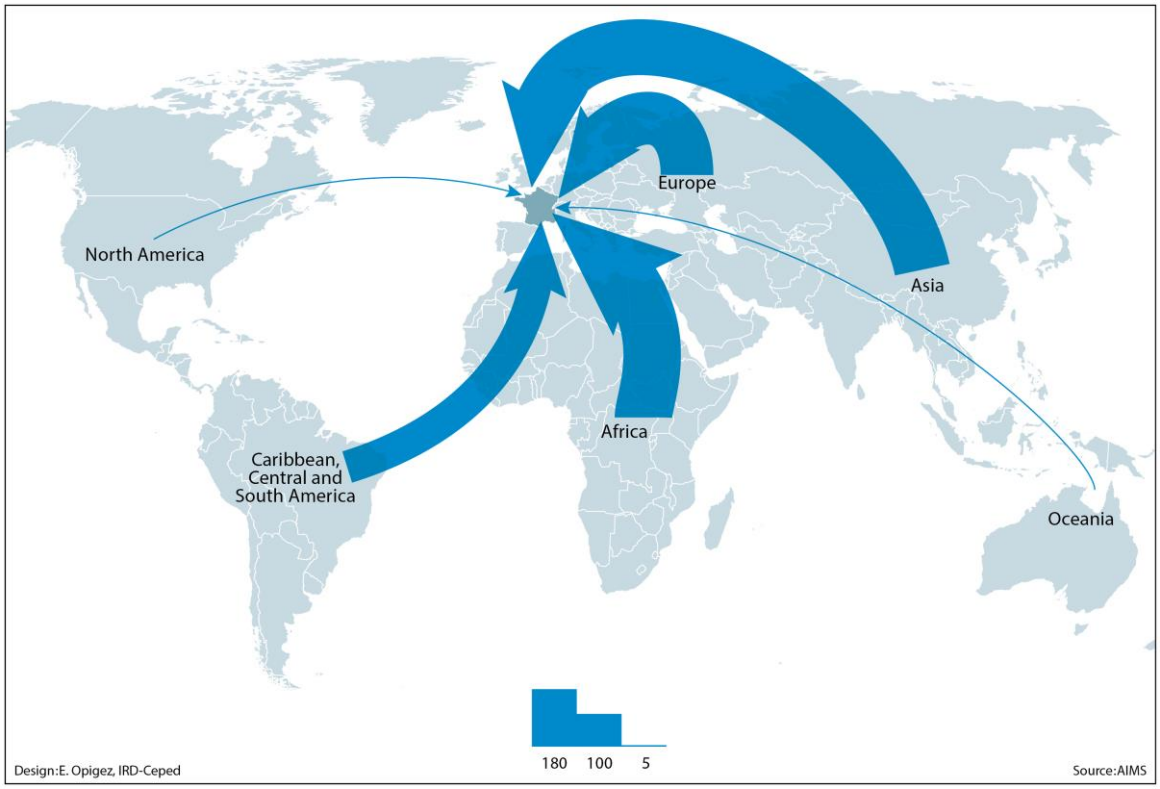
6.3.1 France

Master students currently enrolled in France are a quite diversified population coming from a very large number of countries across the world. Map 2 provides the regions of origin of Master international students: 28.5% were in born Africa – less than their share in the

population as documented in the administrative data -, 27.7% in Asia, 26.1% in Europe, and only 17.1% in the Americas.

Table 7 (see Annex) shows top three countries of origin by continent for master students. Morocco is the top origin country for all these students (5.2%), followed by India (4.6%), China (4.3%) and Russia (3.7%).

Map 2. Place of birth of Master international students in France



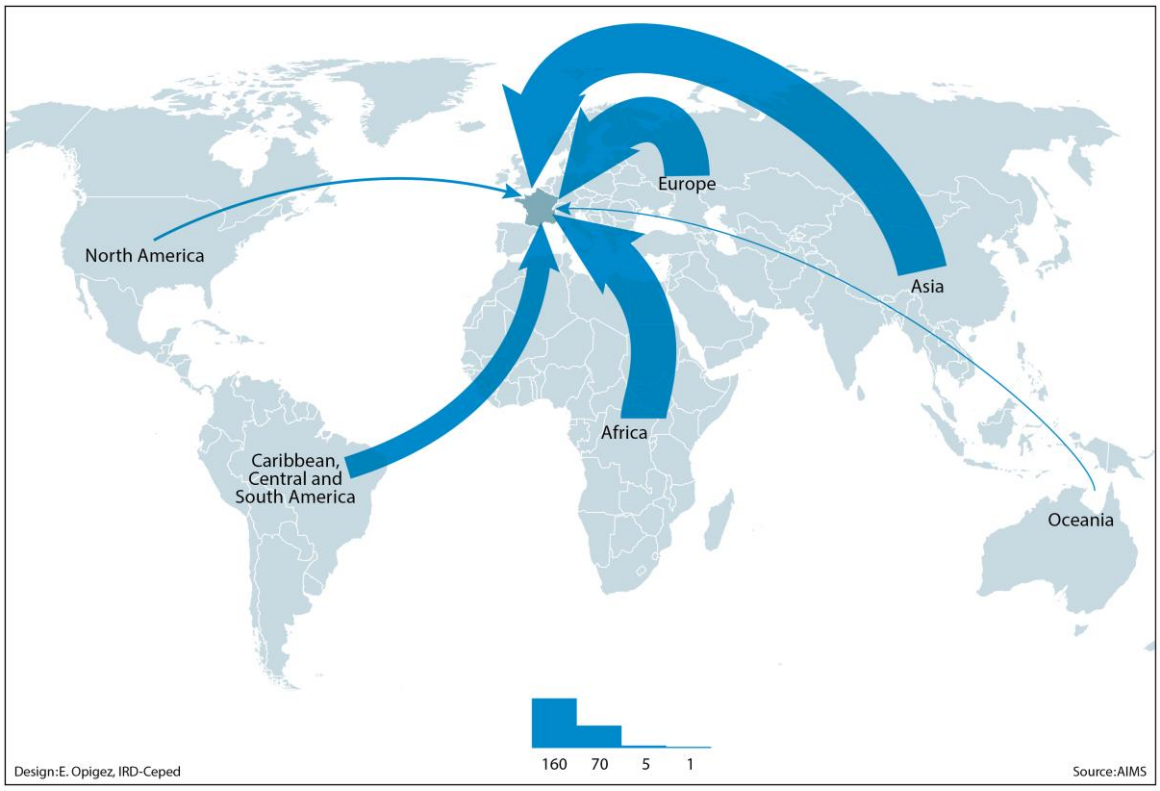
Source: AIMS

Note: The size of the arrows reflects the number of students from each region of origin.

As is the case for Master international students, the origin-continent composition of PhD international students doesn't highlight a specific continent as the major sending one. In fact, after Asia, represented with 30%, come Africa and Europe with the same share (27.4%). Yet, 14.7% originate from America, of which only 1.3% are from Northern America.

As shown in Table 8 (see Annex), most important countries of birth of PhD students are: Viet Nam (5.6%), Spain (5.1%), Italy (4.1%) and Brazil (4.1%).

Map 3. Place of birth of PhD international students in France



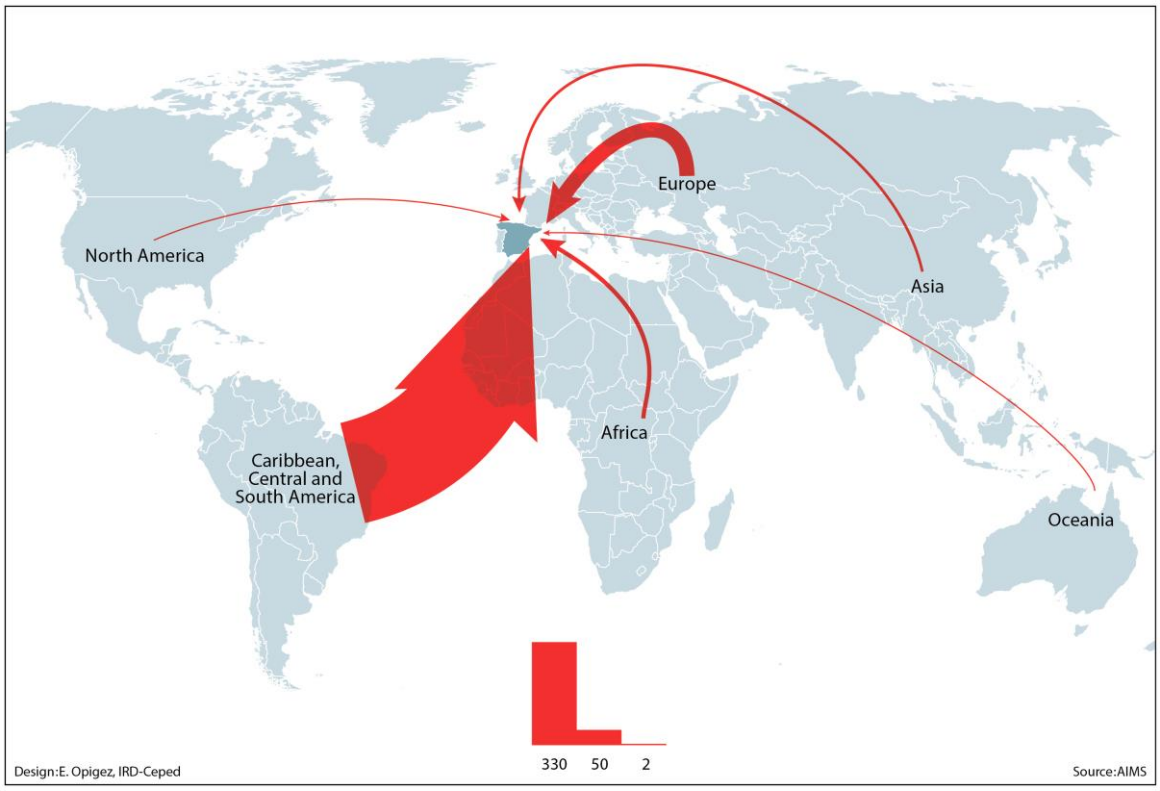
Source: AIMS

Note: The size of the arrows reflects the number of students from each region of origin.

6.3.2 Spain

As illustrated in Map 4, South, Central America and Caribbean is by far the top continent of birth for Master international students in Spain, sending more than four-fifths of respondents, of which Colombia (14%), Mexico (13%) and Ecuador (10%) are the prominent sending countries (See annex). The remaining 18% come from various other regions, predominantly from Europe: Italy (3%), Germany (2%) and France (1%).

Map 4. Place of birth of Master international students in Spain



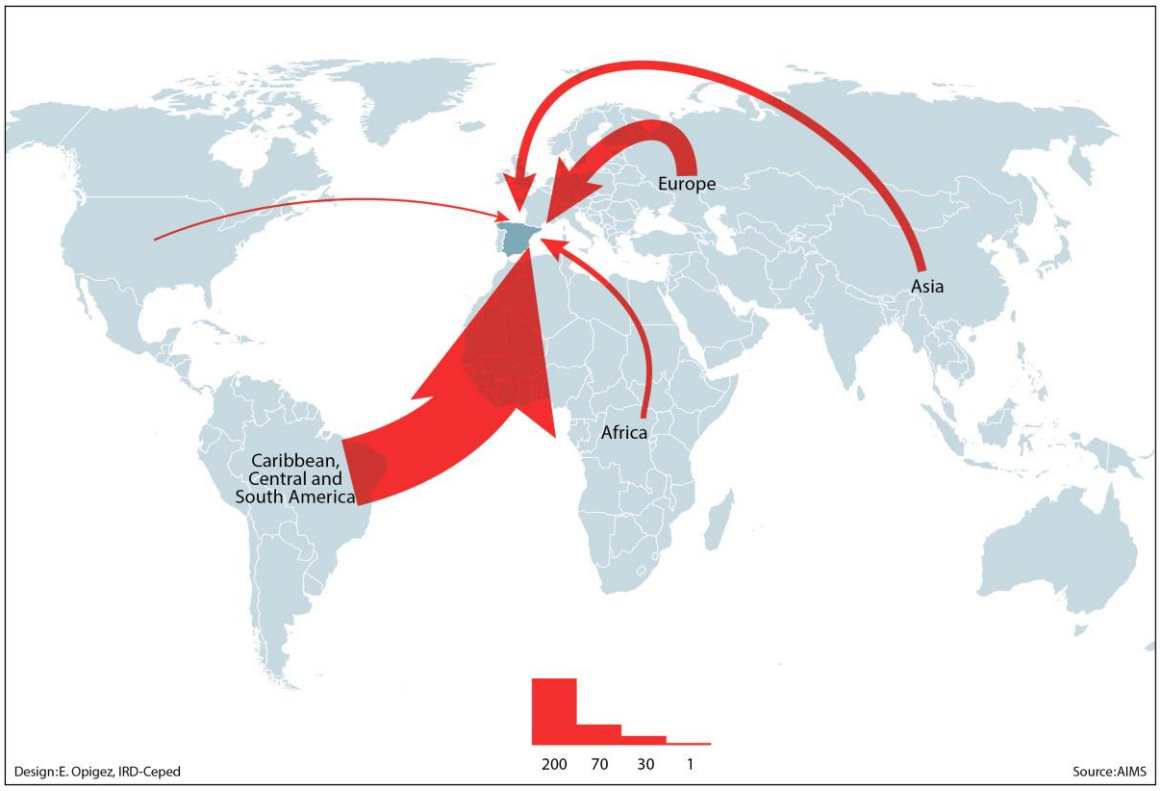
Source: AIMS

Note: The size of the arrows reflects the number of students from each region of origin.

Map 5 shows that almost two-thirds of PhD students come from South, Central America and Caribbean. European international students account for 20%. PhD candidates from Asia account for 9%, while the share of Africa is the lowest (5%).

In addition, as shown in Table 9 (see Annex), PhD students from Colombia (15%), Ecuador (11%), Italy (10%) and Mexico (9%) predominate.

Map 5. Place of birth of PhD international students in Spain



Source: AIMS

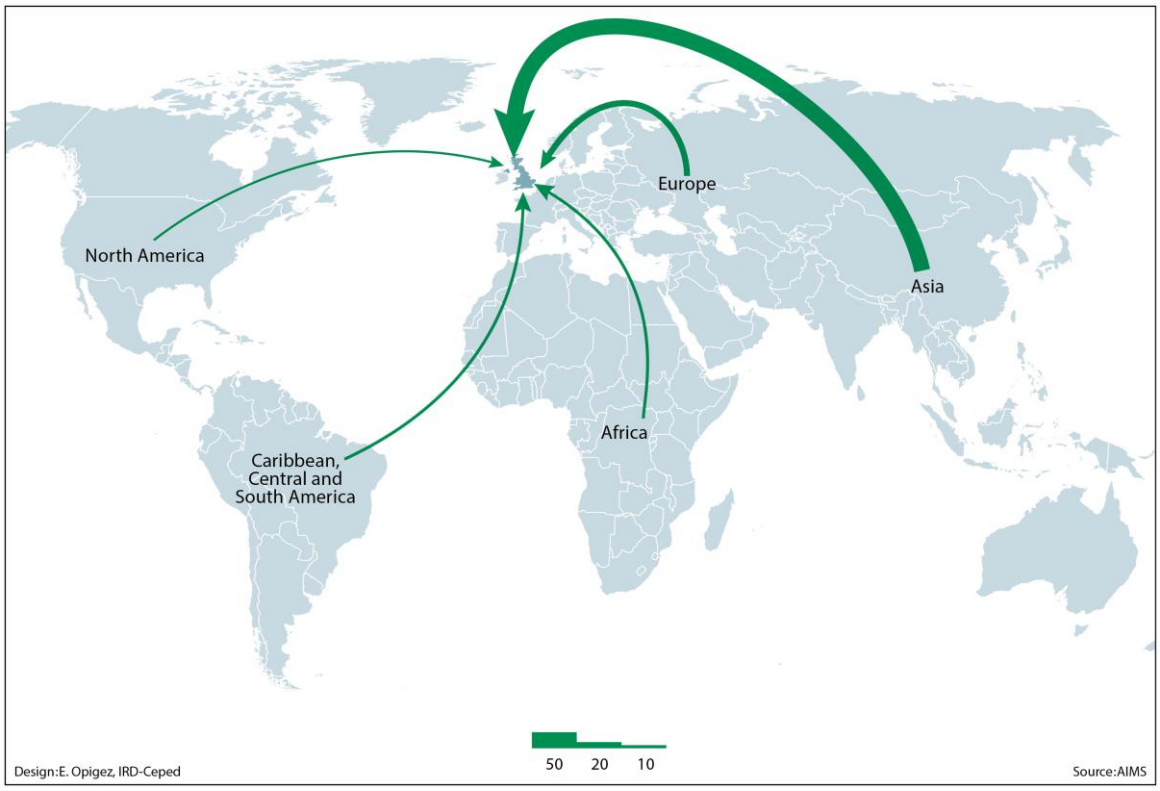
Note: The size of the arrows reflects the number of students from each region of origin.

6.3.3 UK

Over half of the Master international students in the UK are from Asia (Map 6). European students account for 22%, whereas Africa, "Northern America" and "South, Central America and Caribbean" account for approximately 9% each.

Furthermore, as illustrated in Table 11 (See annex), the number of students coming from China far exceeds any other nationality (13%). The other largest number of Master international students is from USA (7%), or Pakistan, Turkey and Spain (5%).

Map 6. Place of birth of Master international students in the UK

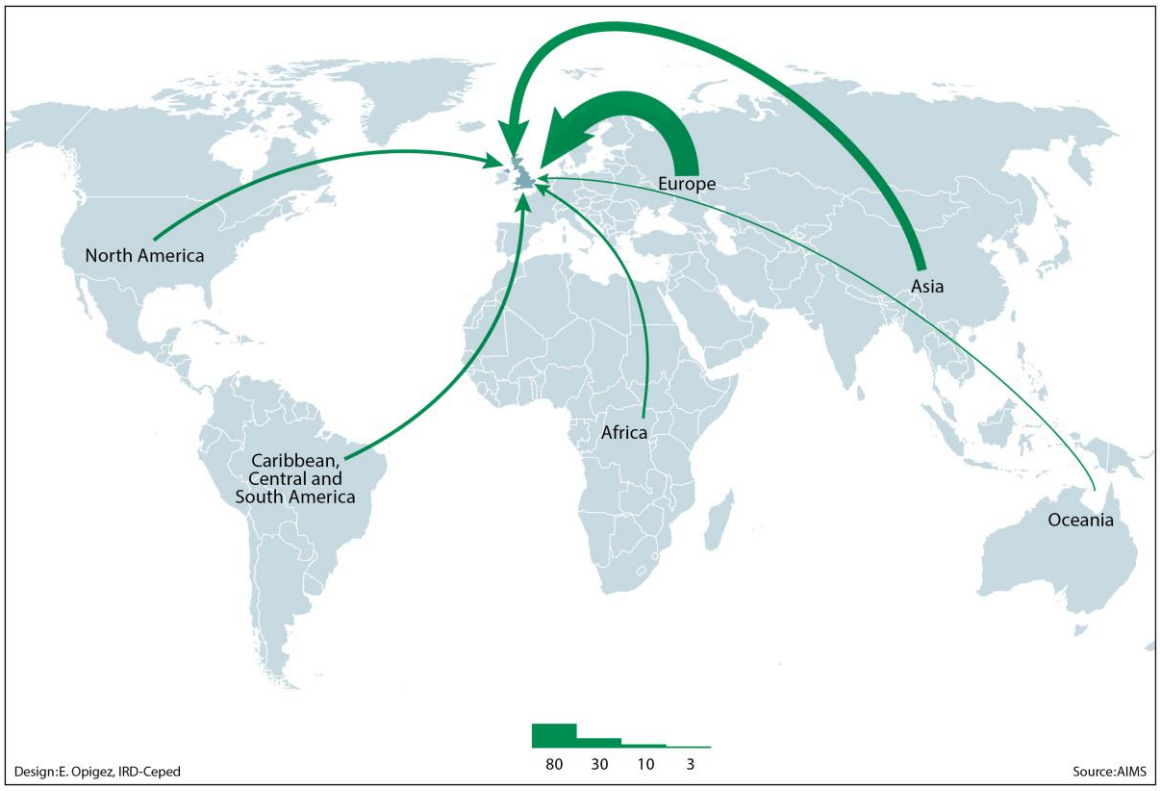


Source: AIMS

Note: The size of the arrows reflects the number of students from each region of origin.

PhD candidates from Europe represent approximately 40% of all international PhD students in the UK, where prominent sending countries include Italy (19%), Germany (15%) and Spain (9%). In the other continents, USA (9%) and Turkey (7%) are the top two countries of birth of the respondents.

Map 7. Place of birth of PhD international students in the UK



Source: AIMS

Note: The size of the arrows reflects the number of students from each region of origin.

6.4 Field of studies of international students

The students who responded to AIMS are enrolled in a variety of fields as seen in the figure 15, including humanities and arts, science (e.g. mathematics and statistics, life science, physical sciences, and computing), engineering, manufacturing and construction (e.g. engineering and engineering trades, manufacturing and processing, architecture and building), agriculture (e.g. veterinary, agriculture, forestry and fishery), health and welfare (e.g. health and social services), education (e.g. teacher training and education science), services (e.g. personal services and environmental protection), social and behavioural science, journalism and information, law and finally business and administration. For details on the field of studies, see Annex.

The main fields of studies of international students - all Temper countries included - are “humanities and arts” and “science” (41%) in contrast with “journalism and information”, “services” and “agriculture” (3%).

Regardless of studies’ level, international students in France and Spain are more enrolled in the “humanities and arts” (28% in France and 15% in Spain), “science” (21% in France and 15% in Spain), “engineering, manufacturing and construction” (each 12% in France and Spain) and “business and administration” (11% in France and 13% in Spain). In the UK, the students’ disciplinary backgrounds are slightly the same, with more interest in “social and behavioural science” (21%) and less attraction for “engineering, manufacturing and construction” (9%) than France and Spain.

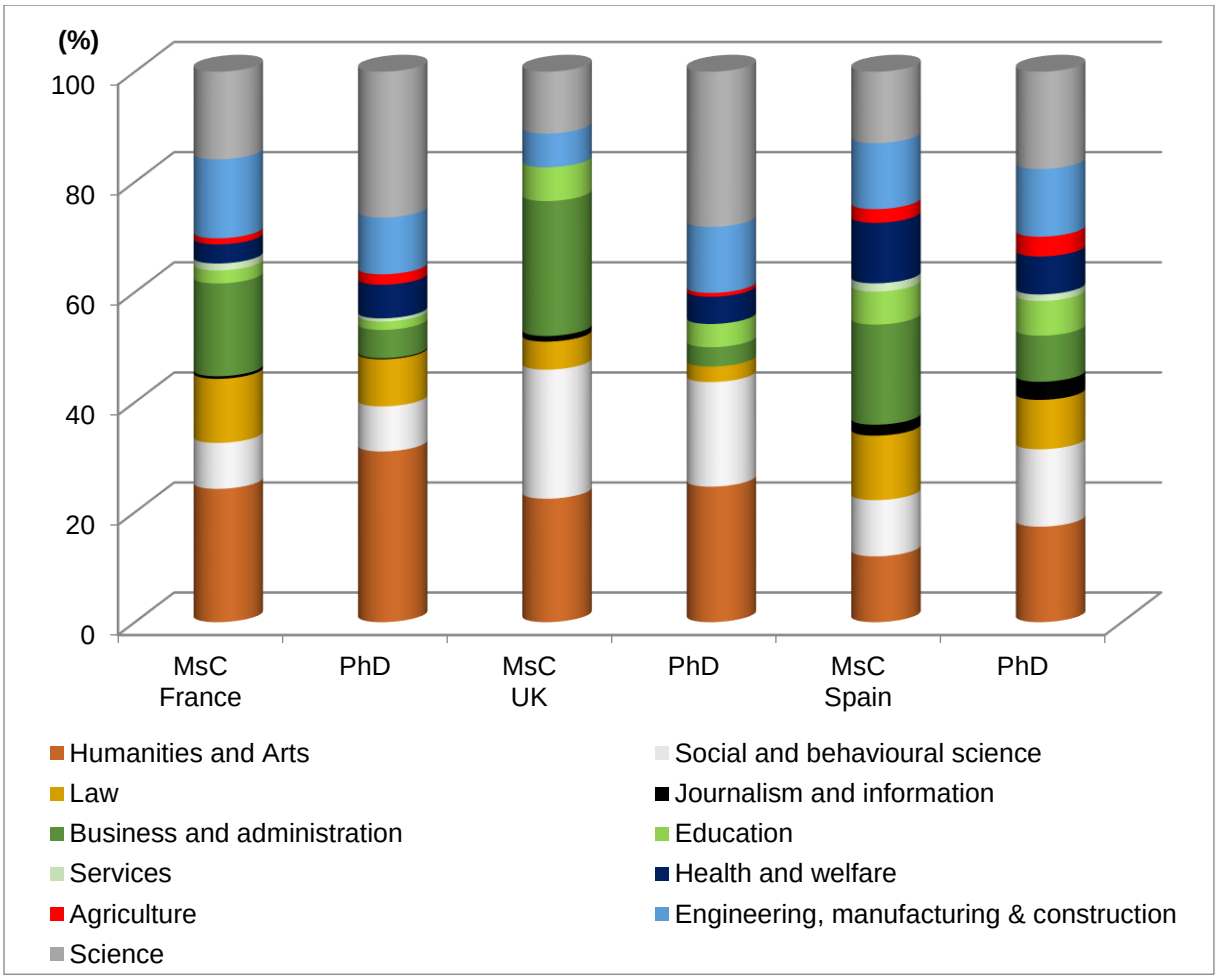
The distribution of international students also varies by studies’ level:

For master’s degree students, the proportions are the largest in the field of “humanities and arts” (24% in France, 12% in Spain and 22% in the UK) and “business and administration” (17% in France, 18% in Spain and 24% in the UK). Moreover, especially in the UK, 23% of Master international students are currently enrolled in “social and behavioural science” studies.

Besides, other fields such as “science”, “law” and “engineering, manufacturing and construction” seem to be the favourites for Master international students in France (16%, 12% and 14% respectively) and also in Spain (13%, 12% and 12% respectively).

As for PhD candidates, they are also over-represented among international students in “humanities and arts” (31% in France, 25% in the UK and 17% in Spain), “science” (26% in France, 28% in the UK and 18% in Spain) and “engineering, manufacturing and construction” (10% in France, 12% in the UK and Spain). Another field of study is characterized by high shares in the UK and Spain: “social and behavioural science” (23% and 10% respectively).

Figure 15. Field of studies of Master and PhD international students by country of ongoing degree



Source: AIMS

When looking at the differences of fields by gender, we can observe some particularities. In fact, in the three Temper countries, "humanities and arts" is the most frequent field of study among female students (24%) whereas "science" is the most frequent disciplinary background for males (23%). In both France and UK subsamples, the second favourite field for men is "humanities and arts" (22%) in contrast with Spain where this discipline comes fifth (10%). Apart from UK, female's second field selected is "science" (15%).

In France, while both "humanities and arts" (31% vs. 22%) and "law" (12% vs. 8%) gathers more females than male students, "science" (17% vs. 24%) and "engineering, manufacturing and construction" (8% vs 17%) interests more men than women. Moreover, other fields such

as “social and behavioural science”, “business and administration” and “health and welfare” tend to be shared equally between the two sexes. (See Table 5 in Annex)

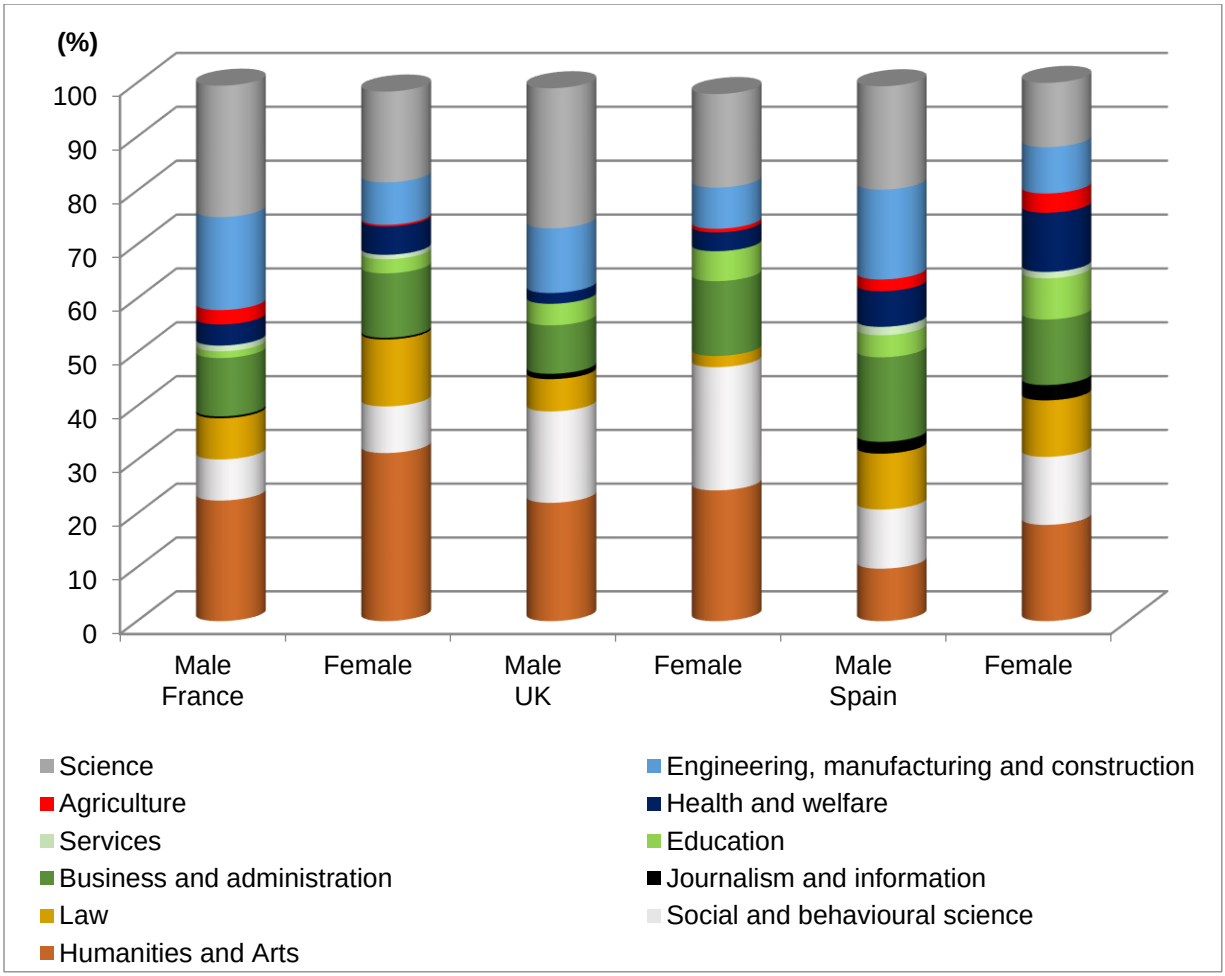
In Spain, “Humanities and arts”, “health and welfare” and “education” are clearly more represented in the female sample than in the male one. By contrast, male students’ sample is dominated by three fields: “science”, “engineering, manufacturing and construction” and “business and administration” (See Table 5 in Annex).

“Law”, journalism and information”, “social and behavioural science”, “services” and “agriculture” are slightly more common to both sexes.

In the UK, female respondents are overrepresented among the students of “business and administration” and “social and behavioural science”; while male students are directed towards “science”, “engineering, manufacturing and construction” and “law”.

Finally, the disparities by gender in “humanities and arts”, “health and welfare” and “education” tend to be less pronounced for international students in the UK.

Figure 16. Field of studies of international students by gender and by country of ongoing degree



Source: AIMS

6.5 Education and Mobility trajectories

In this section, we use sequence analysis to explore educational mobility trajectories of MsC and PhD students who responded to AIMS. This method allows visualising the educational trajectories of the respondents and capturing the timing of their geographical mobility. Sequences are defined as a set of successive states arranged over time and specific to each respondent (Robette 2011). In our case, the states constituting the trajectories combine two elements: education, with four possible states (secondary education, first university degree education, Master, PhD) and place of residence with five possible states (Country of birth, France, Spain, UK and other country). Compared with traditional descriptive statistics, sequence analysis allows capturing the broader sequencing of mobility events and exploring the geographical mobility path of the respondents. We also explore individual characteristics

associated with these paths (Gender, Social Class, Country of birth, Discipline of on-going degree, and Language of secondary education). The tables including information on these variables are available in the Annex.

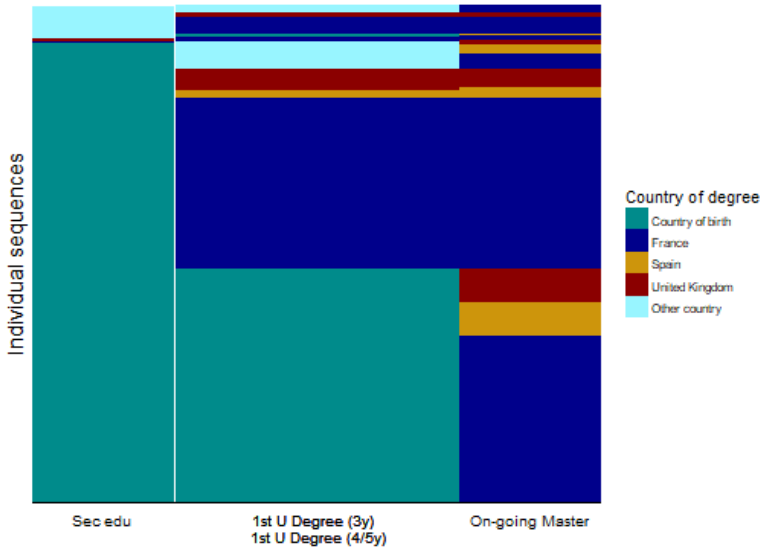
The individual trajectories are described using sequence index plots. This type of figure makes it possible to represent the successive states, which constitute a sequence within the course of an individual. The individual sequences are sorted so that similar paths are presented together.

6.5.1 Masters' students' trajectories

Sequence analysis allowed us to identify four profiles for master students. A first group of students, whose paths are described in the two figures below, have in common a linear and short education path (Path 1 (24%) and Path 2 (48%)). The timing of first migration for study purposes distinguishes paths 1 and 2, with path 1 involving an earlier mobility. Paths 3 (9%) and 4 (19%) are longer and include students who already hold a master other than the one they are currently pursuing (a more skilled population).

Most of the students who followed path 1 are enrolled in a master program in France (77%). Half of them left their country of birth after secondary education to pursue studies abroad, the others left after a bachelor degree, and a small group pursued their secondary education or more in a country different from the country of birth. Most of these students are females (60%), were born in Europe, Africa or Asia, belong to families with a highly skilled father (50%), pursued their secondary education in other languages than that of the country where they are currently doing their on-going degree (45%). Their main fields of current studies are Humanities and Arts (26%) and Business and Administration (20%).

Figure 17. Path 1: Secondary, First degree (3 years), Current Master (N = 266) [19]



Country of on-going degree

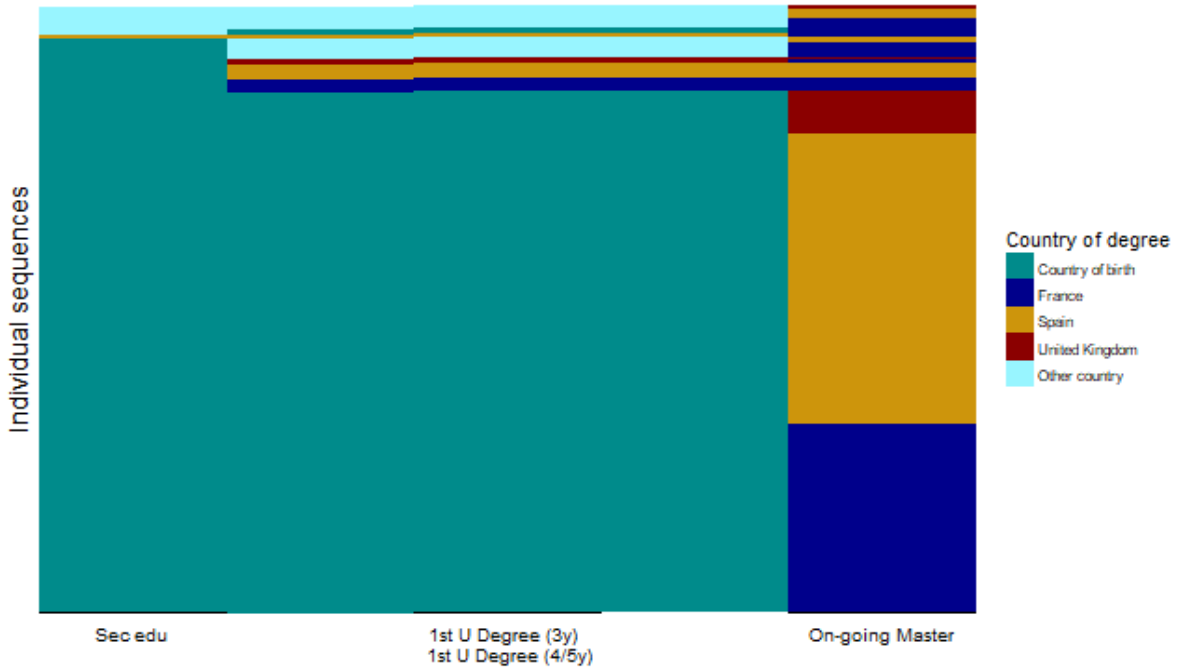
	n	%	%cum
Spain	29	10.9	10.9
United Kingdom	33	12.4	23.3
France	204	76.7	100
Total	266	100	100

Source: AIMS

The majority of the master students who responded to AIMS survey belong to the group that followed path 2. As we see in the figure below, this group studied for a longer period at home than the previous one, and left after a first degree lasting 4 or 5 years to pursue a master degree in Spain (in orange), or France (in dark blue). These students are mostly females (56%), a large proportion comes from South, Central America and Caribbean (57%), have a highly skilled father (53%) and pursued their secondary education in Spanish (48%). Their main fields of studies are: Business and administration (17%), Science (16%), Engineering, manufacturing and construction (15%) and Humanities and Arts (14%).

[19] How to read this figure: In this figure, the first state represents the place of secondary education, the second state, the place of first university degree (lasting 3 years or 4/5 years) and the last state is the place of current master. The colours indicate the different countries of studies. For example, in this figure, most students completed their secondary education in country of birth, almost half of them also completed their first university degree at home, and most of the students belonging to this group are currently enrolled in a master program in France (dark blue colour is predominant for the last state which refers to the country of on-going degree.

Figure 18. Path 2: Secondary, First degree (4/5 years), Current Master (N = 532)



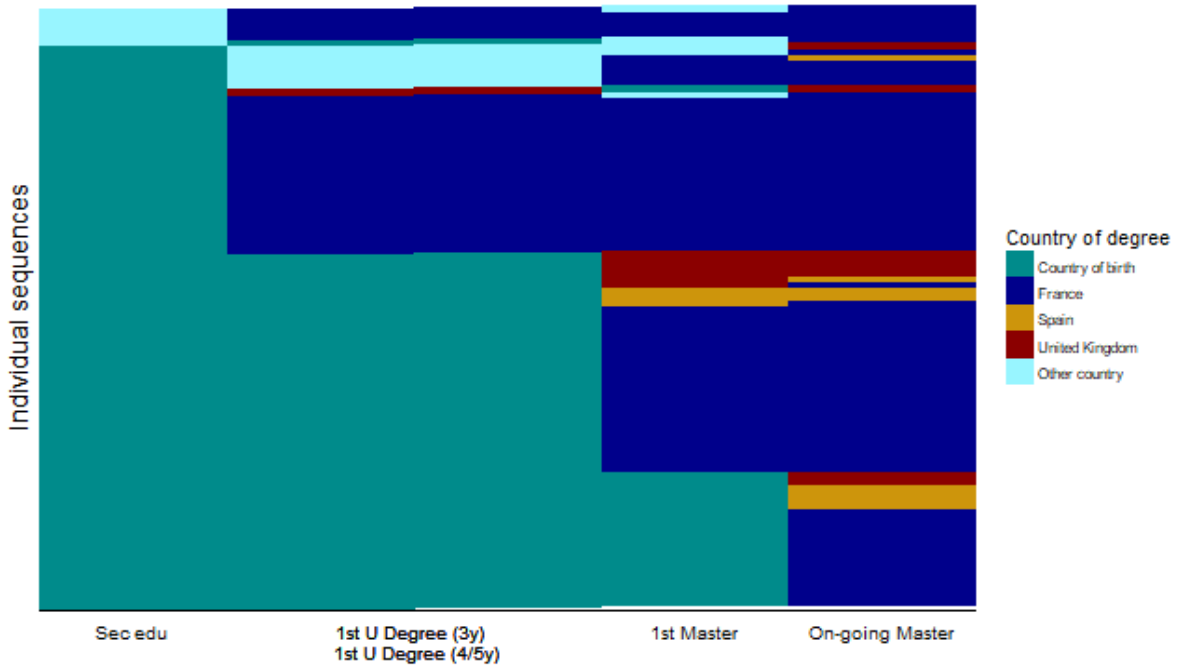
Country of on-going degree

	n	%	%cum
United Kingdom	41	7.7	7.7
France	208	39.1	46.8
Spain	283	53.2	100
Total	532	100	100

Source: AIMS

Paths 3 and 4 are longer, and include students who already hold a master other than the one they are currently pursuing (a more skilled population). Group 4 spent more time studying at home than group 3 before pursuing a master in France or Spain. The large majority of the students who followed path 3 are enrolled in a master program in France (84%). We can roughly say that a third left their country of birth after their secondary education, a third after bachelor and the rest left after first master. A small group pursued their secondary education in a country different from the country of birth. These students are mostly females (54%), were mostly born in Africa (43%), then Europe and Asia, have a highly skilled father (45%) and a proportion did their secondary education in French (36%), the others in other languages (44%). Their main fields of current studies are Humanities and Arts (31%) and Business and Administration (20%).

Figure 19. Path 3: Secondary, First degree (3 years), First Master, Current Master (N = 98)



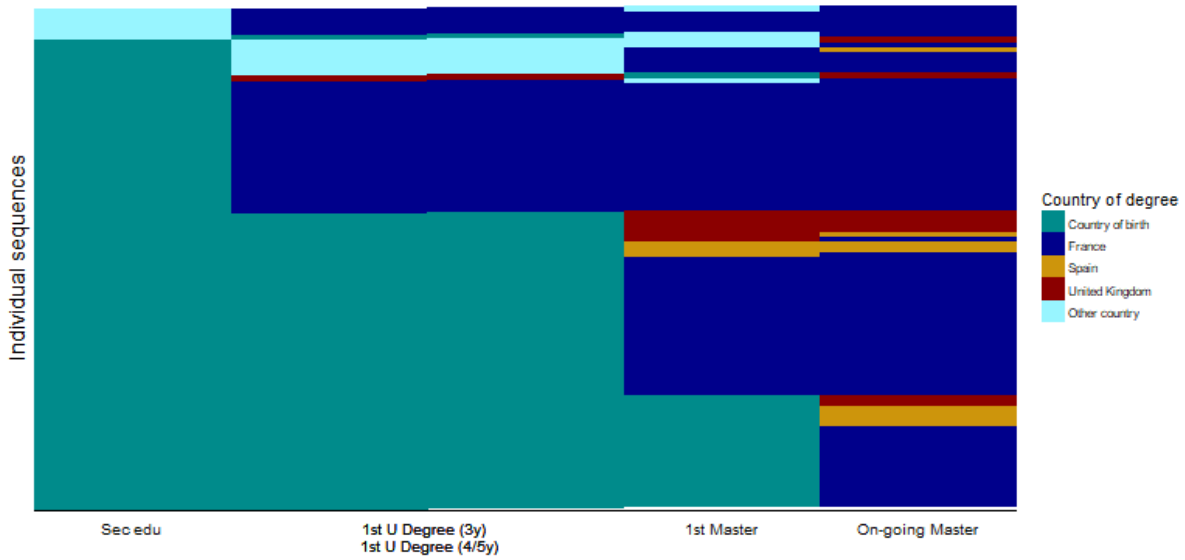
Country of on-going degree

	n	%	%cum
Spain	8	8.2	8.2
United Kingdom	8	8.2	16.3
France	82	83.7	100
Total	98	100	100

Source: AIMS

Most of the students who followed path 4 are enrolled in a master program in France (59%) and in Spain (35%). Most left after one our two masters obtained at home. A small group pursued their secondary education in a country different from the country of birth. These students are mostly females (58%), were born in South, Central America and Caribbean (47%), have a highly skilled father (50%), pursued their secondary education in Spanish (36%) or in other languages (36%). Their main current fields of studies are: Humanities and Arts (20%), Business and administration (15%), Engineering, manufacturing and construction (15%), Law (13%) and Science (11%).

Figure 20. Path 4: Secondary, First degree (4/5 years), first master, Current Master (N = 209)



Country of on-going degree

	n	%	%cum
United Kingdom	12	5.7	5.7
Spain	73	34.9	40.7
France	124	59.3	100
Total	209	100	100

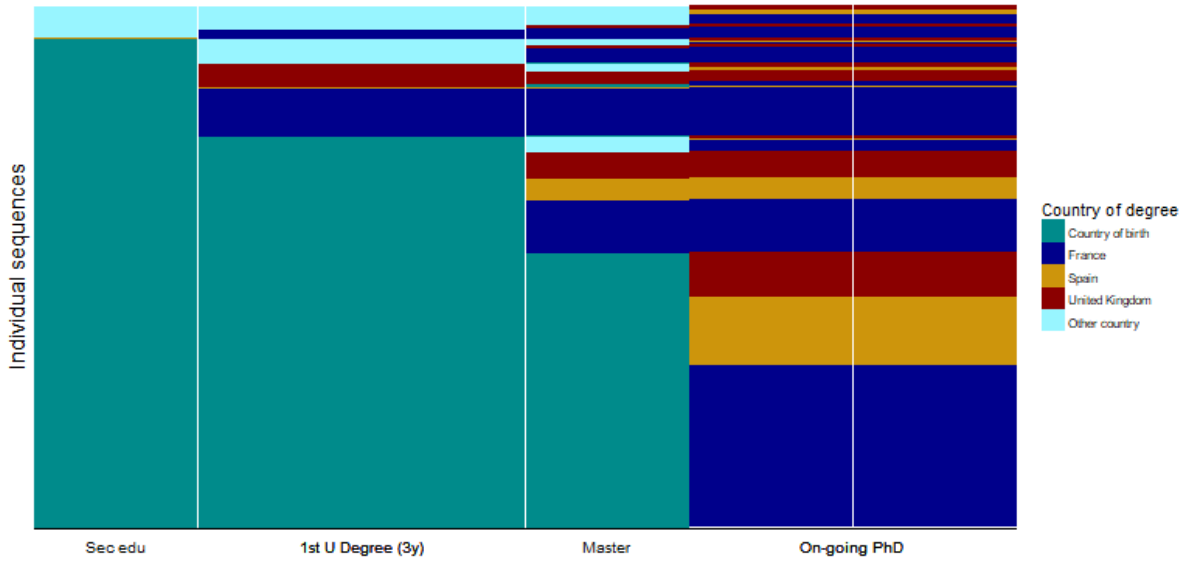
Source: AIMS

6.5.2 PhD students' trajectories

For PhD students, 4 profiles also emerge from sequence analysis. Students who followed Path 1 (25%) and Path 2 (51%) have shorter education paths. Paths 3 (7%) and 4 (17%) correspond to longer education paths characterised by several university diplomas.

The ones who followed path 1 are mainly enrolled in a PhD program in France (61%). They left their country of birth to pursue studies abroad at different moments of their education path. A small group pursued their secondary education or more in a country different from the country of birth. Students following path 1 are mostly female (58%), were mainly born in Europe (44%), then Asia (20%) and Africa (22%). The majority did their secondary education in other languages than that of the country of on-going degree (only 19% pursued their secondary education in French). They have a highly skilled father (49,5%). Their main fields of studies are the following: Science (32%) and humanities and arts (30%).

Figure 21. Path 1: Secondary, First degree (3 years), Master, current PhD (N = 229)



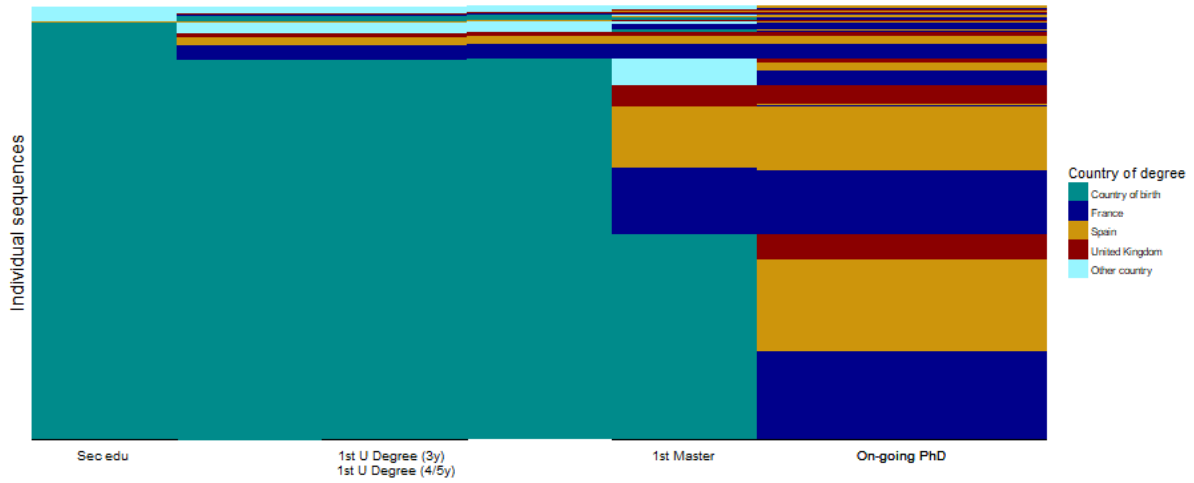
Country of on-going degree

	n	%	%cum
United Kingdom	44	19.2	19.2
Spain	46	20.1	39.3
France	139	60.7	100
Total	229	100	100

Source: AIMS

The figure below illustrates the paths of the largest group among PhD students, including mainly individuals who pursued their secondary education and a 4 or 5 years first university degree at home. Half of them left to pursue a master abroad (mainly to go to Spain or France) and the other half left after a master completed at home. They are almost half females (51%) half males, a large proportion were born in South, Central America and Caribbean (40%), then Asia and Europe (25% and 21%), they have a highly skilled father (50%), pursued their secondary education in Spanish (36%) or in other languages (39%). Their main current fields of studies are: Science (25%), Humanities and Arts (19%), Social and behavioural science (13%) and Engineering, manufacturing and construction (13%).

Figure 22. Path 2: Secondary, First degree (4/5 years), first master, current PhD (N = 473)



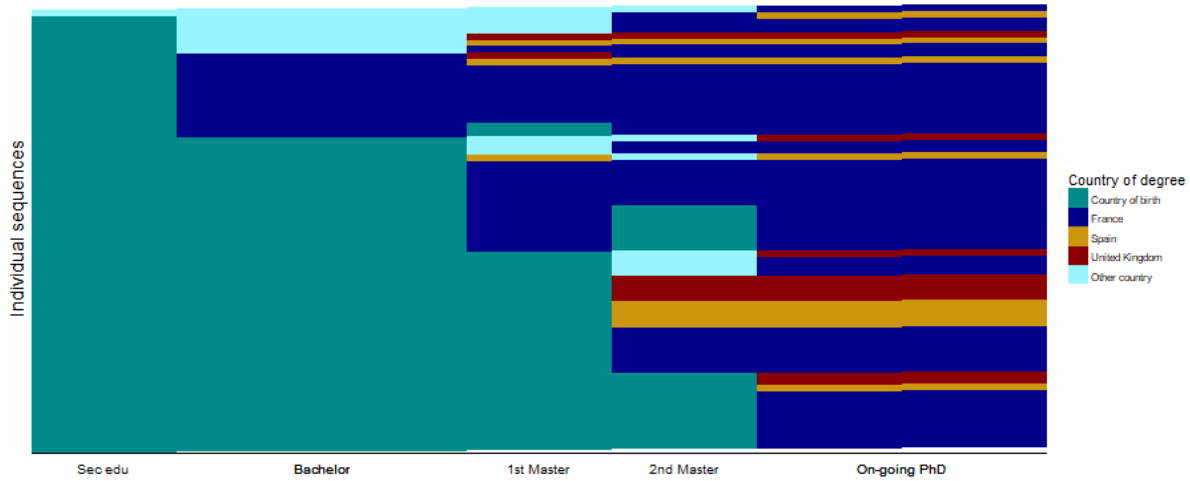
Country of on-going degree

	n	%	%cum
United Kingdom	60	12.7	12.7
Spain	197	41.6	54.3
France	216	45.7	100
Total	473	100	100

Source: AIMS

Figures 3 and 4 illustrates longer education paths characterised by several university diplomas. A small group of students are concerned by path 3. They are mainly enrolled in a PhD program in France. They completed 2 master degrees, either at home or abroad, mainly in France. This group includes almost the same proportion of males/females and comes from several continents: Africa (39%), Europe (36%), Asia (20%). These students mostly did their secondary education in other languages than the one where they are currently pursuing their on-going degree (46%), and 35% pursued secondary education in French. 47% have a highly skilled father. Their main fields of studies are: Humanities and arts (43%), then Social and behavioural science (17%) and Science (13%).

Figure 23. Path 3: Secondary, First degree (3 years), first master, second master, current PhD (N = 69)



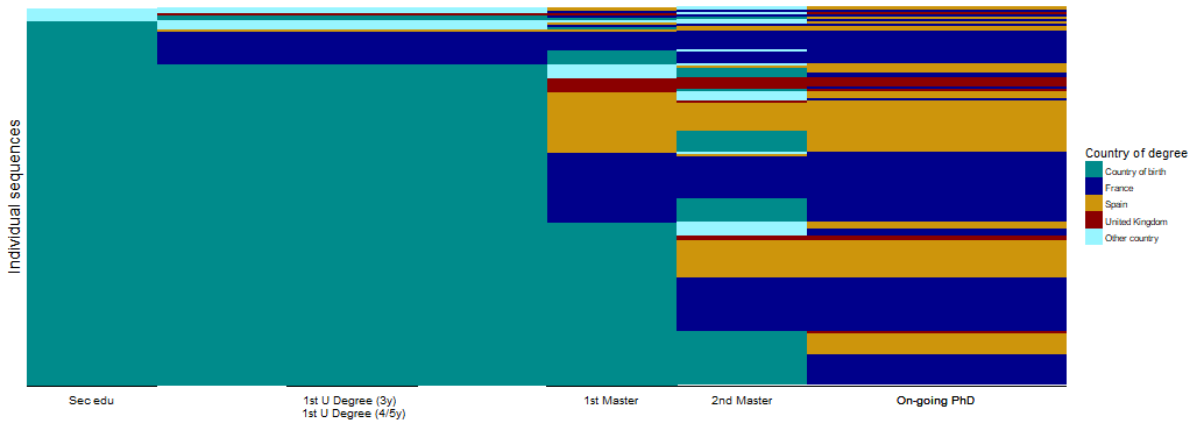
Country of on-going degree

	n	%	%cum
Spain	9	13	13
United Kingdom	9	13	26.1
France	51	73.9	100
Total	69	100	100

Source: AIMS

162 individuals share the trajectories illustrated in the figure below (path 4). These trajectories are quite similar to the previous group, with the exception that these students completed a first university degree of 4 or 5 years. They hold two masters and are mainly enrolled in a PhD program in France (56%) and then in Spain (38%). This group also includes almost the same proportion of males/females. They mainly come South, Central America and the Caribbean (42%). These students mostly did their secondary education in Spanish (37%) or other languages. 52% have a highly skilled father. Their main fields of studies are Humanities and arts (28%), then Science (12%), Law (12%), Engineering, manufacturing and construction (10%) and Business and administration (10%).

Figure 24. Path 4: Secondary, First degree (4/5 years), first master, second master, current PhD (N = 162)



Country of on-going degree

	n	%	%cum
United Kingdom	9	5.6	5.6
Spain	62	38.3	43.8
France	91	56.2	100
Total	162	100	100

Source: AIMS

Sequence analysis allowed to identify two main variables that differentiate paths of master and PhD students: the timing of migration and the number of university diplomas obtained. Sequence analysis also showed that previous educational mobility path counts in order to explain current mobility: for example, having pursued a master in France leads to the enrolment in a PhD program in France. These exploratory results led us to think that students who experience migration at different times of their educational trajectory differ. The next step for further analysis would be for us to estimate the probability to study abroad at the different stages of the educational trajectory: after secondary school, after a first university degree, after a master.

6.5.3 Short stays abroad during studies

We also asked the respondents to declare their stays abroad for study or research purposes, in another country than the one of their degree studies, at each step of their education trajectory (secondary school, first university degree, master, on-going degree).

Among Master international students, 5% have travelled abroad three months or more during their secondary school for study or research purposes (or similar, such as doing a short-term internship, etc.). School exchange was the main reason for their stay abroad (70%), followed by family moves (30%). Short stays abroad are more frequent during the first university degree: 22% of international master students did a short stay, especially in France (29%), Spain (14%), USA (11%), Germany (6%), the UK (5%) and Canada (4%). In addition, 24% of PhD candidates stayed abroad during their master's degree, which is very different to Master students, since PhDs have been more mobile when they were at the same level as current Master students. For those holding two master degrees, 15% also experienced a short stay abroad during this other master, especially in France (29%), Spain (18%), the UK (8%), Germany (7%) and USA (7%). Finally, during their ongoing degree (PhD level), 24% of PhD international students already experienced a short stay abroad. These figures are quite similar regardless of the country of on-going degree.

Among PhD international students, 3% have travelled abroad three months or more for study or research purposes (or similar, such as doing a short-term internship, etc.) during their secondary school. School exchange was also the key reason behind their stay abroad (63%), followed by family move (37%). Once again, short stays abroad are more common during university. 16% of PhD international students stayed abroad during their first university degree, particularly in France (26%), Spain (15%), the UK (10%), USA (7%), Germany (7%) and Canada (4%). In addition, 24% of PhD candidates stayed abroad during their master's degree, which is very different to Master students, since PhDs have been more mobile when they were at the same level as current Master students. For those holding two master degrees, 15% also experienced a short stay abroad during this other master, especially in France (29%), Spain (18%), the UK (8%), Germany (7%) and USA (7%). Finally, during their ongoing degree (PhD level), 24% of PhD international students already experienced a short stay abroad. These figures are quite similar regardless of the country of on-going degree.

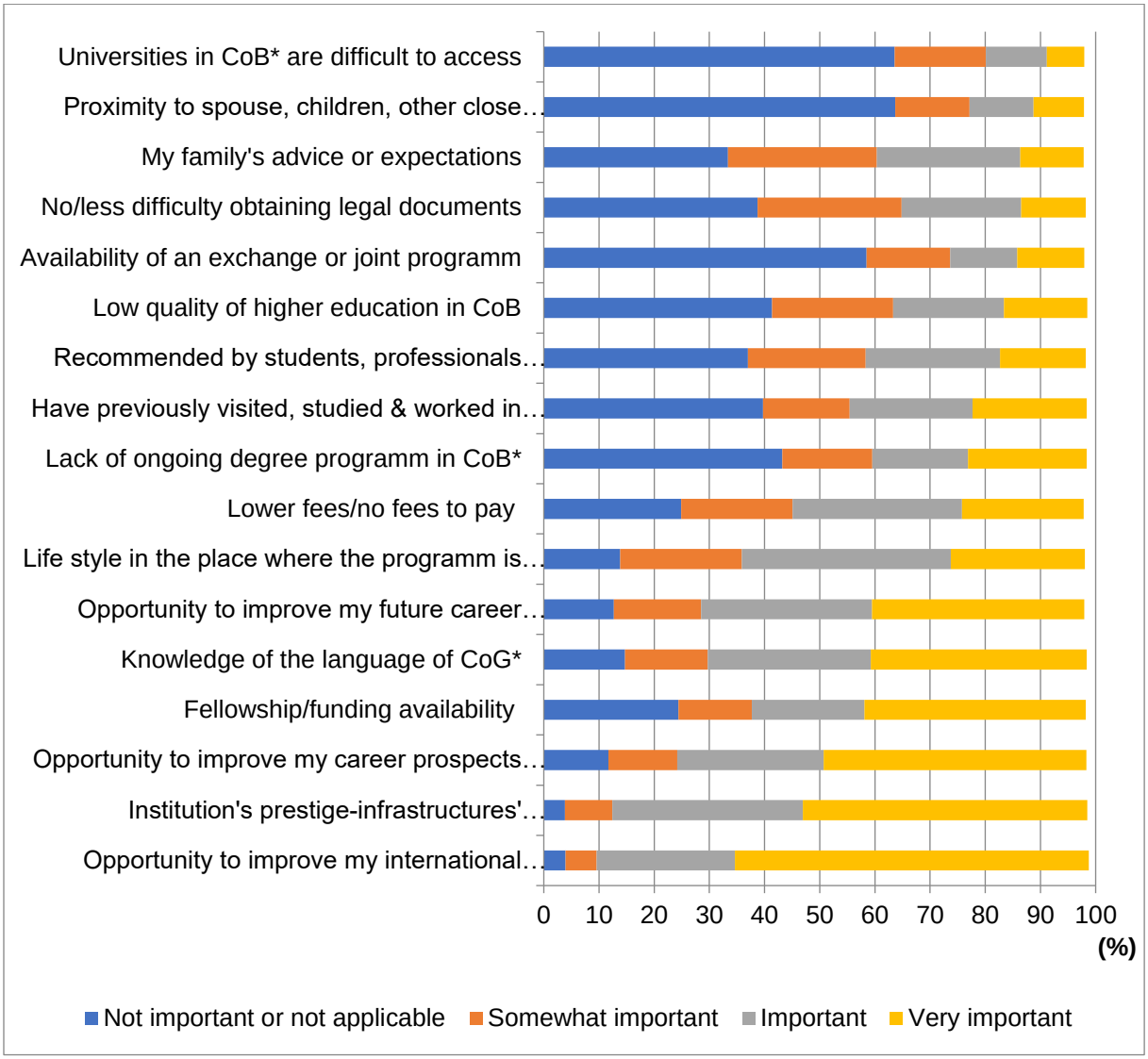
6.6 Choosing the place of studies: which factors are predominant?

Master international students were asked to rate 17 factors that may influenced their choice of the place of studies. The findings reveal that, regardless of the country of ongoing degree, the most three influential factors for them were the opportunity to improve their international career prospects (63% in France, 67% in Spain and 57% in the UK), the institution's prestige-

infrastructure's availability-program's content (52% in France, 50% in Spain and 55% in the UK) and the opportunity to improve their career prospects in the country of birth (41% in France, 58% in Spain and 48% in the UK).

The results also indicate the least important criteria (considered as "not important or not applicable") when choosing the place of studies: Universities in the country of birth are difficult to access (69% in France, 55% in Spain and 67% in the UK), the proximity to spouse, children, other close family members or friends (63% in France, 64% in Spain and 70% in the UK) and the availability of an exchange or joint program (59% in France, 55% in Spain and 70% in the UK). Furthermore, the sum of the shares "very important" and "important" show that other factors place vital influence for Master international students to choose their place of studies, such as the knowledge of the language of the country of ongoing degree (74% in France and the UK, only 59% in Spain), fellowship/funding availability (60% in France, 63% in Spain and only 49% in the UK), the opportunity to improve their future career prospects in the country of ongoing degree (75% in France, 62% in Spain and 64% in the UK) and finally the life style in the place where the program is located (59% in France, 66% in Spain and 65% in the UK).

Figure 25. Reasons for choosing place of on-going degree (Master international students in France, Spain and the UK, %)



Source: AIMS

Note: CoB: Country of Birth

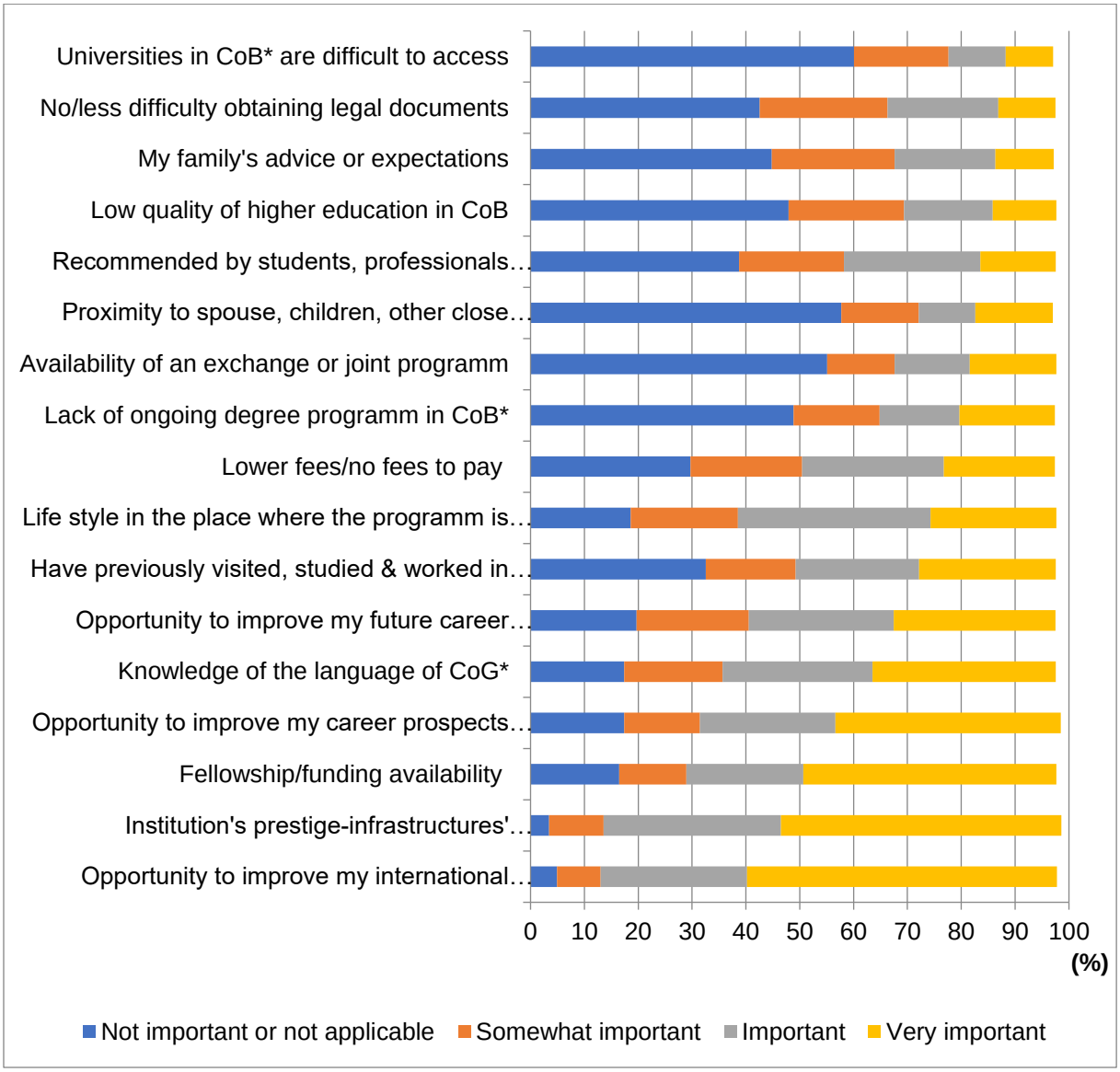
CoG: Country of on-going degree

The international PhD candidates have also chosen their place of study according to several factors. The main three reasons, that are notably important for the three TEMPER countries are "Opportunity to improve their international career prospects", "Institution's prestige-infrastructures' availability-program's content" and "Fellowship/funding availability". Among the hole respondents, respectively 57%, 52% and 48% found these three parameters to be very important when choosing their study destination place. Moreover, "Opportunity to improve their career prospects in the country of birth" is as well considered to be highly important in Spain (very important: 51%) and France (very important: 40%). In the UK, this purpose is

less regarded as being important, since the highest part of students replied: “Not important or not applicable” (32%). In contrast, international PhDs in the UK consider the “Knowledge of the language of the country of ongoing degree” to be very important (37%) or at least important (33%), while in France and Spain, the respondents accorded less importance to this factor (very important: approximatively 33% for both). The same trend is observed according to the AIMS results for the factor “Opportunity to improve their future career prospects in the country of ongoing degree” since 36% of the UK respondents considered this element to be very important. “Having previously visited, studied & worked in the country of ongoing degree*” or the “Life style in the place where the program is located” are not key factors that can attract international students when making their selection, with a slight advantage of the lifestyle factor (considered to be important by 36% of the hole respondents vs. 21%).

For the rest of the reasons, the biggest part of international PhDs - regardless of their country of ongoing degree - responded “Not important or not applicable”. However, for some factors, the sum of the shares of “very important” and “important” approach or even exceed the part that responded: “Not important or not applicable”. It is the case for the determinant “Recommended by students, professionals and academics in the country of birth*” in France and Spain (on average, 43% for the sum versus 42% for “Not important or not applicable”), whereas in the UK, the said sum share doesn’t exceed 28%. Regarding respondents in Spain, the factor “My family's advice or expectations” is not ignored since 35% consider it to be at least important.

Figure 26. Reasons for choosing place of on-going degree (PhD international students in France, Spain and the UK, %)



Source: AIMS

Note: CoB: Country of Birth

CoG: Country of on-going degree

6.7 Funding of Master and PhD international students

Asked about their primary source of funding, a third of Master international students (34%) declare benefiting from a fellowship, which can be a fellowship/scholarship from the government or other institution of country of birth (7%), or country of degree including PhD contract (25%), or from EU or other international organizations (2%). Moreover, almost another third (32%) reports having a support from their family. The remaining third is divided

between savings or loans (22%, including 16% from personal savings and 6% from loans) and work (9%, 1% of which is from teaching and/or research assistantship contract, and 8% are from other employment outside academia).

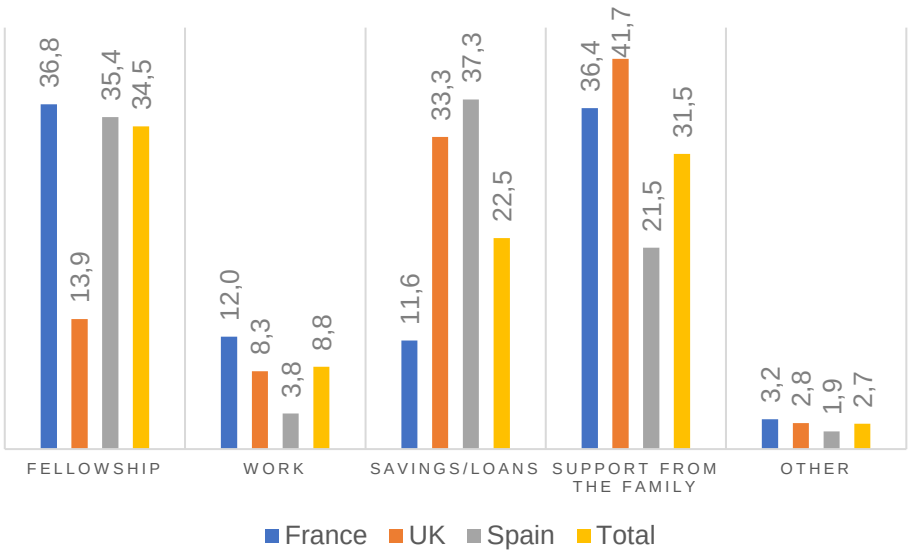
In France, 37% of these students declare receiving fellowship as primary source of their funding. The same percentage is found for students receiving support from their families, while the remaining percentage is shared between savings and loans (12%) and work (12%).

In the UK, most of students receive their funds either from their families (41%) or from their own savings and loans (33%). A fewer percentage of them finance their studies through work (8%) or fellowship (14%).

The case is a little different in Spain, where 37% of students report financing their studies by savings and loans, and 35% of them state receiving fellowships.

Only 4% of these students declare work as their primary source of funding.

Figure 27. Primary source of funding (Master international students in France, Spain and the UK)

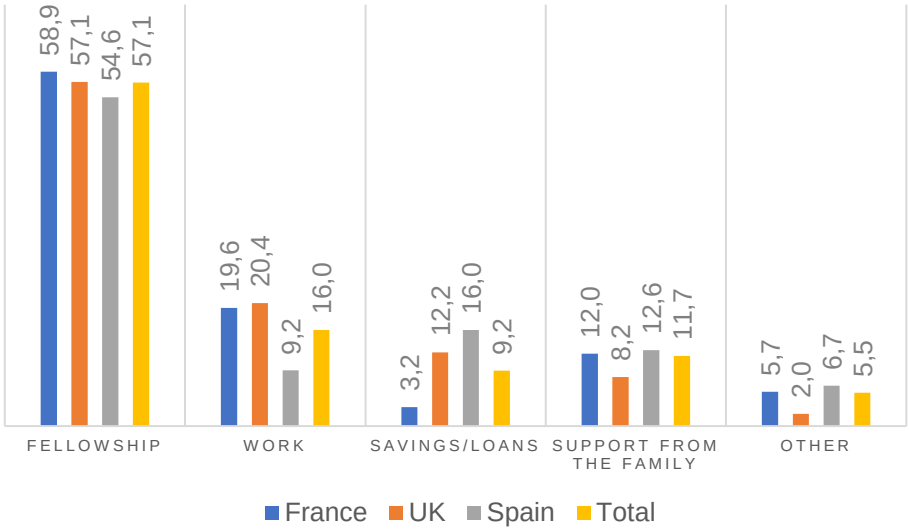


Source: AIMS

Unlike Master international students, more than half of PhD ones (57%) state that they benefit from a fellowship, which in the case of 18% of them is from the government or other institution of country of birth, 34% of a country of degree including PhD contract and 5% from EU or other international organization. 16% receive income from employment (including 6% from teaching and/or research assistantship contract, and 10% from other employment outside academia). Finally, 12% are funded by support from the family and 9% by savings/loans (7% of which is from personal savings and 2% from loans).

In each of the three TEMPER countries, more than half of the surveyed PhDs declare that they receive a scholarship. For the remaining sources, an interesting percentage of 20% for work was reported in France and in the UK. The highest percentage of students declaring savings and loans as their primary source of funding was reported in Spain (16%).

Figure 28. Primary source of funding (PhD international students in France, Spain and the UK)



Source: AIMS

7 Native and international Academics' profiles across the three contexts

This section introduces the profiles of native and international academics who responded to the AIMS survey. We begin with an overview of their socio-demographic characteristics. However, before turning to the results of the survey, it is necessary to give some background information on foreign academics in the three countries.

7.1 The foreign researcher population in France, Spain and the UK

There are few administrative sources available for describing foreign academics, particularly in France and Spain. A few recent large-scale surveys allow examining a limited number of socio-demographic characteristics of our population of interest.

According to the MORE2 Higher Education Survey, in 2012, the UK is particularly attractive with 26.5% foreign researchers working in the country, France comes next with 13.5% and Spain with 4.4%. Regarding the geographical origins of these researchers, in 2013, US, China and India are always among the five largest providers of researchers to the three TEMPER destinations (EUROSTAT). In the UK, the presence of Indian researchers represents 54% of the new permits for research granted in 2013 to non-EU foreigners, while their importance in

Spain and France was much lower with 6 and 9 %, respectively. Researchers from the US made up about 10% in all the countries, and the same for the ones from China, except for the UK where they represented only 4%. Finally, each TEMPER country seems to have their own specialization by origin: Mexicans and Colombians in Spain, with 5% each; Brazil and Tunisia in France, with 10 and 6% respectively; and Australia and Japan in the UK, with 4% each. For France, we also have data on the region of origin of foreign academics in the main research centre: the National Centre for Scientific Research (CNRS). According to the latest data available, around 55% of foreign post-doctorates employed by the CNRS are Europeans; Asians are the second largest national group - one out of five post-doctoral researchers are from this region. Americans represent around 12-13% and are over-represented among post-doctoral researchers compared to doctoral students (9%) (CNRS Bilan Social, 2010-2013). Africans represent 9% of foreign post-doctoral researchers working at CNRS. They are under-represented when compared with their proportion among foreign doctoral students.

In France and Spain, according to the MORE2 Higher Education Survey, the gender distribution of foreign researchers in 2012 shows that on average, females are almost as represented as males among foreign researchers: in France, female foreign researchers represent 13.1% of total researchers in the country and male represent 13.7%; in Spain, female foreign researchers represent 4.6% of total researchers in the country and male represent 4.3 %. In the UK, the differential is noticeable as female foreign researchers represent about 30% of total researchers in the country whereas male only 24.5%.

To complete the picture of foreign researchers working in the TEMPER countries, the distribution of foreign researchers by discipline shows that in France, foreign researchers represent 20% of total researchers working in natural sciences, engineering and technology (whereas they are 11% in social sciences, MORE2 Higher Education Survey, 2012). In the two other TEMPER destination countries, social sciences constitute the field where foreign researchers are mostly concentrated. In the UK, foreign researchers represent 30% of total researchers working in the social sciences (whereas they are 27.5% in natural sciences) and in Spain these shares are respectively 7% and 3%.

In terms of new recruitments, the Spanish government created in 2001 and 2004 two different programs aimed at financing post-doctoral research positions with no nationality requirement

for application. In the case of the Juan de la Cierva program[20], the proportion of foreigners was almost 20% in 2013; and the proportion of foreigners in the case of Ramón y Cajal Program[21] was also around 20%. Moreover, according to Finotelli (2010) and MEYSS, the number of newly recruited professors, researchers and academics for public administration in Spain were almost 183 in 2013 and only during the quarter from September to December 2014, 136 more new recruitments in this sector were counted. The main nationalities recruited for these positions under the new Law[22] has been Colombia (49), India (29), China (28), Argentina (20), Mexico, Iran and Cuba, EEUU, Venezuela and Turkey.

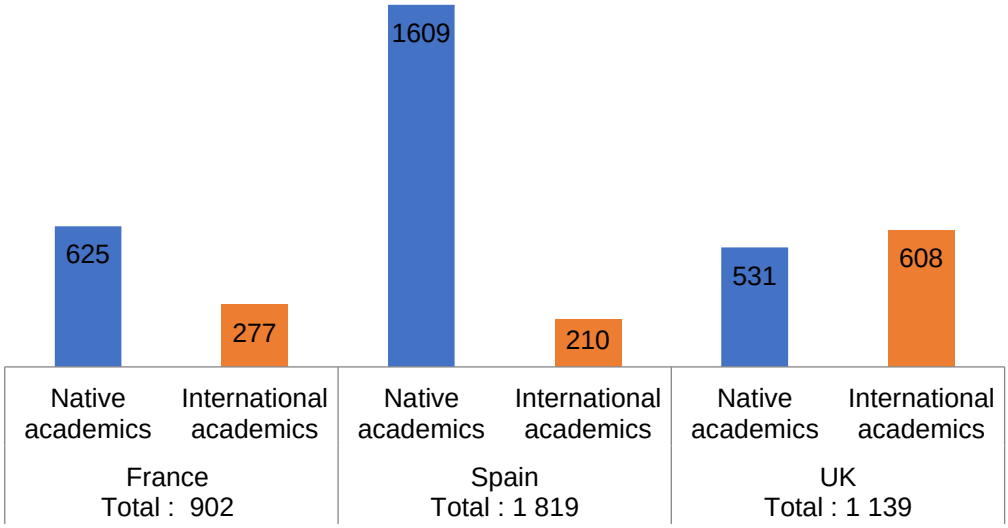
7.2 Profile of academics across the three contexts

3,860 academics responded to the AIMS survey. As illustrated in the Figure 29, the highest number of respondents are those who are currently living in Spain, with 1819 academics representing 47% of the whole sample, followed by the UK with 1139 (30%) and then France with 902 academics (23%).

The proportion of international respondents is the highest in the UK (53%), followed by France with 31% and Spain with 12%.

[20] The program was created in 2004, for junior postdocs.
[21] Launched for the first time in 2001, this program is addressed to senior researchers.
[22] According to the information provided by the Ministry of Interior, the new law to promote investments and entrepreneurship in Spain passed in September 2013 (Law 14/2013) to facilitate the hiring of academics and researchers in comparison to the legal procedure established in the general Immigration Law.

Figure 29. Total number of native and international academics by country of current residence

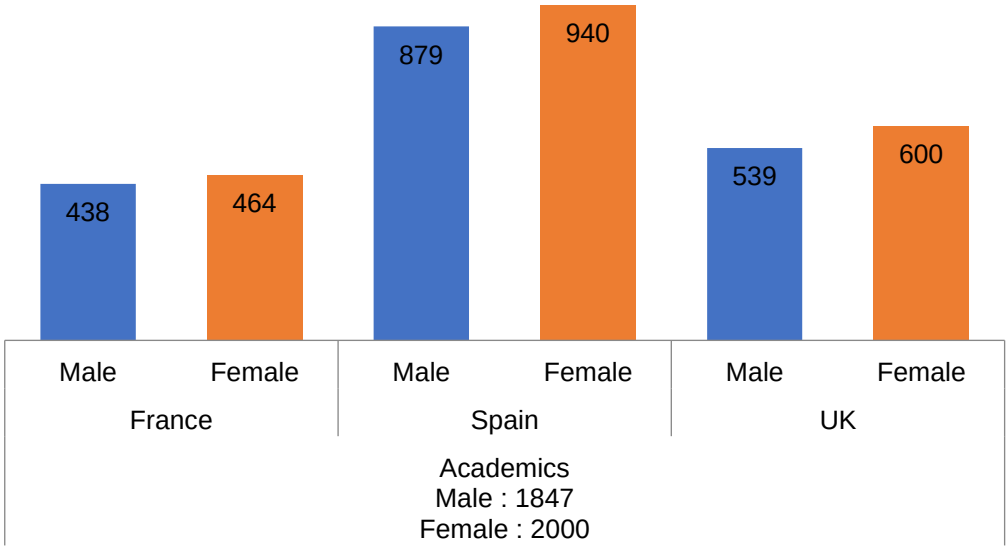


Source: AIMS

Out of the total number of respondents, 48% are males and 52% are females.

Besides, in the three Temper countries, women are slightly overrepresented. This overrepresentation is almost the same in France (51% vs. 49%) as in Spain (52% vs. 48%) and the UK (53% vs. 47%).

Figure 30. Total number of academics by gender



Source: AIMS

7.3 Profile of academics in France

In France, females are slightly overrepresented among academics (52% of international academics and 51% of native females, all origins). International academics are younger: 35% are under 36 years, compared to 22% for the natives, and 24% are above 51 years old compared to 28% for the natives. The overwhelming majority of academics have obtained a PhD (89% of international academics and 94% of natives).

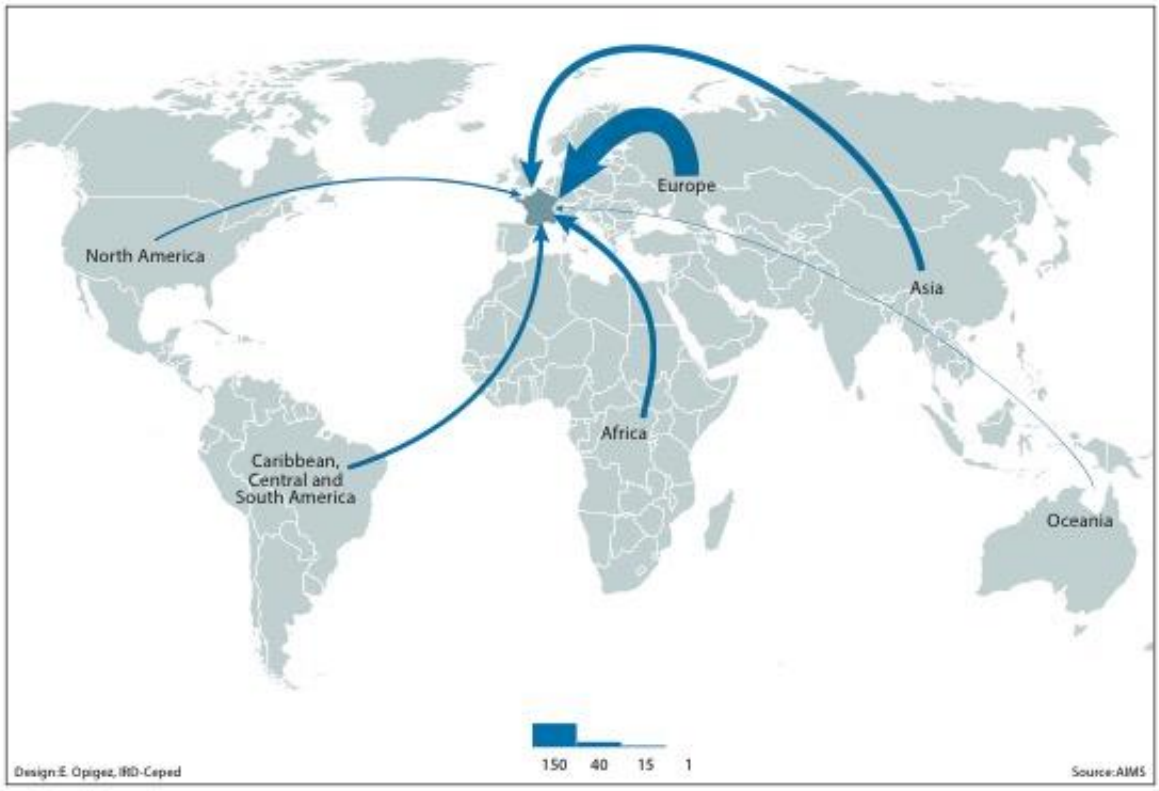
Table 2. Socio-demographic profile of native and international academics in France

	International academics		Native academics		Total	
	N	%	N	%	N	%
Gender						
Male	132	47.7	306	48.9	438	48.6
Female	145	52.3	319	51.0	464	51.4
Generation						
Under 36 years	97	35.0	140	22.4	237	26.3
36 - 50	115	41.5	310	49.6	425	47.1
51 +	65	23.5	175	28.0	240	26.6
Highest degree						
PhD	246	88.8	590	94.4	836	92.7
Other	31	11.2	35	5.6	66	7.3

Source: AIMS

Map 8 provides the continents of origin of international academics in France. Europe is the biggest source of academics (55%), of which Italy (4%), Germany (3%), Spain (2%) and Belgium (2%) are the largest group. Asiatic respondents accounted for 16% of all international academics, followed by Africa (14%), “South, Central America and Caribbean (10%) and lastly Northern America (5%). Besides, Algeria is the top origin country for African academics (1%), while USA (10%) and Brazil (10%) are the ones with the highest proportions for Americans. Finally, in Asia, most of academics come from China (1%), Syria (1%) and Turkey (1%). These figures are slightly different from the data on international students presented previously, where PhD students come at almost equal proportions from Asia, Africa and Europe.

Map 8. Place of birth of international academics in France



Source: AIMS

Note: The size of the arrows reflects the number of academics from each region of origin.

7.4 Profile of academics in Spain

In Spain, gender distributions don't vary by academics' place of birth. In fact, in both international and native subsamples, females are overrepresented (55% and 51% respectively). Furthermore, a comparison between the two samples indicates that age distributions also don't vary a lot: Most of academics belong to the group aged 36-50 years old (47% for international academics and 44% for natives); the second largest age group is composed of academics over 51 years, with natives a bit older than internationals (31% for internationals and 43% for natives); finally, those who are under 36 years are the less represented among academics currently living in Spain

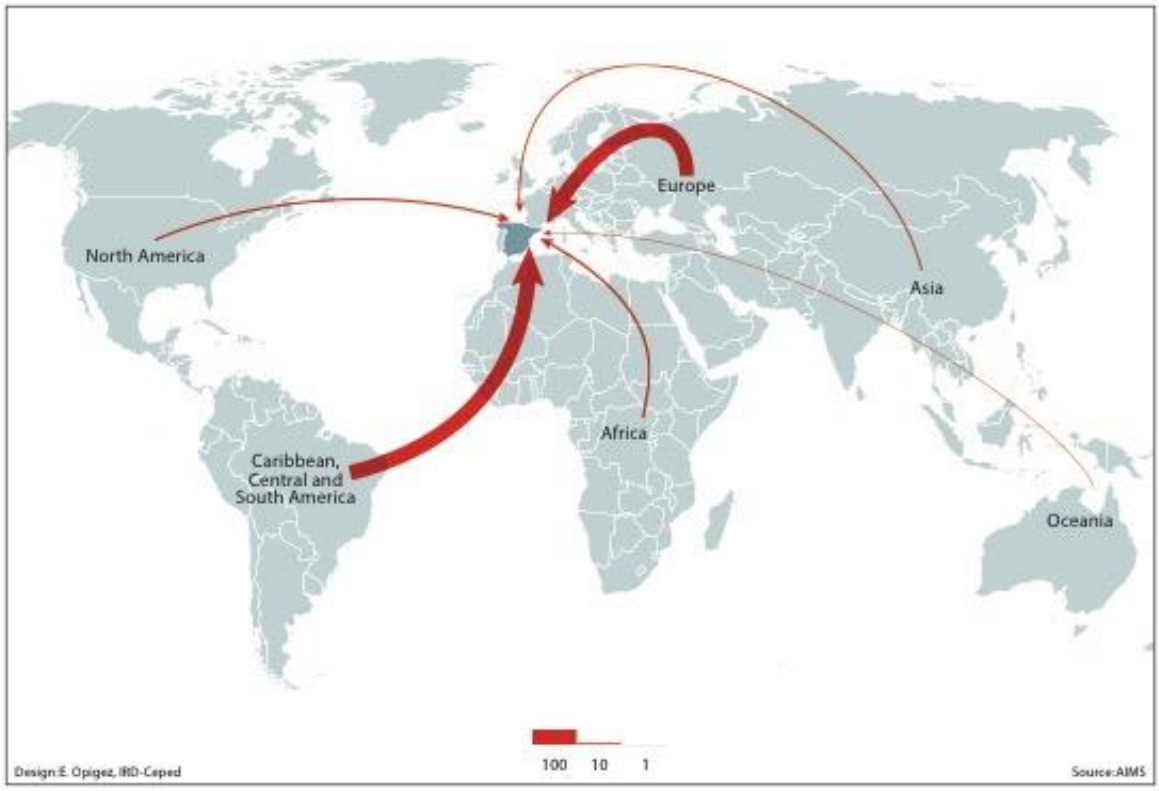
Table 3. Socio-demographic profile of native and international academics in Spain

	International academics		Native academics		Total	
	N	%	N	%	N	%
Gender						
Male	94	44.8	785	48.8	879	48.3
Female	116	55.2	824	51.2	940	51.7
Generation						
Under 36 years	48	22.9	199	12.4	247	13.6
36 - 50	98	46.7	715	44.4	813	44.7
51 +	64	30.5	695	43.2	759	41.7
Highest degree						
PhD	174	82.9	1,407	87.5	1,581	86.9
Other	36	17.1	202	12.6	238	13.1

Source: AIMS

More than 87% of international academics were born in South, Central America and Caribbean (45%) or in Europe (42%). The remaining 13% come from Africa (6%), Asia (4%), Northern America (3%) and Oceania (0.5%). Furthermore, as shown in the table 15 (see Annex), the largest number of academics is from Argentina (1.4%), France (1.3%), Italy (1.0%), Germany (0.8%), Colombia (0.7%) and lastly Mexico (0.7%). Once again, regions of origin of academics differ from PhD international students where two thirds came from South, Central America and Caribbean and only 20% from Europe.

Map 9. Place of birth of international academics in Spain



Source: AIMS

Note: The size of the arrows reflects the number of academics from each region of origin.

7.5 Profile of academics in the UK

In the UK, females are largely over-represented among international academics (55% vs. 45%) compared to the native sub-sample where their share is equal (Table 4).

Moreover, as it is the case in France, native academics in the UK are overrepresented in the 26-50 age group (40%), while 37% are over 51 and 23% under 36 years. International academics are younger with 46% belonging to the 36-50-year-olds group and 35% are below 36 years old.

Besides, PhD represents the highest degree for both native and international academics in the UK (93% and 85% respectively).

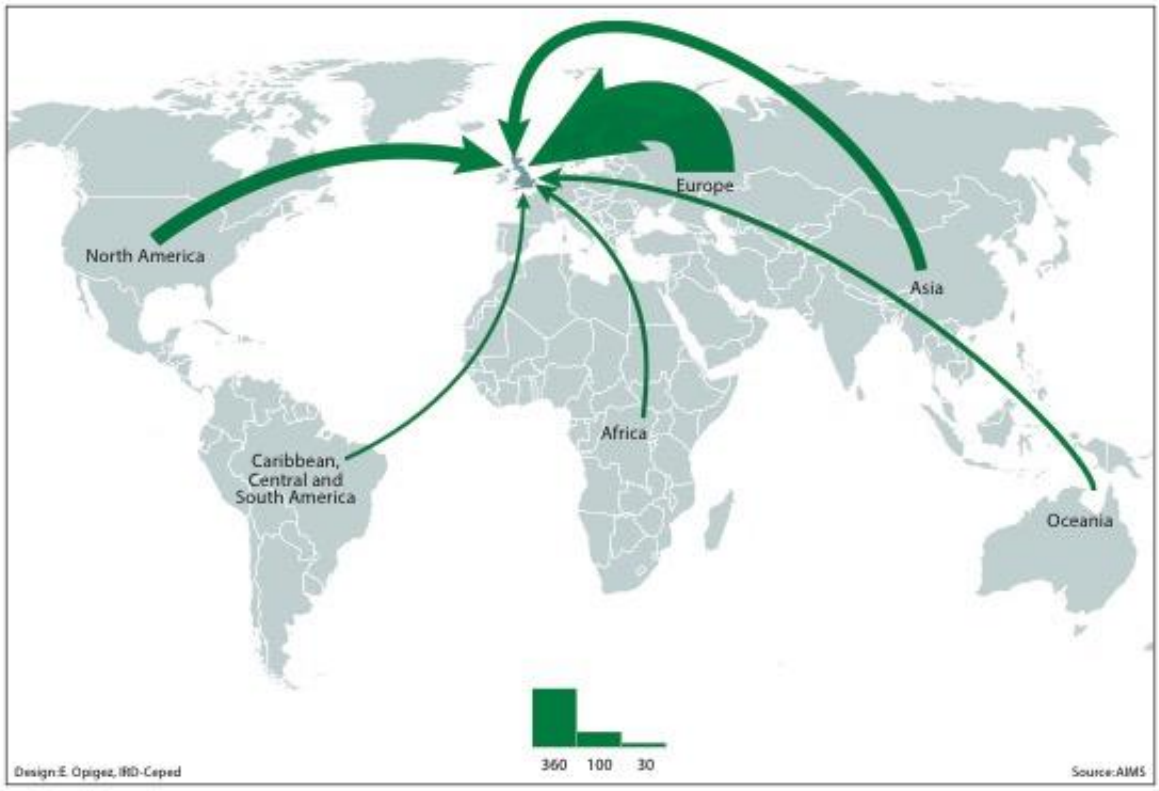
Table 4. Socio-demographic profile of native and international academics in the UK

	International academics		Native academics		Total	
	N	%	N	%	N	%
Gender						
Male	273	44.9	266	50.1	539	47.3
Female	335	55.1	265	49.9	600	52.7
Generation						
Under 36 years	215	35.4	122	22.9	337	29.6
36 - 50	279	45.9	212	39.9	491	43.1
51 +	114	18.8	197	37.1	311	27.3
Highest degree						
PhD	565	92.9	450	84.8	1,015	89.1
Other	43	7.1	81	15.3	124	10.9

Source: AIMS

Map 12 shows that most of the international academics who are currently living in the UK come also from Europe (59%), as it is the case in France. Then, northern America represents 16% of academics in the UK, with USA as the major sending country (7%). Asian respondents accounted for 12% of which India (1%) is the largest group. Moreover, we highlight a slight diversification in favour of Oceania, where 2% of academics come from Australia (2%) and 1% from New-Zealand. The remaining regions are Africa (5%) and South, Central America and Caribbean (4%), where most of academics come from South Africa (1%), Kenya (0.5%) and Brazil (0.5%). Once again, this is slightly different from the data on international PhD students presented previously. We notice an over-representation of Europe and Northern America as main providers of international academic in the UK compared to Asia and other continents.

Map 10. Place of birth of international academics in the UK



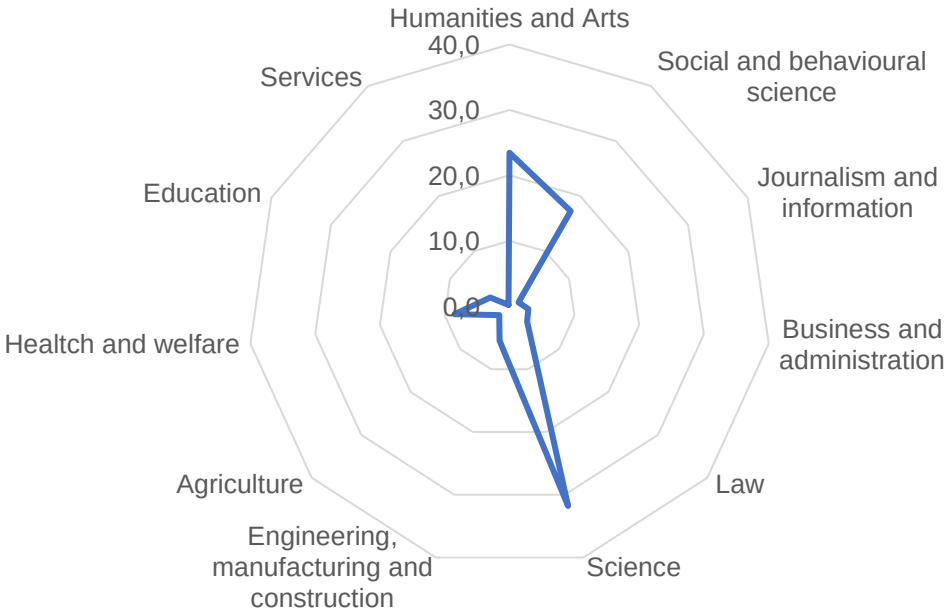
Source: AIMS

Note: The size of the arrows reflects the number of academics from each region of origin.

Most of academics were enrolled, during their highest degree, in science (32%), humanities and arts (24%) and social and behavioural science (17%), all Temper countries included. In contrast, academics obtaining their highest degree in education (3%), business and administration (3%), agriculture (2%), journalism and information (1%) and services (0.3%) are largely less represented in the survey.

When analysing disciplines' distribution by origin, we do not observe noteworthy disparities between native and international academics: among international academics, 36% did their highest degree in science, 25% in humanities and arts and 19% in social and behavioural science while 30% of native academics did their highest degree in Science, 23% in humanities and arts and 17% in social and behavioural science (see Annex).

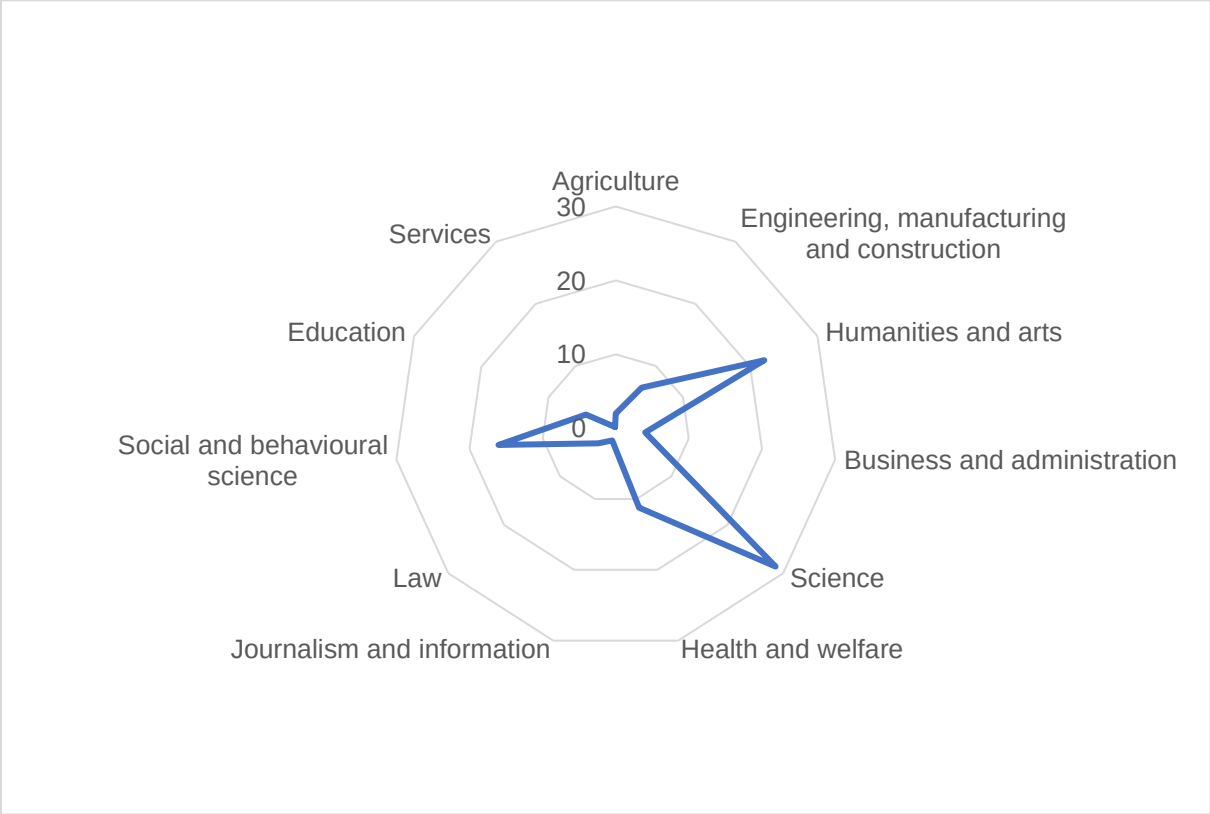
Figure 31. Disciplines of highest degree of native and international academics in the three Temper countries



Source: AIMS

Figure 32 provides a similar analysis to that shown in Figure 31, but it presents information on disciplines of current employment rather than highest degree. Among the fields of work, science (29%) and "humanities and arts" (22%) have the largest share of native and international academics. The next most popular subjects include "social and behavioural science" (16%) and "health and welfare" (11%). By contrast, academics following "journalism and information" and services account for a relatively small share (1.8% and 0.2% respectively) of the total number of academics in France, Spain and the UK.

Figure 32. Disciplines of current employment of native and international academics in the three Temper countries

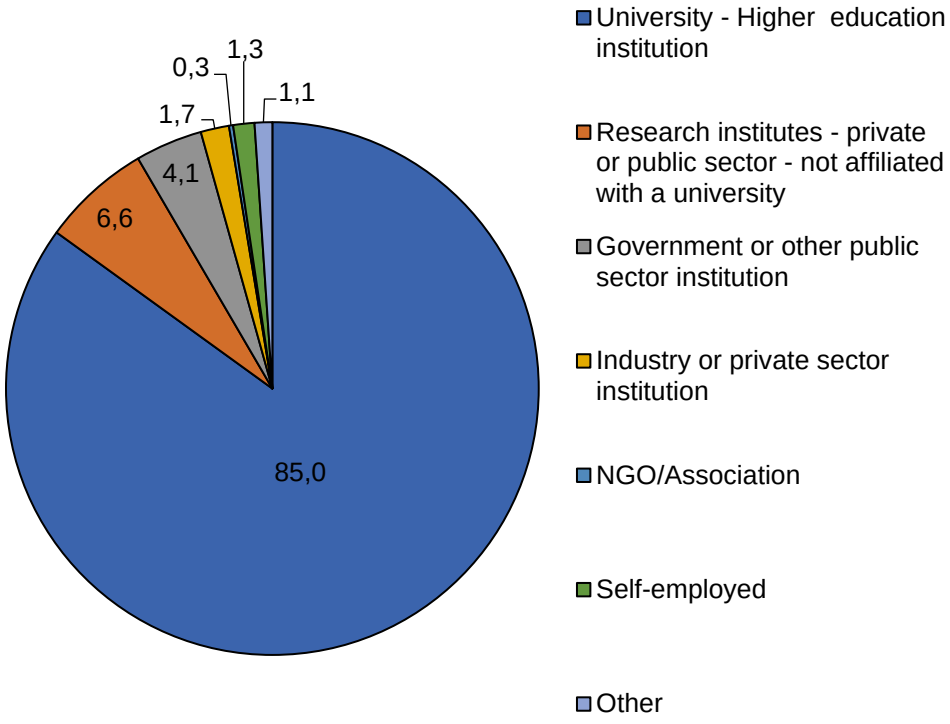


7.6 Comparing educational and professional characteristics of academics in the three countries

The large majority of academics in the three Temper countries (85%), are currently working in a university/higher education institution. 7% are working in a research institute not affiliated with a university; 4% in a government or other public sector institution; 2% in an industry or private sector institution, 1% in an NGO/association and the last 1% is self-employed.

The repartition of academics does not vary significantly by origin. In fact, 89% of international academics are currently working in a university/higher education institution compared to 83% of natives. Moreover, in government or other public sector institution, 2% are international whereas 5% are natives. In the other types of organisations, the shares are slightly the same between the two subsamples (see Annex).

Figure 33. Type of organisation of current employment

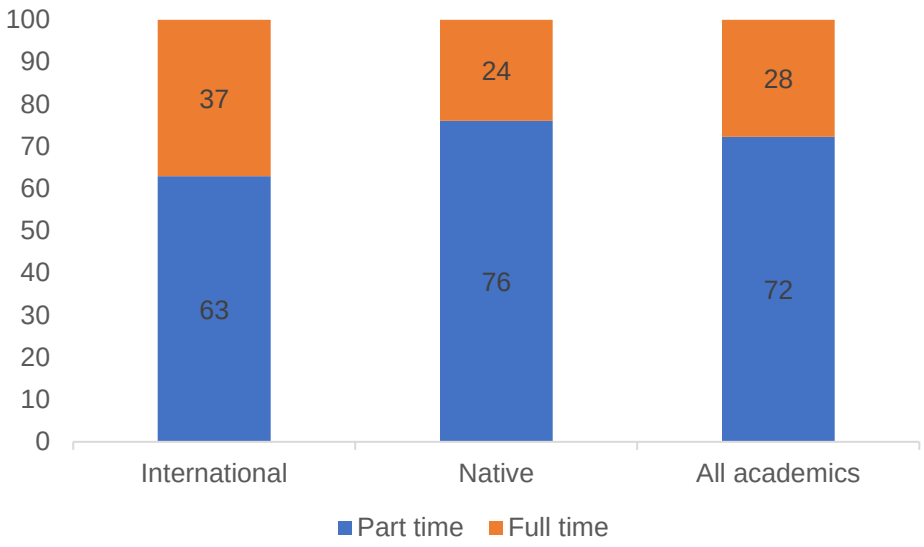


Source: AIMS

As illustrated in the figure 33, among academics currently living in France, Spain and the UK, 72% are working part-time while only 28% are working full-time. More specifically, natives are more likely to work part-time (76%) than international academics (63%). In addition, when analysing the type of position by country of origin, we can note that slightly the same shares are observed in Spain (73% in part-time work vs. 27% in full-time) and in the UK (70% in part-time vs. 30% in full-time), unlike France, where 84% of French academics are working part time whereas only 16% are working full-time.

Furthermore, 34% of academics currently working in France, Spain and the UK state that their current job remains the first one, whereas 66% of them have changed their first employment.

Figure 34. Type of position of current employment



Source: AIMS

As it is the case for Master and PhD students, international academics were also asked to rate 17 factors that may influenced their choice of the place of highest degree. The results indicate that the main reasons that are notably "important" or "very important" in France, Spain and the UK are "Institution's prestige-infrastructures' availability-program's content" (76%, 78% and 82% respectively), "the opportunity to improve their future career prospects in the country of on-going degree" (64%, 68% and 64% respectively) and "fellowship/funding availability" (63%, 56% and 73% respectively).

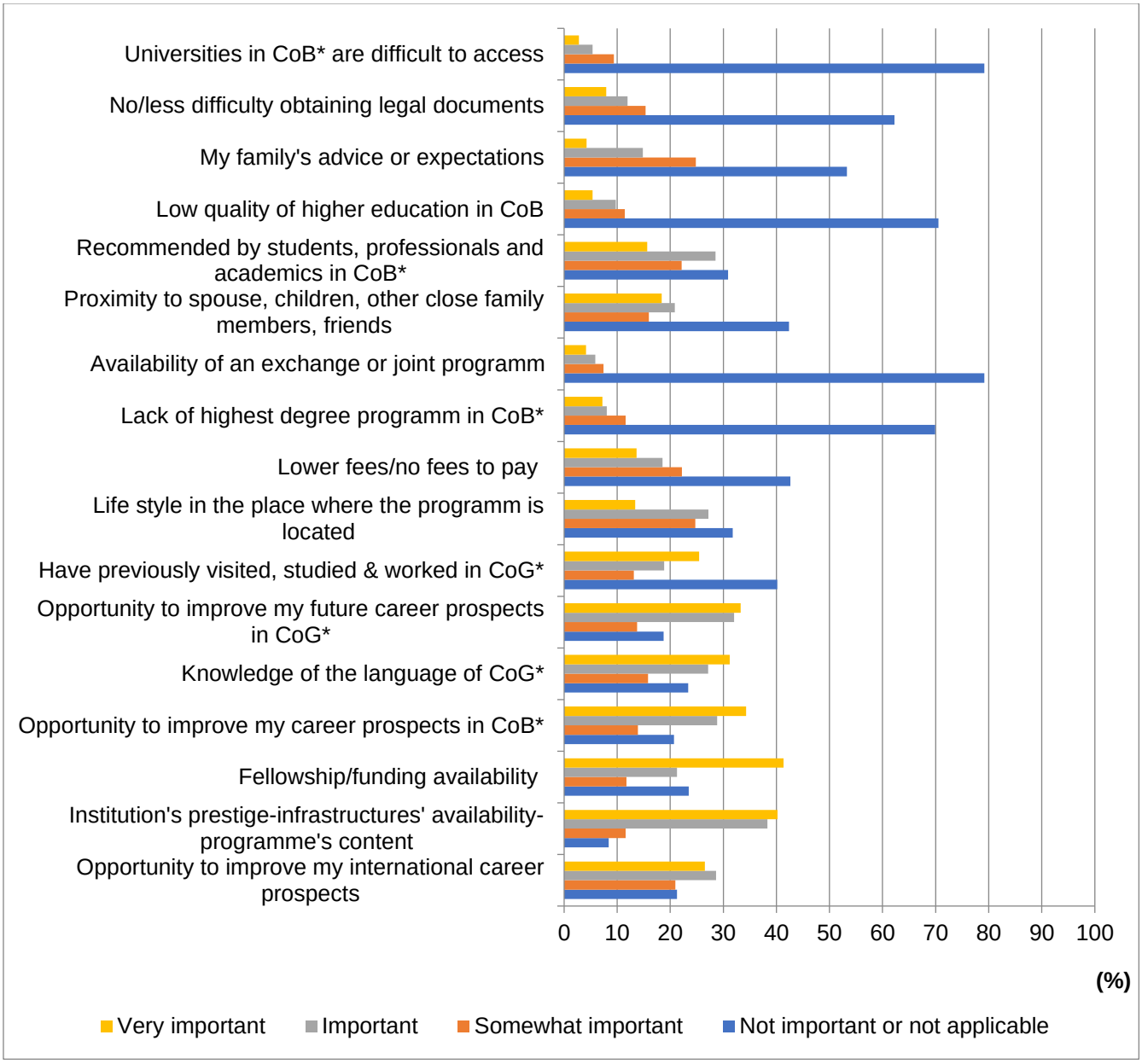
Other factors are particularly influential in the UK, such as the "knowledge of the language of the country of on-going degree" (63%), and others particularly in Spain: the opportunity to improve their international career prospects (63%) and their career prospects in the country of birth (77%).

The findings also reveal the least important criteria (considered as "not important or not applicable") when choosing the place of highest degree: Universities in the country of birth are difficult to access (82% in France, 70% in Spain and 83% in the UK), the lack of highest degree program in the country of birth (71% in France, 65% in Spain and 72% in the UK), the availability of an exchange or joint program (72% in France, 73% in Spain and 87% in the UK), the low quality of higher education in the country of birth (73% in France, 66% in Spain

and 72% in the UK) and no/less difficulty obtaining legal documents" (70% in France, 62% in Spain and 58% in the UK) ".

Furthermore, other factors do not place vital influence for international academics, especially in France and the UK, such as "my family's advice of expectations" (68% and 63% respectively). Lastly, a comparison between students' and academics' reasons for choosing the place of studies shows that the trends are mainly similar between the two subsamples.

Figure 35. Reasons for choosing place of highest degree (Academics in France, Spain and the UK, %)



Source: AIMS

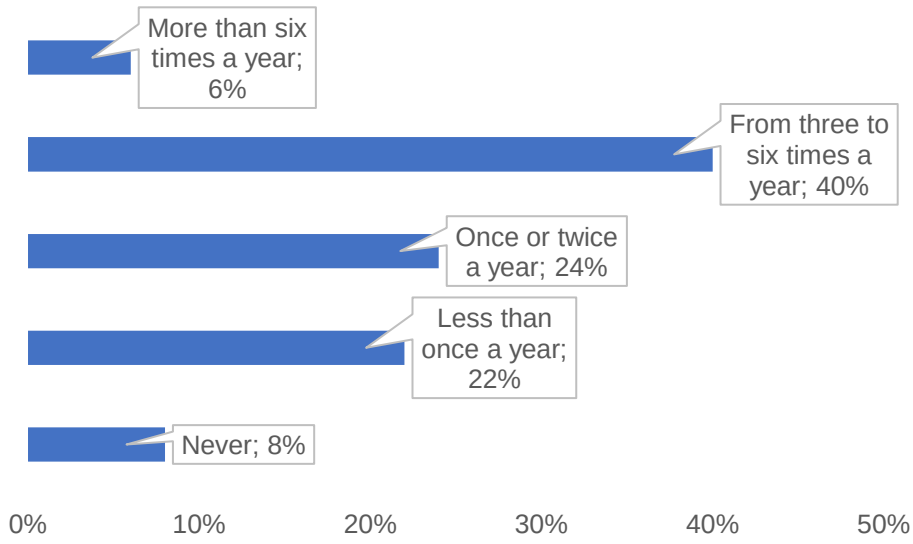
7.7 Links of international academics with country of origin and participation to diaspora programs

Several questions were asked concerning the links with origin country and participation to diaspora programs. The main results are presented below.

Since the completion of their highest degree, 22% of international academics have worked in the academia and/or made academic visits of one month or more in their country of birth.

Furthermore, asked how often they visit their country of birth, 6% of international academics state having made personal visits more than six times a year, 40% from three to six times a year, 24% once or twice a year, 22% less than one a year, and lastly 8% declare having never made a personal visit in their country of birth. Moreover, major discrepancies between the three countries can be noticed in Spain, where more than a third of academics currently working in Spain state having visited their country of birth less than once a year (in contrast to 22% in France and 17% in the UK). In Spain again, only 13% declare having made personal visits once or twice a year, contrary to the UK (28%) and France (24%).

Figure 36. Frequency of personal visits of international academics in their country of birth

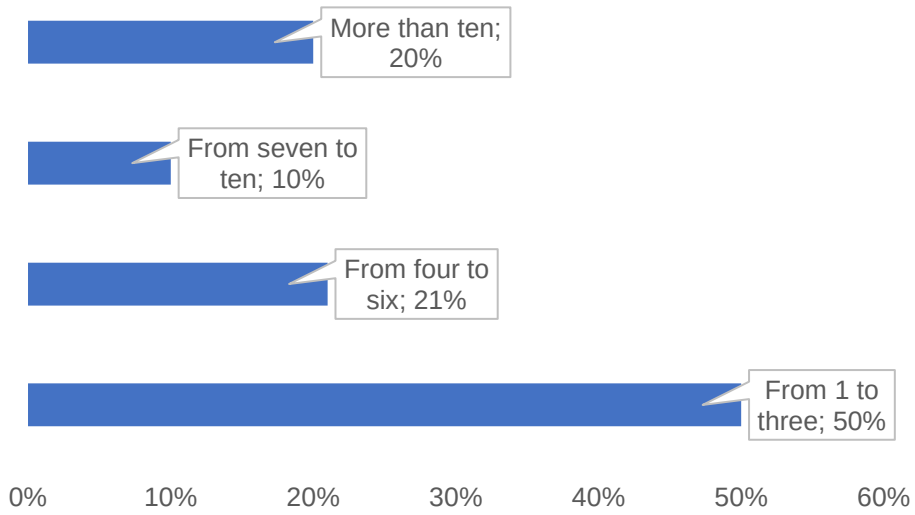


Source: AIMS

During their academic career, almost half of international academics have co-authored publications (articles in peer-reviewed journals or books or book chapters) with other academics based in their country of birth.

As illustrated in the figure 37, a fifth of these international academics have co-authored more than ten publications with other academics based in their country of birth, 10% from seven to ten publications, 21% from four to six and almost half of international academics have co-authored from one to three publications. Finally, the disparities by country of current residence tend to be less pronounced for international academics.

Figure 37. Number of co-authored publications in country of birth of international academics

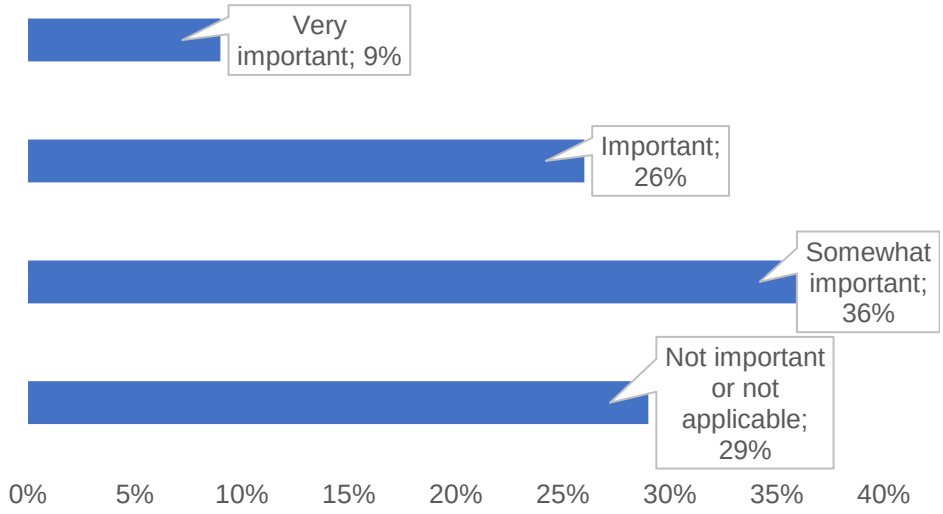


Source: AIMS

Looking at their participation to diaspora programs, only 2% of international academics report being involved in a mobility program aiming to promote the diaspora involvement in the development of their country of birth (e.g. IOM programs, UNPD programs, TOKTEN, etc.). Moreover, only 8% of international academics state having ever heard about diaspora mobility programs. In addition, 9% of international academics declare being involved in a diaspora association or network.

As seen in the figure 35, more than a third of international academics evaluate the contribution made by the diaspora to the development of their country of birth as "somewhat important" (36%); the second large part view this as "not important or not applicable (29%), followed by those who consider diaspora's contribution as "important" (26%), and lastly those who think it is "very important" (9%). Furthermore, similarly to the frequency of personal visits, Spain is the country that present some particularities. In fact, 31% of academics currently working in Spain evaluate the diaspora's contribution as "somewhat important", to the contrary the UK (38%) and France (36%). The same observation is made for those who consider diaspora's contribution as "very important" (5% in Spain vs. each 9% in France and the UK). Furthermore, 36% of academics in Spain state it is "important", in contrast with the UK (23%) and France (25%).

Figure 38. Evaluation of the contribution of diaspora for country of birth of international academics



Source: AIMS

As illustrated before, Europe is by far the top continent of birth for academics, sending more than half of respondents. When analysing for this principal region of birth the links with academics' origin and participation to diaspora programs, some discrepancies are observed on the frequency of personal visits of international academics in their country of birth: 3% of academics born in Europe state having never visited their country of birth (vs. 8% of total), 9% of them have made personal visits less than once a year (vs. 22% of total) and 39% once or twice a year (vs. 24% of total). By contrast, we do not find noteworthy differences neither on the number of co-authored publications nor the evaluation of the contribution of diaspora for country of birth.

8 Conclusion

France, Spain and the UK constitute three interesting contexts to explore the current characteristics of academic mobility. The three countries present different degrees of internationalization of their higher education systems and diverse policy approaches to academic mobility. While in the UK migration policies became overall more restrictive since 2010, France adopted a more selective approach with the aim to diversify the geographical origin of students and academics and select more thoroughly those who are allowed to stay in France after the completion of their post-graduates' studies. Spain is trying to promote the

internationalisation of its higher education and research system with the adoption in 2008 of the « Estrategia Universidad 2015 » - which includes measures to attract more foreign students and academics – while coping with the limited resources due to the effects of the economic crisis.

The analysis of migration trends and composition of international student mobility in France and the UK using administrative data showed that fluctuations in migration stocks and characteristics are linked to some extent to changing migration policies. Negative shocks, aiming at restricting entry or stay of foreign students seem to have a more prominent effect. Overall, since the 70's, the number of foreign students in France had risen. The 2006 shift in policy towards a more selective approach to academic migration seem to have favoured certain types of foreign students: those who are enrolled in other types of institutions than universities such as "Classes préparatoires", "Grandes écoles", IUT of IUFM; those who come from developed or emerging countries in Asia and the Americas, in particular at the PhD level. According to the latest data available, students from Asia are over-represented in PhD programs while half of Master students come from Africa; and those who are enrolled in sciences, engineering or economics (the latest administrative data shows that almost half of foreign students in France are currently enrolled in sciences, engineering or economics). These changes in composition of foreign students in France are also reflected in the data we gathered in the AIMS Survey. Concerning students, in particular Master students, we notice an even higher percentage of students coming from Asia, Europe or the Americas in comparison with Africa, the traditional continent of origin of foreign students in the country. These evolutions confirm the market-oriented strategy towards the higher education sector implemented in France these recent years.

In the UK, the number of foreign students has also risen since the end of the 90's with several periods of stagnation of flows. A major policy change occurs in 2010 with the adoption of the "Cut net migration" strategy by the Conservative coalition. A stagnation of the numbers of international students follows that affects in particular African students but also Asian students. The analysis of trends in visa applications and admission rates to the UK shows that restrictive migration policies seem to influence in particular the granting of student visas.

The preliminary analysis of the AIMS data shows also interesting results regarding the composition of the international students and academics population in the three countries. In

Spain, Master and PhD students from Latin America constitute the large majority of international students, reflecting the importance of colonial links, the existence of cooperation programs and linguistic proximity as shown in previous studies for other countries (Garneau et Mazzella 2013). Origins are more diverse when it comes to the UK and particularly to France where the importance of African students is decreasing over time. However, in the three countries, Europe is the first provider of international academics, leading us to think that it is more difficult for a foreigner from outside the EU to be hired in an academic position in one of these three countries. AIMS data allows us also to explore factors taken into account by students to choose the place of studies abroad. In our survey, the main important ones are improvement of future career prospects, the prestige of the institution, and the availability of funding. Other factors cited in the literature such as the knowledge of the destination country; recommendations by parents and friends and social networks seem to be less relevant.

One of the main contributions of the AIMS survey is to provide information on the mobility trajectories of international Master and PhD students and academics. Sequence analysis allowed us to identify different mobility profiles for students distinguished according to the timing of migration and the number of university diplomas obtained. Two main groups of students emerge in France and Spain: a larger one that has experienced a more linear and short education path, and another more skilled group characterised by a longer education path, with several diplomas obtained before or during migration. Sequence analysis also showed that previous educational mobility path counts in order to explain current mobility in both countries: for example, having pursued a master in France leads to the enrolment in a PhD program in France. These exploratory results led us to think that students who experience migration at different times of their educational trajectory differ and that other factors than the country of current studies distinguish these paths such as social class, country of birth, gender or discipline. Also, the proportion of students holding multiple diplomas lead us to make the hypothesis that the current education patterns of international students illustrate the saturation of the highly skilled labour market (especially in certain fields) at home but also at destination. A master degree is not enough anymore to get a job at home or abroad. Accumulating diplomas could be a strategy to access a saturated labour market, migration could also imply a redirection of career, or constitute a disruption because of the difficult recognition of degrees. A deeper analysis of our data, and the comparison with academics' trajectories will allow us to explore these different hypotheses.

9 References

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10 Appendix

Annex (Section 6)

Table 5. Individual characteristics - Master students

	Path 1		Path 2		Path 3		Path 4	
	n	%	n	%	n	%	n	%
Sex								
Male	106	39.8	234	44.0	45	45.9	88	42.1
Female	160	60.2	298	56.0	53	54.1	121	57.9
Discipline								
Other	5	1.9	1	0.2	2	2.0	1	0.5
Humanities and Arts	70	26.3	77	14.5	30	30.6	41	19.6
Social and behavioural science	27	10.2	60	11.3	10	10.2	18	8.6
Science	37	13.9	85	16.0	11	11.2	24	11.5
Engineering, manufacturing and construction	19	7.1	82	15.4	6	6.1	31	14.8
Agriculture	3	1.1	10	1.9	1	1.0	3	1.4
Health and welfare	5	1.9	43	8.1	1	1.0	14	6.7
Education	10	3.8	16	3.0	3	3.1	14	6.7
Services	3	1.1	8	1.5			2	1.0
Business and administration	54	20.3	92	17.3	20	20.4	32	15.3
Law	31	11.7	52	9.8	13	13.3	27	12.9
Journalism and information	2	0.8	6	1.1	1	1.0	2	1.0
Continent of birth								
Africa	71	26.7	50	9.4	42	42.9	31	14.8
Northern America	5	1.9	7	1.3	0	0.0	0	0.0
South, Central America and Caribbean	24	9.0	302	56.8	6	6.1	99	47.4
Asia	68	25.6	95	17.9	22	22.4	46	22.0
Europe	96	36.1	77	14.5	27	27.6	32	15.3
Oceania	2	0.8	1	0.2	1	1.0	1	0.5
Languages of secondary school								
French	72	27.1	39	7.3	35	35.7	27	12.9
English	58	21.8	95	17.9	17	17.3	30	14.4
Spanish	16	6.0	257	48.3	3	3.1	76	36.4
Other	120	45.1	141	26.5	43	43.9	76	36.4
Occupation of the father								
deceased before I was 15 years old	11	4.9	12	2.5	3	3.6	4	2.2
Academic, Higher-level occupation, Skilled Professional	114	50.7	255	53.2	37	44.6	89	49.7

Large business owner, Small business owner (with employees)	38	16.9	75	15.7	15	18.1	30	16.8
Small business owner (without employees), White-collar worker	40	17.8	82	17.1	12	14.5	36	20.1
Blue-collar worker, Agricultural and other workers in primary production	17	7.6	45	9.4	12	14.5	16	8.9
Unemployed, Student, etc.	5	2.2	10	2.1	4	4.8	4	2.2

Source: AIMS

Table 6. Individual characteristics - PhD students

	Path 1		Path 2		Path 3		Path 4	
	n	%	n	%	n	%	n	%
Sex								
Male	96	41.9	232	49.0	35	50.7	84	51.9
Female	133	58.1	241	51.0	34	49.3	78	48.1
Discipline								
Other	2	0.9	1	0.2	0	0.0	2	1.2
Humanities and Arts	69	30.1	89	18.8	30	43.5	45	27.8
Social and behavioural science	21	9.2	63	13.3	12	17.4	16	9.9
Science	74	32.3	118	24.9	9	13.0	20	12.3
Engineering, manufacturing and construction	26	11.4	60	12.7	3	4.3	17	10.5
Agriculture	3	1.3	13	2.7	1	1.4	4	2.5
Health and welfare	8	3.5	35	7.4	2	2.9	13	8.0
Education	7	3.1	20	4.2	0	0.0	7	4.3
Services	2	0.9	4	0.8	0	0.0	1	0.6
Business and administration	5	2.2	24	5.1	6	8.7	16	9.9
Law	11	4.8	37	7.8	6	8.7	19	11.7
Journalism and information	1	0.4	9	1.9	0	0.0	2	1.2
Continent of birth								
Africa	50	21.8	55	11.6	27	39.1	26	16.0
Northern America	6	2.6	11	2.3	0	0.0	2	1.2
South, Central America and Caribbean	25	10.9	188	39.7	3	4.3	68	42.0
Asia	46	20.1	117	24.7	14	20.3	31	19.1
Europe	100	43.7	100	21.1	25	36.2	35	21.6
Oceania	2	0.9	2	0.4	0	0.0	0	0.0
Languages of secondary school								
French	43	18.8	49	10.4	24	34.8	22	13.6
English	37	16.2	69	14.6	11	15.9	20	12.3

Spanish	19	8.3	169	35.7	2	2.9	60	37.0
Other	130	56.8	186	39.3	32	46.4	60	37.0
Occupation of the father								
deceased before I was 15 years old	5	2.7	14	3.4	6	9.7	6	4.3
Academic, Higher-level occupation, Skilled Professional	91	49.5	208	50.5	29	46.8	72	51.8
Large business owner, Small business owner (with employees)	22	12.0	44	10.7	8	12.9	17	12.2
Small business owner (without employees), White-collar worker	42	22.8	76	18.4	9	14.5	18	12.9
Blue-collar worker, Agricultural and other workers in primary production	21	11.4	58	14.1	9	14.5	21	15.1
Unemployed, Student, etc.	3	1.6	12	2.9	1	1.6	5	3.6

Source: AIMS

Table 7. Top Three countries of birth of Master international students in France by region/continent

Region	N	%	Countries	N / %
Africa	183	28.5	Morocco	34 / 5.3%
			Algeria	20 / 3,1%
			Gabon	17 / 2,6%
South, Central America and Caribbean	106	16.5	Brazil	18 / 2.8%
			Colombia	17 / 2.6%
			Mexico	16 / 2.5%
Asia	178	27.7	India	30 / 4.7%
			China	28 / 4.4%
			Syria	17 / 2.6%
Europe	168	26.1	Russian Federation	25 / 3.7%
			Spain	21 / 3.4%
			Italy	15 / 2.3%

Source: AIMS

Table 8. Top Three countries of birth of PhD international students in France by region/continent

Region	N	%	Countries	N / %
Africa	145	27.4	Gabon	20 / 3.8%
			Cameroon	18 / 3.4%
			Algeria	17 / 3.2%
South, Central	71	13.4	Brazil	22 / 4.2%
America and			Mexico	16 / 3.0%
Caribbean			Colombia - Costa Rica	7 / 1.3%
Asia	161	30.4	Viet Nam	30 / 5.7%
			Pakistan	17 / 3.2%
			China	17 / 3.2%
Europe	145	27.4	Spain	27 / 5.1%
			Italy	22 / 4.2%
			Russian Federation	15 / 2.8%

Source: AIMS

Table 9. Top Three countries of birth of Master international students in Spain by region/continent

Region	N	%	Countries	N / %
Africa			Morocco	4 / 1.0%
	12	3.0		
South, Central			Colombia	57 / 14.1%
America and	330	81.9	Mexico	54 / 13.4%
Caribbean			Ecuador	42 / 10.4%
Asia			China	5 / 1.2%
	10	2.5		
Europe			Italy	12 / 3.0%
	48	11.9	Germany	9 / 2.2%
			France	6 / 1.5%

Source: AIMS

Table 10. Top Three countries of birth of PhD international students in Spain by region/continent

Region	N	%	Countries	N / %
Africa			Algeria	4 / 1.2%
	18	5.4	Angola-Egypt-Morocco	3 / 0.9%
South, Central			Colombia	49 / 14.7%
America and	217	65.0	Ecuador	38 / 11.4%
Caribbean			Mexico	31 / 9.3%
Asia			China	10 / 3.0%
	30	9.0	Jordan/Iran	5 / 1.5%
Europe			Italy	34 / 10.2%
	68	20.4	Portugal	11 / 3.3%
			Russian Federation	4 / 1.2%

Source: AIMS

Table 11. Top Three countries of birth of Master international students in the UK by region/continent

Region	N	%	Countries	N / %
Africa			Nigeria	3 / 3.0%
	9	9.1		
Northern America	8	8.1	USA	7 / 7.1%
South, Central			Mexico	3 / 3.0%
America and	9	9.1		
Caribbean				
Asia			China	13 / 13.1%
	51	51.5	Pakistan-Turkey	5 / 5.1%
			Indonesia	4 / 4.0%
Europe			Spain	5 / 5.1%
	22	22.2	Germany	4 / 4.0%
			France	3 / 3.0%

Source: AIMS

Table 12. Top Three countries of birth of PhD international students in the UK by region/continent

Region	N	%	Countries	N / %
			Egypt	2 / 1.4%
Africa	9	6.2	Nigeria	2 / 1.4%
			South Africa	2 / 1.4%
Northern America	12	8.3	USA	9 / 6.2%
South, Central			Canada	3 / 2.1%
America and	12	8.3	Chile	5 / 3.5%
Caribbean			Mexico	3 / 2.1%
			Turkey	7 / 4.8%
Asia	31	21.4	India	6 / 4.1%
			Iraq-Thailand	3 / 2.1%
			Italy	19 / 13.1%
Europe	78	53.8	Germany	15 / 10.3%
			Spain	9 / 6.2%
Oceania	3	2.1	New Zealand	2 / 1.4%

Source: AIMS

Table 13. Top Three countries of birth of international academics in France by region/continent

Region	N	%	Countries	N / %
Africa			Algeria	9 / 1%
	39	14.1	Morocco - Tunisia	7 / 0.8%
			Egypt	5 / 0.6%
Northern America	15	5.4	USA	10 / 1.1%
			Canada	5 / 0.6%
South, Central			Brazil	10 / 1.1%
America and	27	9.8	Mexico	4 / 0.4%
Caribbean			Venezuela	3 / 0.3%
Asia			China	6 / 0.7%
	43	15.5	Syria	6 / 0.7%
			Turkey	6 / 0.7%
Europe			Italy	34 / 3.8%
	152	54.9	Germany	23 / 2.6%
			Spain - Belgium	15 / 1.7%

Source: AIMS

Table 14. Top Three countries of birth of non-native academics in the UK by region/continent

Region	N	%	Countries	N / %
Africa	28	4.6	South Africa	7 / 0.6%
			Kenya	6 / 0.5%
			Uganda	4 / 0.3%
Northern America	97	15.9	USA	81 / 7.1%
			Canada	16 / 1.4%
South, Central America and Caribbean	23	3.8	Brazil	6 / 0.5%
			Mexico	4 / 0.3%
			Argentina	4 / 0.3%
Asia	71	11.7	India	14 / 1.2%
			China	10 / 0.9%
			Turkey	7 / 0.6%
Europe	357	58.7	Germany	66 / 5.8%
			Italy	54 / 4.7%
			France	51 / 4.5%
Oceania	32	5.3	Australia	23 / 2.0%
			New Zealand	9 / 0.8%

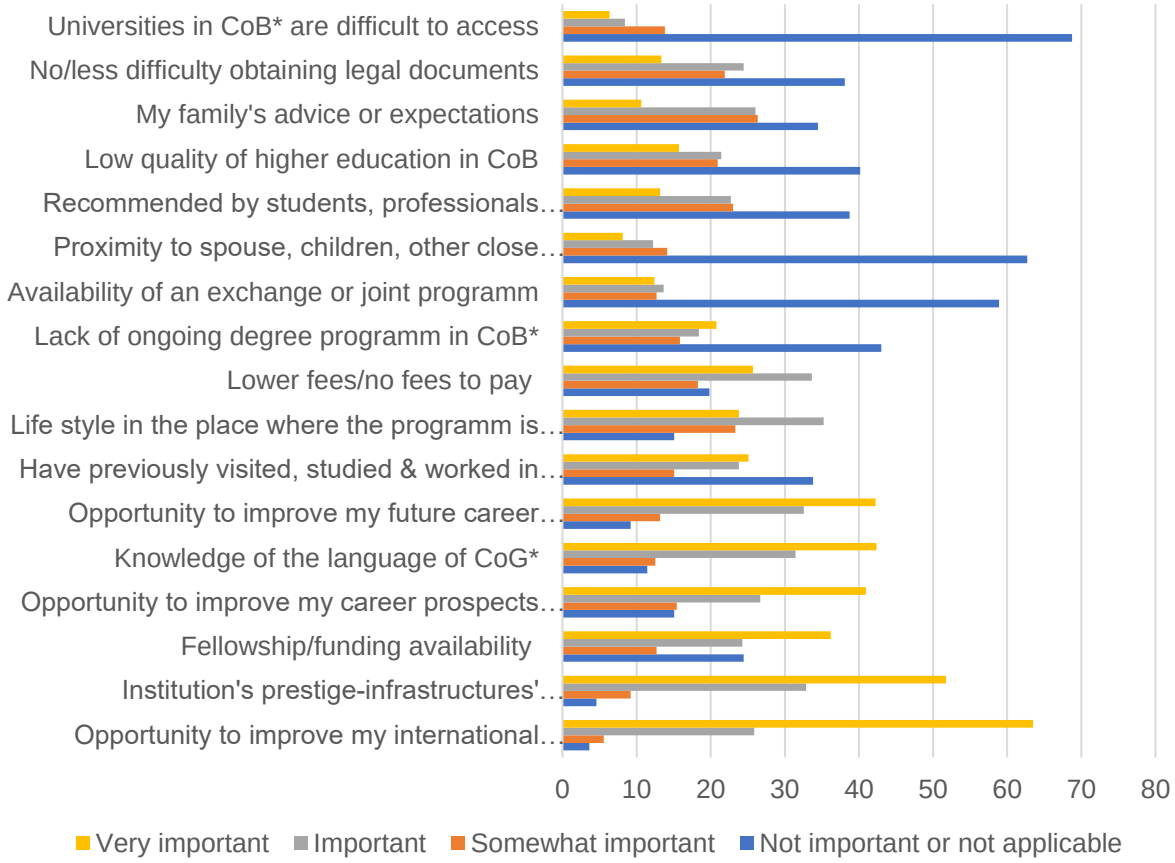
Source: AIMS

Table 15. Top Three countries of birth of non-native academics in Spain by region/continent

Region	N	%	Countries	N / %
Africa	12	5.7	Morocco	4 / 0.2%
Northern America	6	2.9	USA	6 / 0.3%
South, Central America and Caribbean	94	44.8	Argentina	25 / 1.4%
			Colombia	13 / 0.7%
			Mexico	12 / 0.7%
Asia	8	3.8	China	2 / 0.1%
Europe	89	42.4	France	24 / 1.3%
			Italy	19 / 1.0%
			Germany	14 / 0.8%
Oceania	1	0.5		

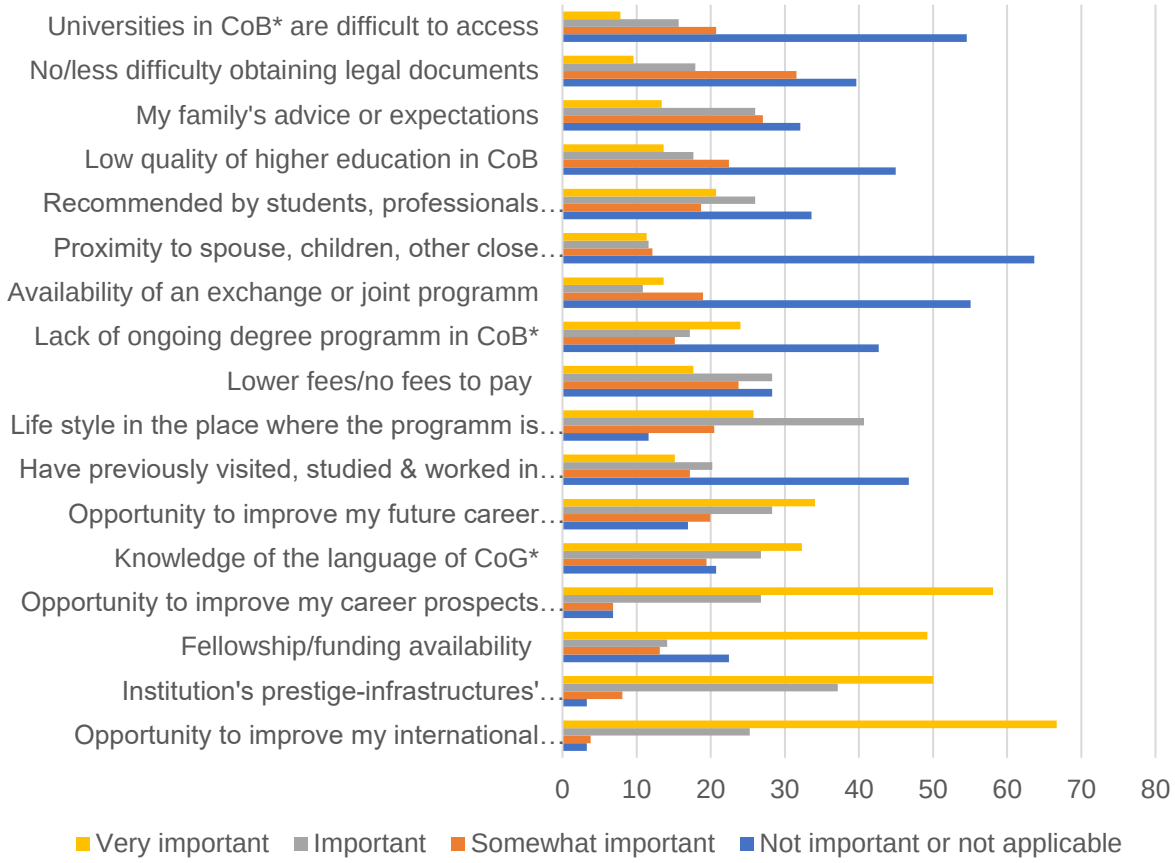
Source: AIMS

Figure 39. Reasons for choosing place of on-going degree (Master international students in France, %)



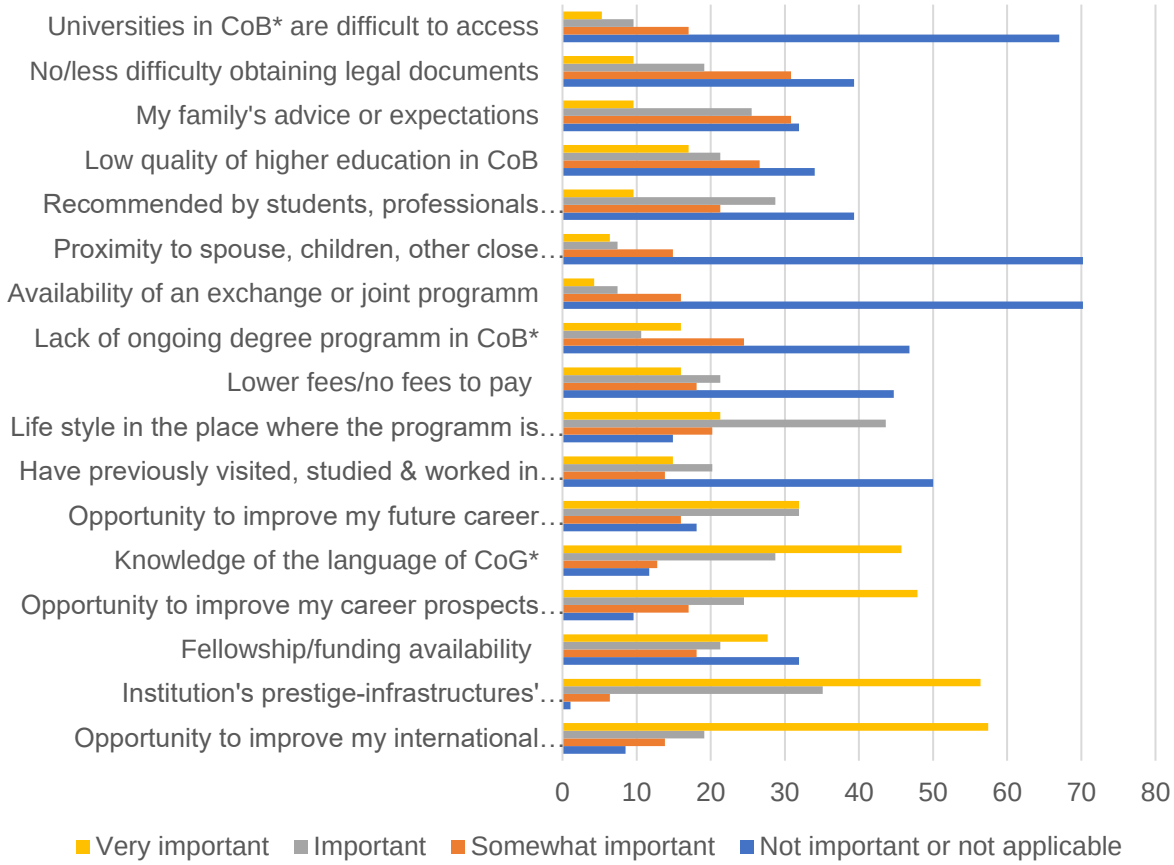
Source: AIMS

Figure 40. Reasons for choosing place of on-going degree (Master international students in Spain, %)



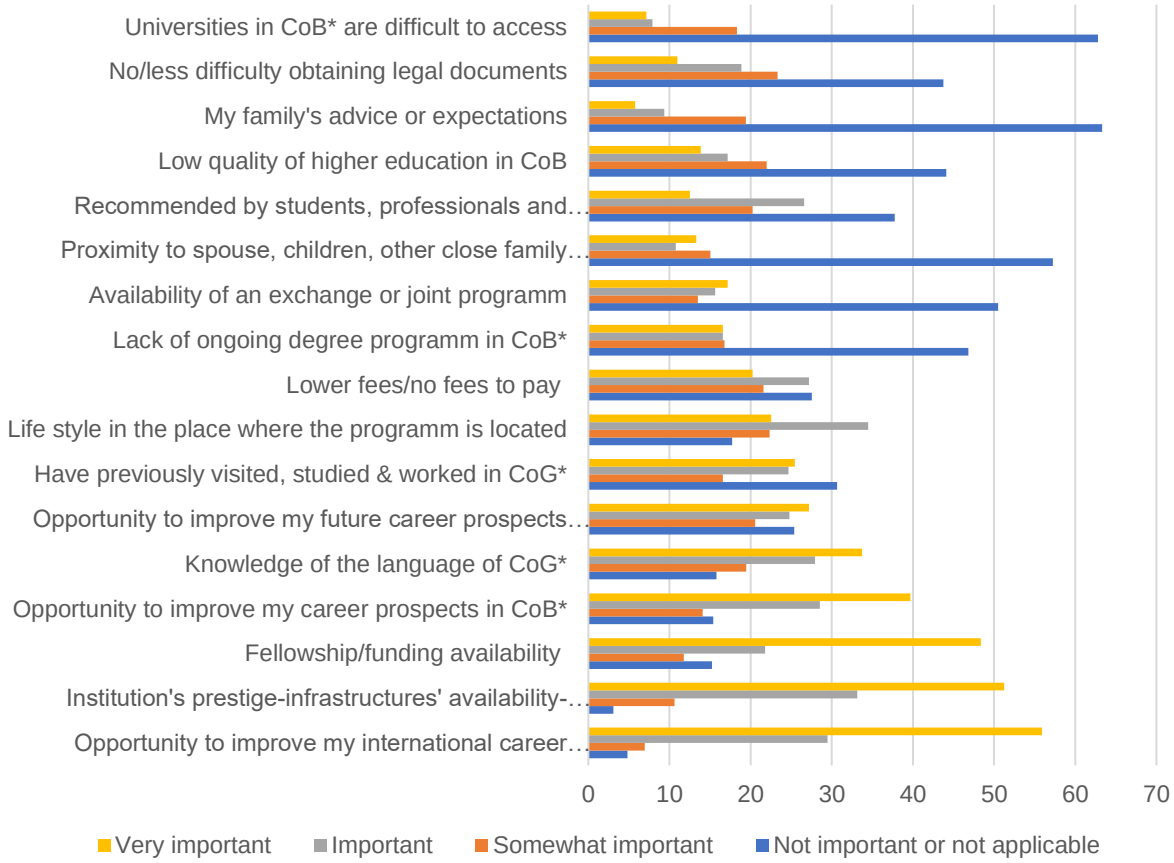
Source: AIMS

Figure 41. Reasons for choosing place of on-going degree (Master international students in the UK, %)



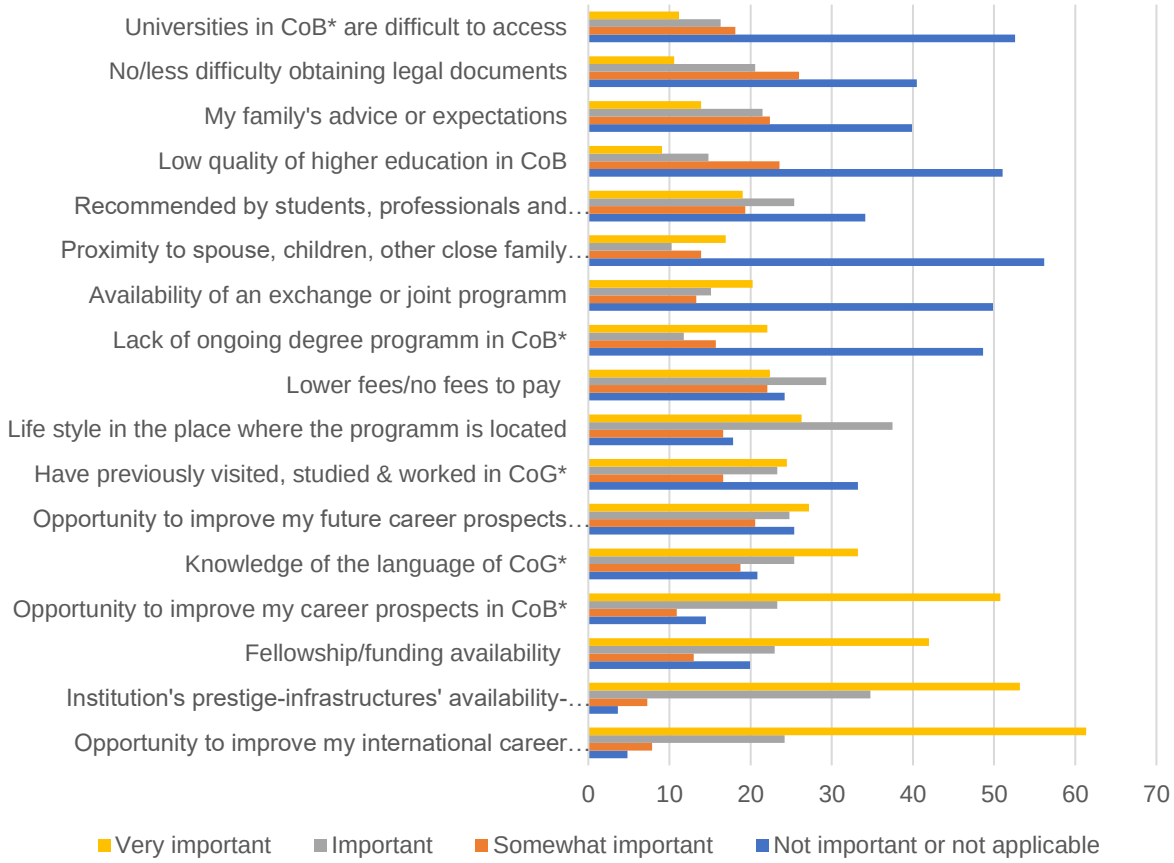
Source: AIMS

Figure 42. Reasons for choosing place of on-going degree (PhD international students in France, %)



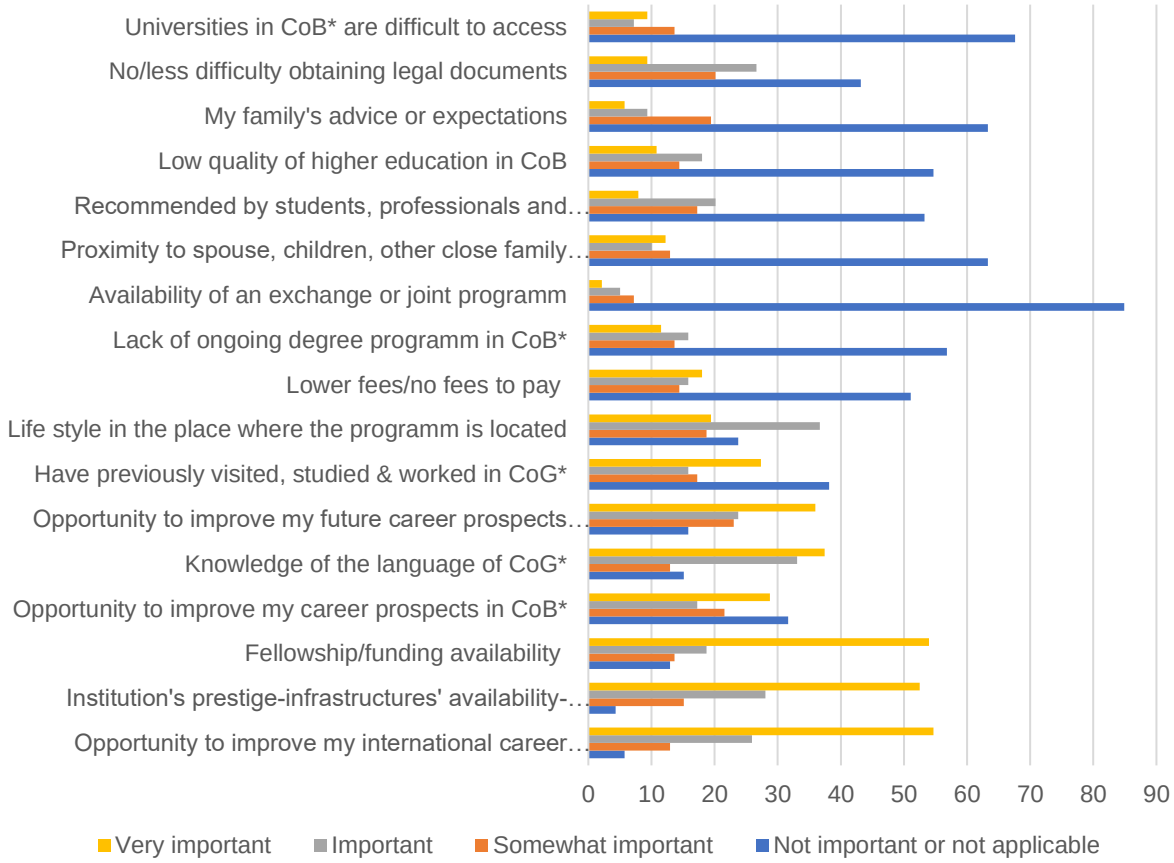
Source: AIMS

Figure 43. Reasons for choosing place of on-going degree (PhD international students in Spain, %)



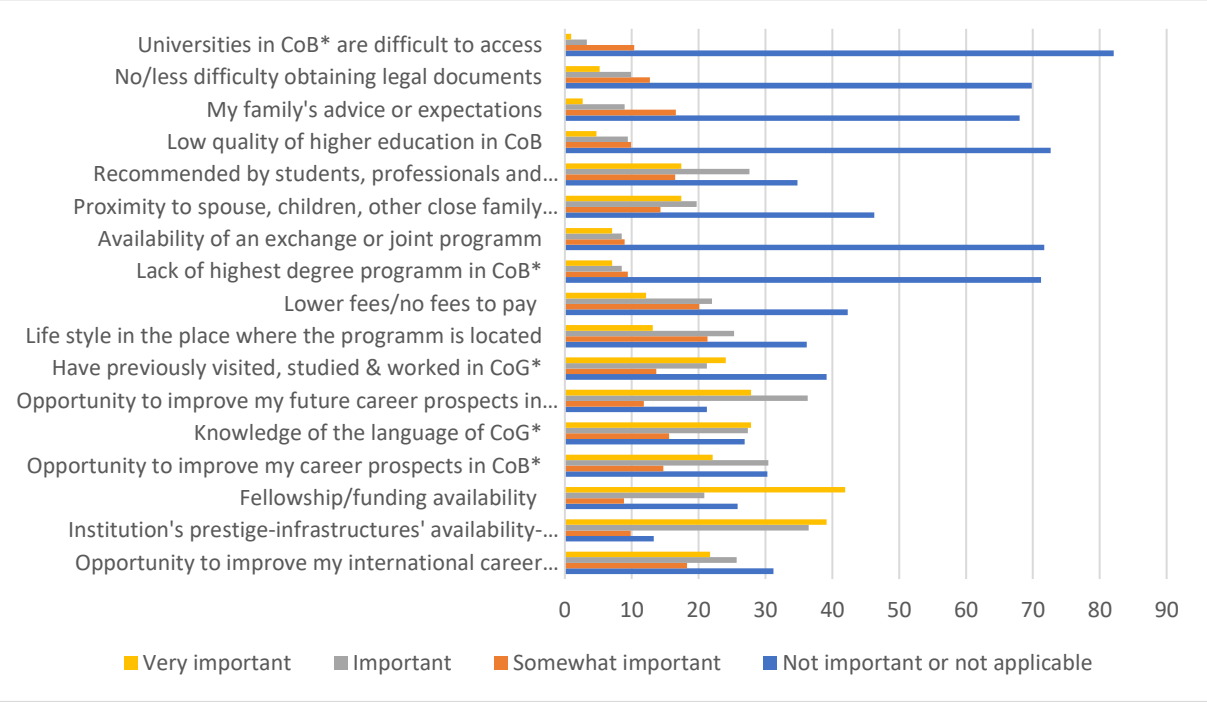
Source: AIMS

Figure 44. Reasons for choosing place of on-going degree (PhD international students in the UK, %)



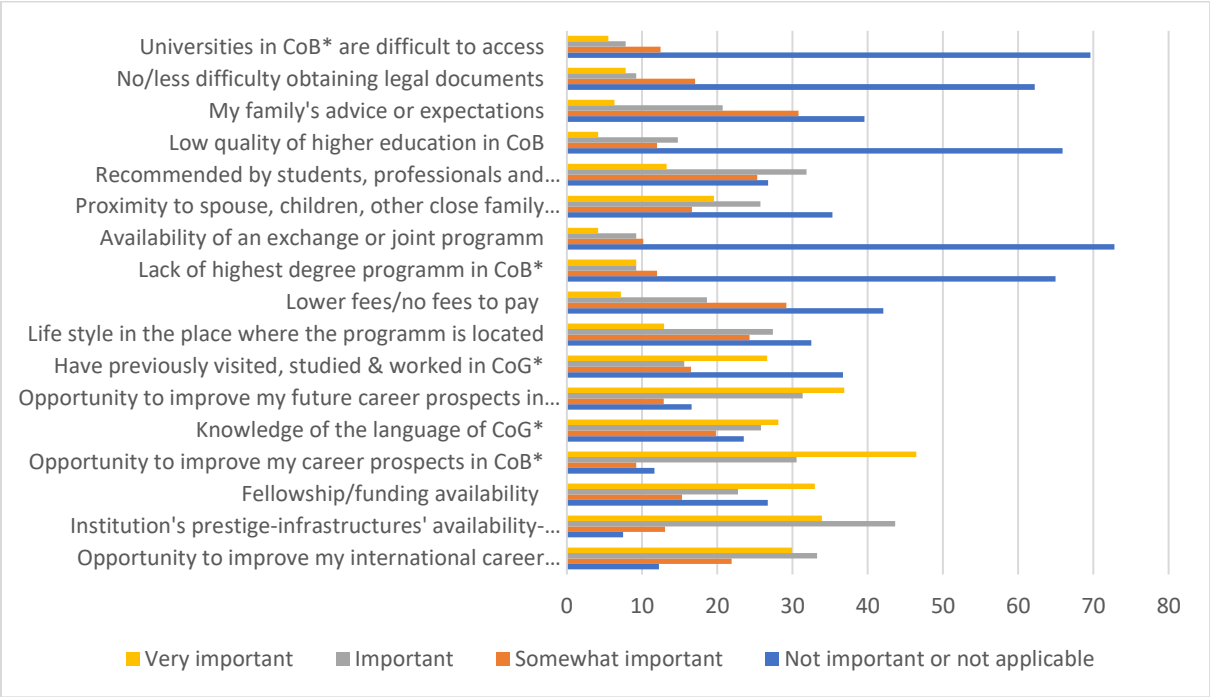
Source: AIMS

Figure 45. Reasons for choosing place of highest degree (Academics in France, %)



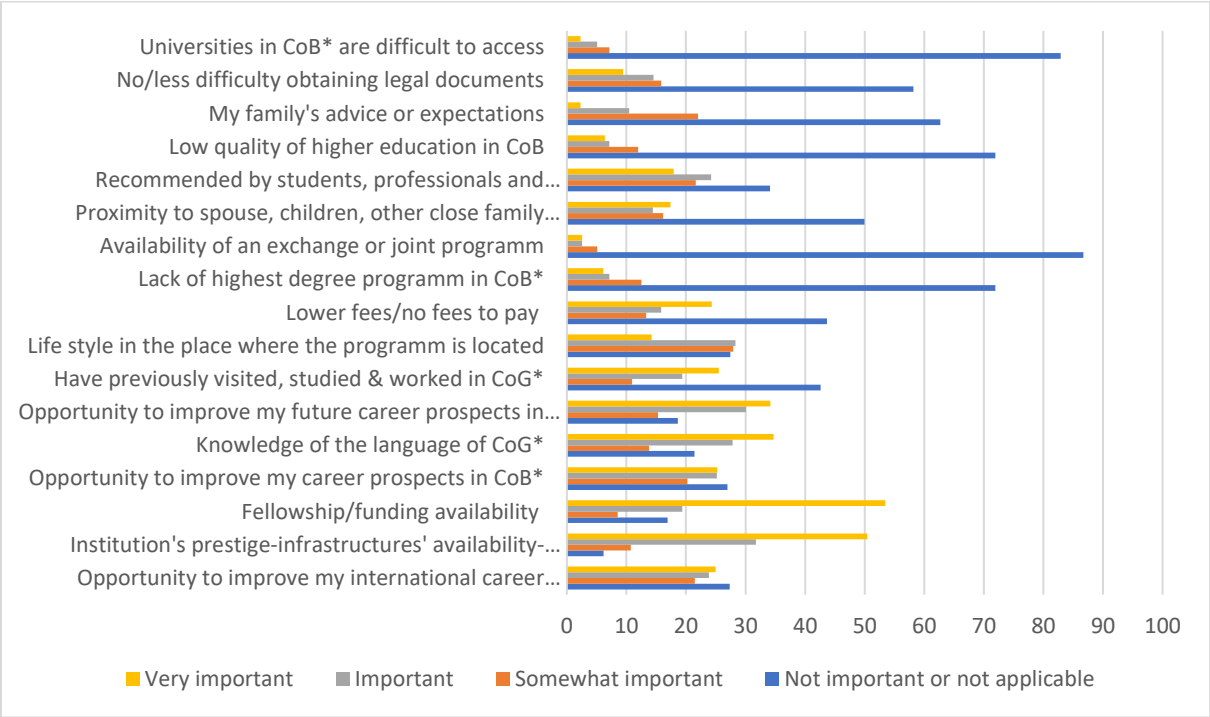
Source: AIMS

Figure 46. Reasons for choosing place of highest degree (Academics in Spain, %)



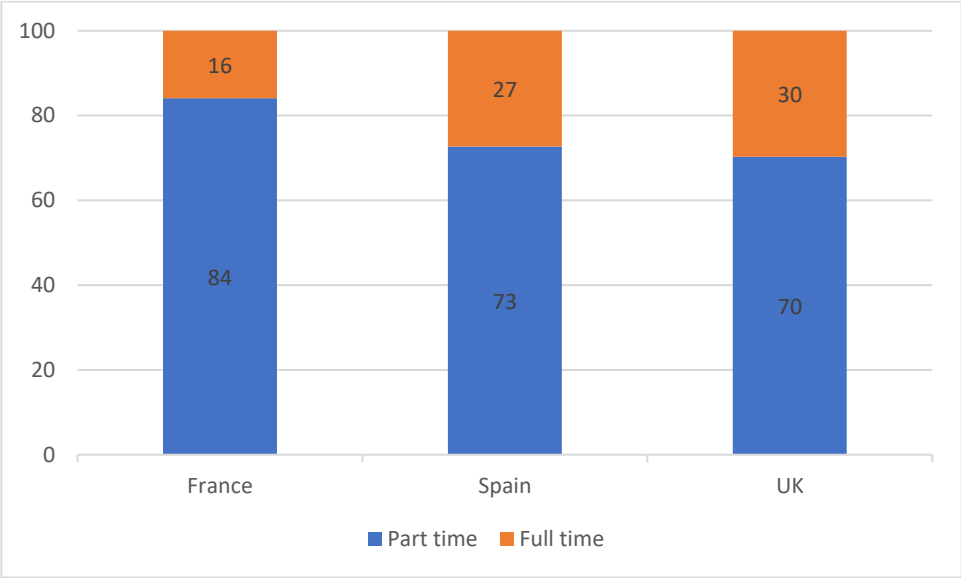
Source: AIMS

Figure 47. Reasons for choosing place of highest degree (Academics in the UK, %)



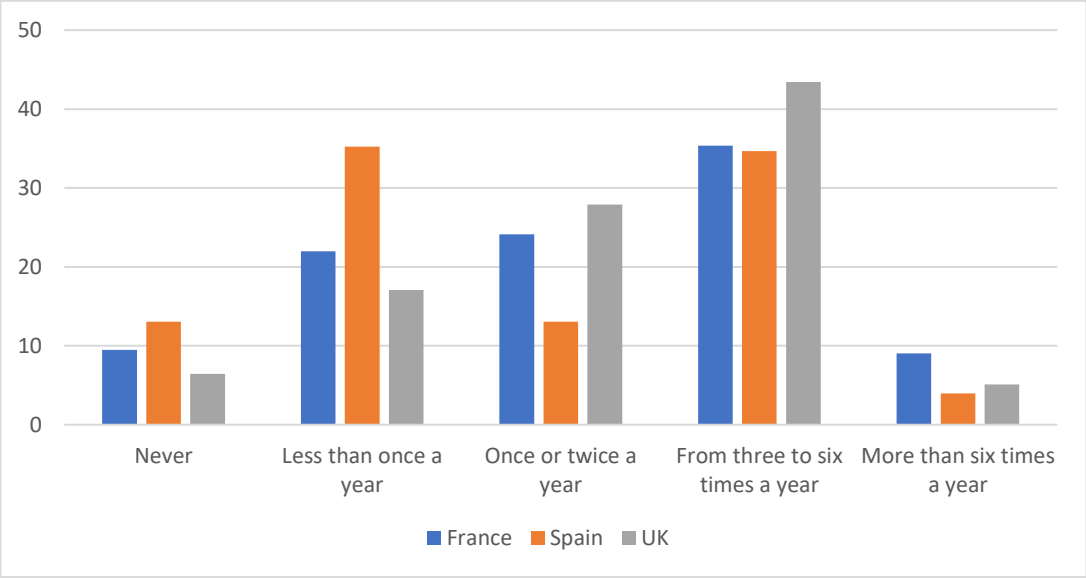
Source: AIMS

Figure 48. Type of position of current employment by country of origin



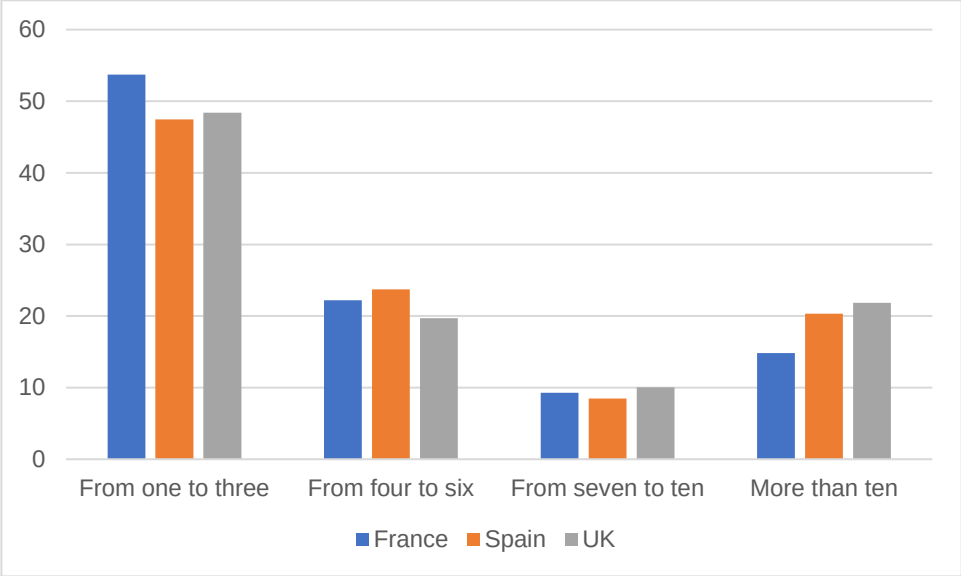
Source: AIMS

Figure 49. Frequency of personal visits of international academics in their country of birth by country of current residence



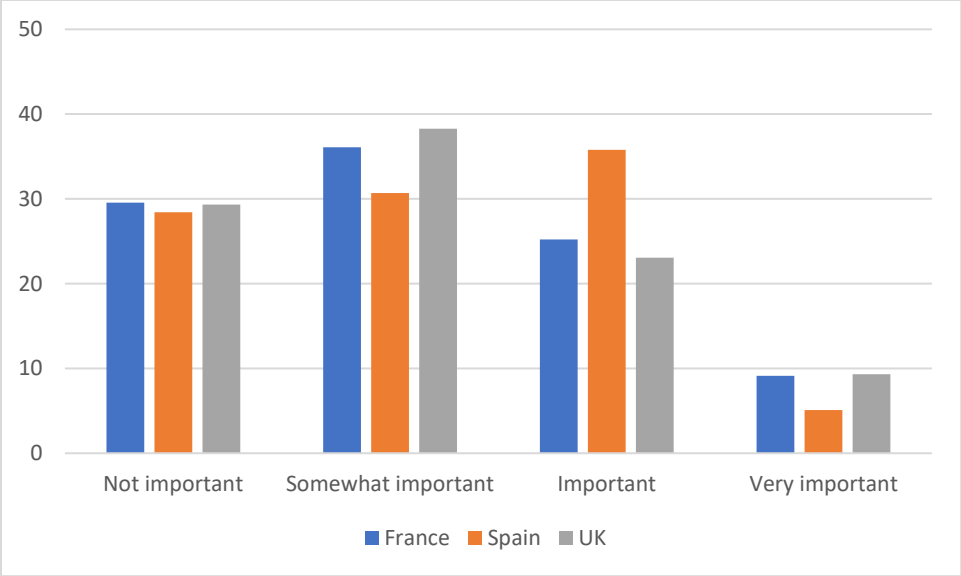
Source: AIMS

Figure 50. Number of co-authored publications in country of birth of international academics by country of current residence



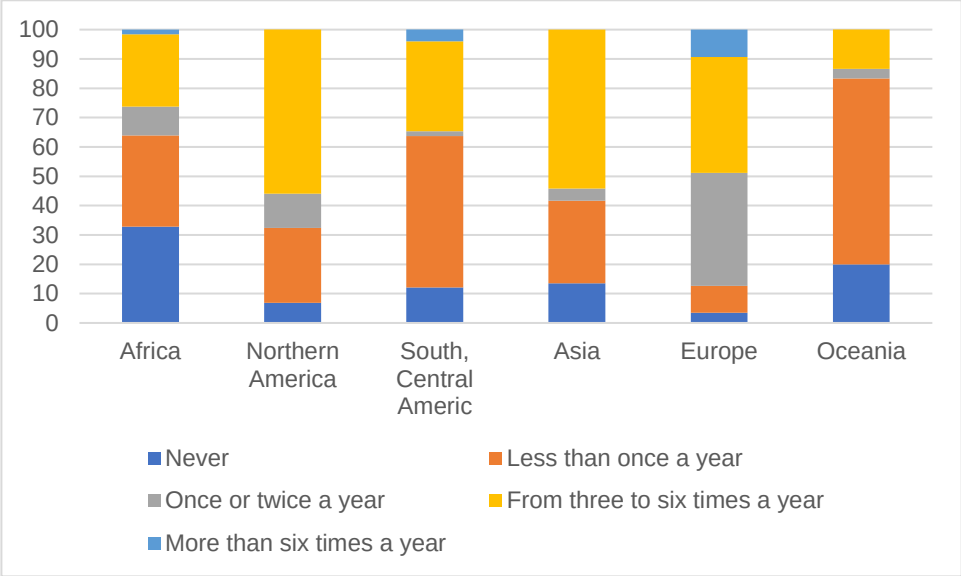
Source: AIMS

Figure 51. Evaluation of the contribution of diaspora for country of birth of international academics by country of current residence



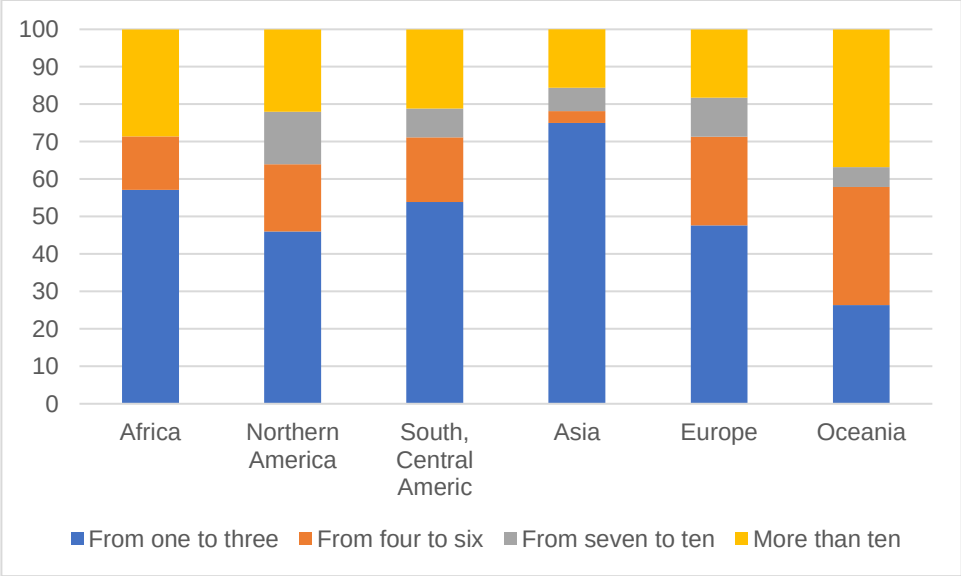
Source: AIMS

Figure 52. Frequency of personal visits of international academics in their country of birth by region/continent of birth



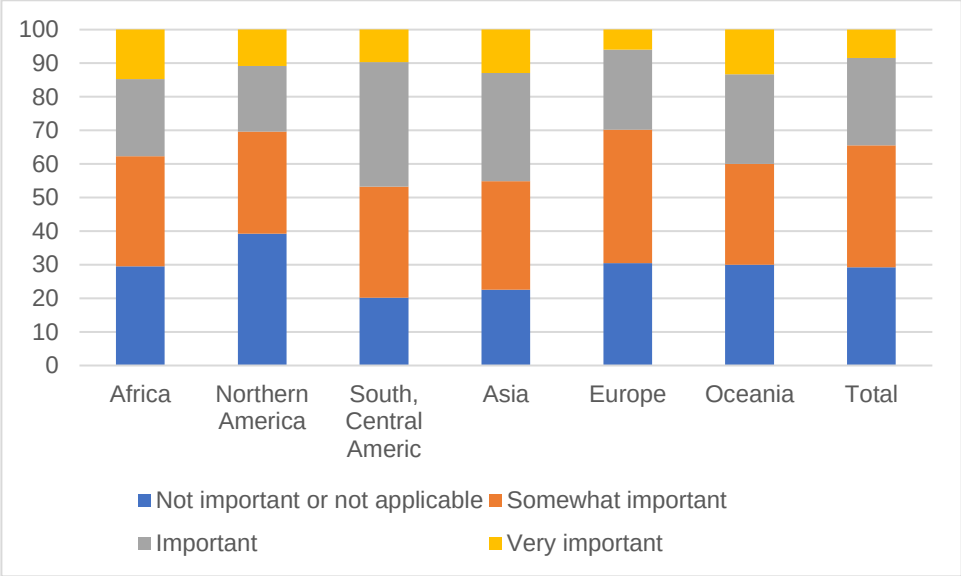
Source: AIMS

Figure 53. Number of co-authored publications in country of birth of international academics by region/continent of birth



Source: AIMS

Figure 54. Evaluation of the contribution of diaspora for country of birth of international academics



Source: AIMS

List of disciplines (field of studies/work)

We used the International Standard Classification of Education (ISCED) to define the field of studies/work of our surveyed population[23].

0 General Programmes

01 Basic programmes

Basic general programmes pre-primary, elementary, primary, secondary, etc.

08 Literacy and numeracy

Simple and functional literacy, numeracy.

09 Personal development

Enhancing personal skills, e.g. behavioural capacities, mental skills, personal organizational capacities, life orientation programmes.

1 Education

14 Teacher training and education science

[23] http://ecahe.eu/w/index.php/ISCED_Fields_of_Study.

- Teacher training for pre-school, kindergarten, elementary school, vocational, practical, non-vocational subject, adult education, teacher trainers and for handicapped children. General and specialized teacher training programmes.
- Education science: curriculum development in non-vocational and vocational subjects. Educational assessment, testing and measurement, educational research, other education science.

2 Humanities and Arts

21 Arts

- Fine arts: drawing, painting, sculpture;
- Performing arts: music, drama, dance, circus;
- Graphic and audio-visual arts: photography, cinematography, music production, radio and TV production, printing and publishing;
- Design; Crafts kills.

22 Humanities

- Religion and theology;
- Foreign languages and cultures: living or "dead" languages and their literature, area studies;
- Native languages: current or vernacular language and its literature;
- Other humanities: interpretation and translation, linguistics, comparative literature, history, archaeology, philosophy, ethics.

3 Social sciences, business and law

31 Social and behavioural science

Economics, economic history, political science, sociology, demography, anthropology (except physical anthropology), ethnology, futurology, psychology, geography (except physical geography), peace and conflict studies, human rights.

32 Journalism and information

- Journalism; library technician and science; technicians in museums and similar repositories;
- Documentation techniques;
- Archival sciences.

34 Business and administration

- Retailing, marketing, sales, public relations, real estate;
- Finance, banking, insurance, investment analysis;
- Accounting, auditing, bookkeeping;
- Management, public administration, institutional administration, personnel administration;
- Secretarial and office work.

38 Law

Local magistrates, “notaries”, law (general, international, labour, maritime, etc.), jurisprudence, history of law.

4 Science

42 Life sciences

Biology, botany, bacteriology, toxicology, microbiology, zoology, entomology, ornithology, genetics, biochemistry, biophysics, other allied sciences, excluding clinical and veterinary sciences.

44 Physical sciences

Astronomy and space sciences, physics, other allied subjects, chemistry, other allied subjects, geology, geophysics, mineralogy, physical anthropology, physical geography and other geosciences, meteorology and other atmospheric sciences including climatic research, marine science, volcanology, paleo ecology.

46 Mathematics and statistics

Mathematics, operations research, numerical analysis, actuarial science, statistics and other allied fields.

48 Computing

Computer sciences: system design, computer programming, data processing, networks, operating systems - software development only (hardware development should be classified with the engineering fields).

5 Engineering, manufacturing and construction

52 Engineering and engineering trades

Engineering drawing, mechanics, metalwork, electricity, electronics, telecommunications, energy and chemical engineering, vehicle maintenance, surveying.

54 Manufacturing and processing

Food and drink processing, textiles, clothes, footwear, leather, materials (wood, paper, plastic, glass, etc.), mining and extraction.

58 Architecture and building

Architecture and town planning: structural architecture, landscape architecture, community planning, cartography;
Building, construction;
Civil engineering.

6 Agriculture

62 Agriculture, forestry and fishery

Agriculture, crop and livestock production, agronomy, animal husbandry, horticulture and gardening, forestry and forest product techniques, natural parks, wildlife, fisheries, fishery science and technology.

64 Veterinary

Veterinary medicine, veterinary assisting.

7 Health and welfare

72 Health

- Medicine: anatomy, epidemiology, cytology, physiology, immunology and immune haematology, pathology, anaesthesiology, paediatrics, obstetrics and gynaecology, internal medicine, surgery, neurology, psychiatry, radiology, ophthalmology;
- Medical services: public health services, hygiene, pharmacy, pharmacology, therapeutics, rehabilitation, prosthetics, optometry, nutrition;
- Nursing: basic nursing, midwifery;
- Dental services: dental assisting, dental hygienist, dental laboratory technician, odontology.

76 Social services

- Social care: care of the disabled, child care, youth services, gerontological services;
- Social work: counselling, welfare

8 Services

81 Personal services

Hotel and catering, travel and tourism, sports and leisure, hairdressing, beauty treatment and other personal services: cleaning, laundry, dry-cleaning, cosmetic services, domestic science.

84 Transport services

Seamanship, ship's officer, nautical science, air crew, air traffic control, railway operations, road motor vehicle operations, postal service.

85 Environmental protection

Environmental conservation, control and protection, air and water pollution control, labour protection and security.

86 Security services

- Protection of property and persons: police work and related law enforcement, criminology, fire-protection and firefighting, civil security;
- Military.

99 Not known or unspecified

(These categories are not part of the classification itself but data collection "99" is needed for "fields of education not known or unspecified".)

[i] The share of international students and faculty is increasingly taken into account as a performance criteria used to construct university rankings (Suter and Jandl 2008).