Chapter 5
The International Mobility of Faculty

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5.1 Introduction

International academic mobility is generally conceived as including both students' and faculties' movements across borders. While data on international student mobility in higher education are quite abundant, data on the international mobility of scholars continue to be scant, incomplete, and incoherent (Schomburg et al. 2007; Teichler 1996, 2011). Thus, the results of international surveys, such as the Changing Academic Profession, are especially important as they shed light on a neglected aspect of international academic mobility. In this chapter, the authors focus on the international mobility of faculty or scholars. First, a methodology for studying the international mobility of academics – the sociological *life course* approach – is discussed. Second, by applying this approach to the data of the CAP survey, a two-stage analysis is carried out yielding a six-category typology of academic mobility. Third, the possible factors explaining the various types of mobility are investigated. Finally, the impact of different types of mobility on academics' international activities is also analyzed. In this chapter, the term *mobility* is used to denote a general concept of movement

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across borders, whereas the term *migration* is used to describe mobility across borders *with the intention to settle down* and establish oneself in another country.[1]

5.2 How to Study the International Mobility of Academics

Over the last few decades, social, political, and economic processes at the global, regional, and national levels have changed both the geographical patterns and the composition of international migrations and the motivations for migrating. As a consequence, old conceptualizations of international migration and migrants have been questioned, and new typologies of international migration, or migrants, have been proposed (Massey et al. 2009). Indeed, as migrations of different durations have been spreading, the associated motivations for these movements, and the associated migrant characteristics, have changed. Alongside economic, political, and familial motivations, education – and especially higher education – has also become a motive for migration, increasing student mobility. On the other side – looking at the outcome of higher education – international flows of highly skilled and highly educated people searching for a job on a larger-scale labor market have grown (Various authors 2001; OECD-SOPEMI 2007, pp. 60–62).

These recent changes have contributed to dissolution of the traditional dichotomies which have shaped the study of international migration and to further blur the distinction between migration and mobility (King 2002).[2] The muddying of clear-cut dichotomies – such as internal vs. international migrations, forced vs. voluntary, temporary vs. permanent, and legal vs. illegal – has provided room for a more nuanced understanding of migrations and has highlighted the existence of a plurality of different types of migrations and of migrants themselves.

A similar development can be identified in the study of academic mobility. The need for a fine-tuned understanding of academic mobility taking into account the existence of several different types of academic mobility has been put forward.

[1] In using the term "mobility," we refer to "any kind of movement of people, whatever its length, composition and causes (…) either across an international border, or within a State" (IOM 2004, p. 41). When people cross a state border, international mobility occurs. In using the term "international migration" we refer to a "Movement of persons who leave their country of origin, or the country of habitual residence, to establish themselves either permanently or temporarily in another country" (IOM 2004, p. 33).

[2] The possibility of drawing clear-cut distinctions between concepts referring to people's movements has been questioned because "New mobilities have emerged which confound the conventional divide between migration … and other forms of human spatial mobility" (King 2002). It has been argued that "migration/mobility" can be conceived as a "time-space continuum" along which people's movements with different degrees of temporariness and/or different motivations can be accommodated. Next to "conventional" migration, other types of movements such as "seasonal or shuttle migration"; "individuals frequently on the move, circulating between two or more countries"; "travel"; "tourism"; and "commuting" must "fit into the continuum, blurring the distinction between migration and other forms of spatial mobility" (King 2002, p. 93). Thus, there is a more general concept of "human spatial mobility" encompassing several forms which are placed along a continuum where clear-cut distinctions are increasingly difficult to draw. "International migration" conceived as a movement across national borders with the purpose of settling in another country is but one of these forms.

According to a qualitative study, different patterns of long-term academic mobility can be identified in order to explore the connections between academic mobility and international migration (Hoffman 2009). The whole range, or "spectrum," of these patterns shows that in order to study international academic mobility, four dimensions are worth considering.

First, by definition, international mobility entails the crossing of national borders. Yet, a well-grounded analysis of academic international mobility requires one to determine first when in the individual career geographic borders were initially crossed and, then, the frequency of such crossings. This information helps to identify different types of international academic mobility. For instance, it helps to distinguish academics crossing a border to get a job for which they are already qualified from academics who crossed the border to enter higher education as students and who subsequently secured a job in higher education.

Second, the time frame or duration of mobility must also be considered. The time span involved in international academic mobility may vary from the few minutes needed to send an e-mail abroad to a stay lasting several generations. The length of mobility has to be understood as a continuum along which it is possible to distinguish short-term vs. long-term mobility, several degrees of temporariness, and international migration vs. other forms of human mobility. Indeed, it helps to take into account specific cases such as academics who never left their country for more than short periods, yet have experienced repeated short-term international mobility throughout their entire career.

Third, the temporal dimension of mobility also has a subjective side which cannot be captured simply by chronological time, i.e., the perceptions of participating actors. Indeed, expectations of the mobile academic and the receiving institution may or may not converge such as when an institution, welcoming a postdoctoral fellowship holder, conceives their stay as temporary, while the postdoctorate perceives it as a first step to an international career in the receiving country.

Fourth, the national, institutional, and personal contexts of mobility must be taken into account. A variety of contexts, such as geographical regions, occupational sectors, national higher education systems, disciplines or disciplinary cultures, stages of study, and career stages, must be taken into account as one begins to explain mobility and, as such, requires adequate theories to account for their effect upon international academic mobility.

5.2.1 The Life Course Approach

Developments in the research on international migration and on academic mobility converge when one considers the *sociological life course approach* – which has already been applied in fields including education, the labor market, and transition from school to work studies (Mortimer and Shanahan 2006) – as a suitable theoretical and analytical framework to study international mobility (Wingens et al. 2011). The sociological life course approach focuses on the interplay of structure and agency over time, aiming at relating individuals' life courses to the dynamics of

social structures and institutions. As a consequence, it "conceives of the life course in terms of sequences of age-related status configurations which refer to individuals' participation in societal fields like education, the labor market, and the family" (Wingens et al. 2011, p. 4).

There are several reasons for considering this approach especially useful for studying international migration and mobility. By conceiving the life course as a sequence of individual events embedded in institutional settings and social structures, the sociological life course approach allows one to link individual movements across space to factors influencing them and to the outcomes they produce. This is a way to account for what is called the "double embeddedness" of migration – that is, the fact that migration is embedded both in the migrant's life course and in broader social contexts, such as societies and social processes of countries or places of origin and destination (King 2002, p. 101), and the "contexts" within which academic movements are also embedded (Hoffman 2009). As the sociological life course approach is a research perspective focusing on the interplay of structure and agency over time, it allows one to account for both the interdependencies of different life spheres and the interdependencies of different temporal dynamics. In particular, it allows one to account for the interaction of three types of time: (a) the *micro* dynamics of an individual's biographical time; (b) the *meso* dynamics of institutional and social time, especially those related to age norms regulating schooling, retirement, etc.; and (c) the *macro* dynamics of historical time (Wingens et al. 2011, p. 10).

Consequently, it is possible to understand international migration as a process that cannot be reduced to a single event (i.e., the crossing of a border) but must be considered a lifelong process which affects all aspects of a migrant's life, as well as the lives of nonmigrants and communities in both sending and receiving countries (Castles 2000, pp. 15–16). Further, both international migration and, more generally, border crossing and spatial mobility can be understood within a wider temporal dimension encompassing not only the migrant's, or the mobile person's, life course but also the life course of his/her family, even across generations and specific segments or phases of his/her life such as study and career.

5.2.2 Types of International Academic Mobility

In order to study international academic mobility, one defines it as a "movement of academics across state borders.[3]" This definition (a) focuses on human physical

[3] It has been argued that comparative analysis of academic mobility has to deal with the problem of defining academics, that is, to decide which people working in which institution and sector are included within the academy (Teichler 2011). Especially important in the frame of a life course approach is the difference which is drawn across countries between considering doctoral candidates (and sometimes also people holding a postdoctoral position) as academics or as students. In this context we shall adopt the definition of academics which has been established for carrying out the CAP survey and we shall leave to the reader whether to interpret postgraduate studies as advanced studies or early career depending on national circumstances.

mobility across space, setting aside the relationship between "physical" and "virtual" international mobility; (b) considers the existence of states and their capacity to regulate flows of people – both incoming and outgoing – across their borders; and (c) leaves open the time frame or duration of these movements and their motivations.

Methodologically, the sociological life course approach requires the collection of longitudinal, individual-level data (Wingens et al. 2011, p. 6) on events and the points in time when, and places where, these events occurred. The CAP survey provides information on 17 individual statuses each of which is related to an event during the academics' life course in three spheres of life, namely, family, education, and the labor market. All of them refer to a specific point in time, and 13 of them provide information on the country to which statuses or events are related.[4] It is worth noting that CAP data allows one to distinguish at least three different time frames of international academic mobility: (1) the time frame of generations, connecting academics' generation to the generation of their parents and to the generation of their children; (2) the time frame of academics' entire life course from their birth to the time when the survey was carried out; and (3) the time frame of academics' career as a specific segment or phase of their life course.

On the basis of the above considerations, and the possibility of comparing the countries associated with individual academics' events or statuses, it is possible to determine whether an academic along the phases of his or her life has been mobile or not, whether it was for the purpose of study or work, and whether being mobile has been to date a temporary or a permanent experience. In other words, it is possible to identify several types of academic mobility along the entire life course of respondents to the CAP survey.

In order to distinguish mobile from nonmobile academics and to identify different types of mobile academics, several steps are followed in this first stage of the analysis. First, the focus is placed on academics' entire life course and its different phases (early life/youth, higher education studies, advanced studies/early career, academic work), excluding the time frame of generations. Second, six events throughout academics' life course, namely, birth; obtaining first, second, doctoral, postdoctoral degrees; and current situation at the time when the survey was carried out and related statuses, were selected for analysis. Third, the study included numerous geographic variables including the country of the academics' employment at the time the survey was carried out, the country of residence at birth, the countries where first and advanced degrees were earned, and the country of current residence. These selected variables were then compared after having merged the information on first and second higher education degrees and on doctoral and postdoctoral

[4] The events and related statuses are the following: (1) birth (year); (2) first degree (year, country); (3) second degree (year, country); (4) doctoral degree (year, country); (5) postdoctoral degree (year, country); (6) first full-time appointment beyond research and teaching assistant in the higher education/research sector (year); (7) first appointment to current institution beyond research and teaching assistant (year); (8) appointment/promotion to current rank at current institution (year); (9) current employment (year, country); (10) current familial status (year); (11) current natural or social parenthood (year); (12), (13), (14) citizenship (at birth, at first degree, current; country); and (15), (16), (17) residence (at birth, at first degree, current; country).

degrees (i.e., advanced degrees). As a result, it is possible to gain information on (a) whether academics were born in the country of current employment, that is, the country where the CAP survey was carried out, or not; (b) whether first, second, or advanced degrees were earned in the country of current employment or not; and (c) whether academics are living in the country of current employment or not.

Fourth, data show that academics that do not live where they work – likely international commuters – are rare, accounting for only 1 % of the entire sample. Thus, the corresponding variable was dropped from the analysis. Fifth, by combining the information provided by three variables[5] from the CAP survey, 12 types of international academic mobility emerge, which can be grouped into three categories.

The first category is represented by academics for whom all the events taken into consideration throughout their life occurred in the same country. As their biographies are strictly connected to, or deeply embedded in, one country, we may call them *embedded academics*. This first category accounts for three-quarters of the whole CAP sample (76 %).

Second, there are those who were born in the country of current employment, yet at least one of the aforementioned events occurred abroad. As these people have left the country where they were born in order to earn a study degree, and returned to their country of origin in order to work, we may refer to them as *circulating academics*, or academics circulating for study purposes. This group includes approximately one academic out of six (15 %).

Third, there are academics who were born abroad and crossed the borders of the country of current employment at different stages of their life and for different purposes. Utilizing the definition of international migration provided by the International Organisation for Migration (IOM) which conceives it as a movement across borders with the purpose of settling in the country of destination, we may refer to them as *migrant academics*. This last category accounts for a bit less than one tenth of the whole sample (9 %).

If we consider the first group of academics as *nonmobile* academics, that is, people who never crossed their country's borders, we would be wrong. Among *embedded academics*, 7 % say that – at the time when the survey was carried out – they have taught courses abroad during the current, or the previous, academic year, and 22 % report having spent some periods abroad, that is, in countries outside the country where they earned their first degree and are currently employed. As a matter of fact, a subset of *embedded academics* have crossed the borders of the country where they are employed – and where they were born and earned their first, and subsequent, degrees – one or more times. Thus, they must be considered as mobile.

[5] On the basis of the original variables included in the CAP international data set, three variables have been created: (1) "residence at birth," distinguishing academics who were born in the country of current employment from those who were born abroad; (2) "study degree," distinguishing higher education study degrees (first and second) earned in the country of current employment from study degrees – either first or second degrees or both – earned abroad; (3) "advanced degrees," distinguishing doctoral and postdoctoral degrees earned in the country of current employment from doctoral and/or postdoctoral degree earned abroad and from no doctoral and/or postdoctoral degrees. As two variables have two categories and one has three categories, the possible combinations are 12.

This finding suggests that a second stage of statistical analysis should be undertaken. As the CAP questionnaire collected information on how many years respondents have spent abroad, it is possible to distinguish rather short periods abroad from rather long periods abroad.[6] As a result, the group of *embedded academics* can be split into three subgroups: (a) academics who never experienced international mobility throughout their life; (b) academics who, while working at the time when the survey was carried out where they were born and where they earned their study degrees, have experienced short-term mobility in their career; and (c) academics who, while working at the time when the survey was carried out where they were born and where they earned their study degrees, have experienced long-term mobility in their career. It is likely that the last subgroup includes both "return migrants," that is, people who left the country where they were born and studied, worked abroad for rather long periods, and were "back home" at the time of the survey, and highly mobile academics, that is, people who are "always on the move."

The disclosure of mobile individuals among *embedded academics* opens up the possibility of creating another typology of international academic mobility. This typology is derived from the one encompassing 12 types (see above), and it is based on the notion of experience abroad along academics' entire life course, assuming that this kind of experience may have an impact on academics' current work, and, especially, on their current international activities. The typology, first, distinguishes between *nonmobile* and *mobile* academics, and, second, it identifies several types of mobile academics on the basis of two aspects of the temporal dimension of mobility, namely, the phase of the life course when the experience abroad started and its length. As mentioned, academics that were born abroad and crossed the borders of the country of current employment at different stages of their life and for different purposes are considered as migrants (see Table 5.1).

Indeed, information provided by the CAP survey allows one to draw some clear conclusions. At the global level, 42.3 % of academics experience or have experienced some kind of international mobility.

The most frequent type of international academic mobility involves 15.7 % of the whole sample. The related experience abroad starts early in academics' life course and has a rather short duration; it is aimed at earning study or advanced degrees. As this type of mobility entails circulation of academics-to-be across countries' borders, one may refer to those involved in it as *circulating for study*.

The second most frequent type of international academic mobility – *short-term academic mobility* – involves 10 % of CAP respondents. An experience abroad during their professional career starts late in life and has a rather short duration, and it is aimed at professional purposes related to academic activities. It entails circulation across countries as well, so one may refer to those involved in it as *academics circulating for work spending short periods abroad*.

[6] In analyzing international mobility, a distinction is made between short-term mobility and long-term mobility. Usually, periods abroad lasting 1 year or less are considered short-term academic mobility while periods lasting more than 1 year are considered long-term mobility (Hoffman 2009). As the CAP questionnaire does not provide information on how many periods abroad respondents have spent but only on the total length of periods abroad, it has been decided to consider short periods abroad those lasting 2 years or less and to consider long periods abroad those lasting more than 2 years.

Table 5.1 Distribution of respondents by type of mobility experience (in percent)

Type of mobility experience	Percent (N=21,130)
Nonmobile: no experience abroad throughout entire life course	58
Circulating for study: short term	16
Circulating for work: short term	10
Circulating for work: long term	6
Migration for study: long term	5
Migration for work: long term	6

Source: CAP data September 2011
Note: Due to rounded values, the sum of the items exceeds 100 %

Table 5.2 Proportionate (relative) frequency of five types of academic mobility by country of current employment

	Proportionate (relative) frequency		
Type of mobility	High	Medium	Low
Circulation for study: short term	MY, KR, HK	NO, CA, MX, AR, PT, BR	DE, UK, IT, ZA, AU, FI, JP, NL, CN, US
Migration for study: long term	AU, CA, US	DE, UK, NO, PT, HK, ZA	NL, FI, BR, MY, JP, MX, AR, IT, KR, CN
Circulation for work: short term	IT, JP	BR, KR, FI, NO, DE	US, MY, NL, AU, CA, AR, ZA, UK, PT, CN, MX, HK
Circulation for work: long term	JP, BR, FI, AU	IT, NO, NL, US, UK	CA, PT, DE, KR, ZA, CN, AR, MX, HK, MY
Migration for work: long term	HK, CA, AU, NO	UK, NL, FI, US	DE, MY, ZA, MX, PT, IT, BR, AR, JP, KR, CN

Source: CAP data September 2011
Notes: Country of current employment is also the country of destination in case of migration. The definition of high, medium, and low proportions of mobile academics refers to the average value for each type of mobility, i.e., Low = below average; Medium = between average and one standard deviation above average; High = over one standard deviation above average; average values are provided in Table 5.1

The three less frequent types of mobility – which nevertheless account for a cumulative 16.5 % of the sample – share as a common trait the long duration of the experience abroad. One type refers to experiences starting late in an academics' life and entailing the circulation across countries for professional purposes, identifying *academics circulating for work spending long periods abroad*. Within another type, experience abroad starts late as well and entails working – permanently to date – in a country which is different from country of residence at birth. As academics involved in this type of experience were born abroad, and entered the country of current employment while being already fully qualified for their job, one may refer to them as *late migrants for work*. Finally, a third type of experience abroad starts early in academics' life. As academics involved in it were born abroad, and entered the country of current employment as students, we may refer to them as *early migrants for study*.

The five types of mobile academics are not distributed evenly across countries. Table 5.2 displays the proportions of mobile academics by type of mobility in the

CAP countries. Australia, Canada, the USA, Hong Kong and Norway have the largest proportions of study and labor migrants. Academics from Malaysia, South Korea, and Hong Kong are very mobile for study, whereas academics from Italy, Japan, Brazil, Finland, and Australia are the most active in job circulation.

5.3 Explaining International Academic Mobility

Factors that might explain international academic mobility, or at least are associated with it, pertain to different domains and levels (Altbach 2006; Baumgratz-Gangl 1996; Jöns 2007; Musselin 2004; Teichler 2011; Welch 2008). At the macrostructural level, the international division of labor, international relations between central and peripheral countries, historical turning points, economic growth and national expenditures in R&D, the functioning of national academic labor markets and of higher education systems, national or regional migration policies and the competition for highly qualified labor, and languages and linguistic regions have been identified among the factors hindering or enhancing academic mobility. At a microinstitutional level, the attention has especially focused on the characteristics of higher education institutions, academic disciplines, and research activities, especially those influencing the extent to which scientific research is bound to a particular setting in a specific country and those influencing scientific collaboration, which affect the patterns of academic mobility. At the individual level, personal features, skills, and motivations of scholars, the stage of their career, and the scope and nature of the social networks in which they are embedded, e.g., family ties, friendship, and previous study experience abroad, are thought to influence the decision to become internationally mobile. Briefly, academic mobility is influenced by a large and complex set of factors, and we can expect that different types of international academic mobility are influenced by different sets of factors. On the basis of the typology of international academic mobility presented in the previous paragraph (see Table 5.1), an investigation of the possible determinants of the international mobility of scholars was undertaken through multivariate analysis.

Five multinomial logistic regression models, one for each type of mobility, were built to analyze the net impact of a common set of explanatory factors on the probability of experiencing a specific type of mobility vs. (a) the situation of immobility, that is, no experience of mobility, and (b) all the other types of mobility merged together into a single composite category. This analytical strategy allows one to compare the net effects of each factor upon the different types of mobility.

Possible explanatory factors were divided into three groups. The first group referred to selected structural features of academics' country of employment at the time the survey was carried out and of their country of birth. They included both economic and cultural features: the economic status of the country (mature vs. emerging or less developed) and the status of the English language in the country (English as the only official or main language vs. English as one official language

among others vs. no English as official language).[7] The second group referred to several aspects of academic work: the type of institution at which academics worked (university vs. other institutions); academic rank (senior position vs. junior or other position); discipline of teaching divided into five broad fields (education and humanities; social sciences, business, and law; science; engineering, manufacturing, construction, and architecture; and medical sciences, health-related sciences, and social services); the emphasis of academics' primary research (whether basic/theoretical or applied/practically oriented or a combination of the two); and their interests for teaching vs. research (whether lying primarily in teaching, in research, in both, but leaning toward teaching, or in both, but leaning toward research). The third group referred to selected biographical features of respondents: gender, age and age cohort (divided into four cohorts), family background in terms of fathers' educational attainment, and educational history, that is, the discipline of highest degree and having or not earned a doctoral and/or a postdoc degree.

In displaying the outcomes of the analysis, this study first looked at experiences of mobility which occurred early in academics' life course and then at those experiences that occurred, or are still occurring, later in their lives. Results should be read taking into account the proportions of academics by type of mobility and country displayed in Table 5.2, and the fact that some family factors thought to have had an impact on mobility, such as respondents' familial status, partners' characteristics, number of children living in the household, as well as tertiary education of the respondents' mothers, proved to be nonsignificant. Further, it must be noted that not all factors are included in each model. Economic and cultural features of the country of birth are considered only when migration is studied because when circulation is at issue, country of birth coincides with country of current employment. Also, characteristics of respondents' advanced studies and work are excluded from the models referring to the early stage of their lives. Similarly, while referring to experiences that occurred early in the life course, age is not considered assuming that at that stage respondents were young.

Table 5.3 reports the estimates of the two models referring to mobility experiences that occurred early in academics' life course.

As far as early mobility is concerned, *circulation* for study – which is especially frequent in three Asian countries (Malaysia, South Korea, Hong Kong SAR) – depends, according to the model, on six factors: (a) the economic status of the country of academics' current employment, which is also their country of birth; (b) the status of the English language in the country of employment; (c) academics' field of study (discipline of highest degree); (d) gender; (e) the cohort within which the respondent was born; and (f) father's level of educational attainment, used as an indicator of academics' family, social, cultural, and economic capital.

[7] The classification scheme for comparing the CAP countries based on wealth and on language policy has been presented in Chap. 3. It has to be noted that the countries of origin of migrant academics who have been interviewed do not necessarily coincide with the countries participating in the CAP survey. The later must be considered as countries of destination of migrant fluxes while the former are more than 100 countries around the world, excluding the 19 participating ones. Some of academics' countries of origin have an income which is lower than "upper middle" and have been considered as "less developed".

Table 5.3 Predictors of two types of "early" academic mobility

	Type of mobility					
	Circulation for study			Migration for study		
	B	Std. err.	Exp (*B*)	*B*	Std. err.	Exp (*B*)
Econ status of country of birth: mature	Not included			−3.03***	0.18	0.05
Econ status of country of emp: mature	0.43***	0.05	1.54	4.16***	0.21	64.31
Country of birth: excl Eng	Not included			−2.30***	0.20	0.10
Country of birth: Eng also	Not included			−2.14***	0.21	0.12
Country of emp: excl Eng	−0.82***	0.08	0.44	3.41***	0.20	30.14
Country of emp: Eng also	1.61***	0.06	5.01	4.01***	0.21	55.14
Gender: male	0.19***	0.05	1.21	−0.14	0.09	0.87
Age cohort:						
Born up to 1950	0.64***	0.07	1.89	0.61***	0.14	1.83
Born 1951–1960	0.71***	0.06	2.03	0.41***	0.13	1.51
Born 1961–1970	0.63***	0.06	1.88	0.37**	0.12	1.45
Father's educ: college	0.24***	0.05	1.27	0.28**	0.09	1.32
Disc highest degree:						
Educ and hum	0.16*	0.08	1.17	0.02	0.15	1.02
Socl sci, bus, and law	0.26**	0.08	1.29	0.16	0.15	1.18
Science	0.45***	0.08	1.57	0.15	0.15	1.16
Engin, manufact, const, and arch	0.23**	0.09	1.26	−0.10	0.19	0.91
Constant	−2.67***	0.09		−4.89***	0.20	

Source: CAP data September 2011
Note: ***$p<.001$, **$p<.01$, *$p<.05$

Further, Australia, Canada, and the USA are the most frequent destinations of early *migration* for the purpose of study. Six factors are associated with this type of mobility: (a) the economic status of the country of birth (which is the country of origin) and (b) of the country of current employment (which is the country of destination), (c) the status of the English language in the country of birth and (d) in the country of employment, (e) academics' age cohort, and (f) father's education.

In explaining these two first types of mobility, the economic features of countries play the role one would expect. Being born, and working, in an economically mature country increases the probability of circulating for study as it is likely that the country is able to provide its students with enough resources and the necessary legal regulations to study abroad and, at the same time, offer enough job opportunities to call them back. In contrast to academics having circulated for study, the academics having migrated for study remain in the foreign country of study and become academic staff. Compared to emerging and less developed countries, being born in a mature country decreases the probability of migrating for study, while working in a mature economy increases this probability. In short, academics' early migration for study is part of the flux of moving people from less developed to more developed countries.

The status of the English language in the countries participating in the survey has an impact upon mobility. Circulating for study is an experience primarily involving

academics working in countries where English is not the official language, especially those working in countries where English is one official language among others, such as Malaysia and Hong Kong, much more than those working in countries where English is the only main or official language. The results of the analysis also show that migrants for study move from non-English-speaking countries to English-speaking countries.

Interestingly enough, gender has an impact on early circulation for study but not on early migration for study. It is likely that opportunities to study abroad discriminate against women, while early migration occurs irrespective of gender, possibly as a consequence of decisions involving all the members of a family.

Being born before, or after, the beginning of the 1970s makes a difference as far as both circulation and migration for study are concerned. Being born prior to 1970 seems to increase the probability of circulating or migrating for study compared to those who were born in 1971 or later. Likely, academics that were in their formative years at the beginning of the 1990s were less mobile than their older colleagues. It may be that changes in higher education, notably the expansion of graduate programs, have lowered the need to study abroad in order to get advanced degrees, and that economic change in developing countries might have reduced the need or the willingness of young people to migrate for purposes of study.

Fathers' educational attainment makes a difference as well. Compared to fathers without tertiary education, being children of fathers with tertiary education increases the probability of being internationally mobile. Likely, these fathers (and their families) provide their children with social, cultural, and economic capital to study abroad or to migrate.

Finally, students in medical sciences are less keen to study abroad compared to students of all other disciplines, while field of study does not have an impact on migration for study. It is likely that early migration among academics-to-be depends on factors other than the choice of the field of study in higher education.

Table 5.4 shows the estimates of the three models referring to mobility experiences occurred, or still occurring, later on in academics' life course, when mobility does not depend only on structural and individual factors but also on job and career characteristics.

Short-term circulation for professional purposes, which is most frequent in Italy and Japan, and long-term circulation for the same reasons, which is most frequent in Japan, as well as in Brazil, Finland, and Australia, both depend on nine common factors. Further, working in mature economies, working at universities, and having earned an advanced degree increase the probability of being mobile when compared to the corresponding reference categories.

Using medical sciences as the point of reference, teaching engineering decreases the probability of spending either short or long periods abroad, while teaching social sciences, business, and law has a negative impact only on long-term professional circulation. In all other cases, discipline does not have a significant impact on job circulation.[8]

[8] It might be that the disciplinary groups we are using in analyzing the determinants of academic mobility are too broad and hence too heterogeneous to detect meaningful differences, yet the number of respondents belonging to each type of mobility is too small to further disaggregate disciplinary groups.

Table 5.4 Predictors of three types of "late" academic mobility

	Type of "late" mobility								
	Circulation for work: short term			Circulation for work: long term			Migration for work		
	B	Std. err.	Exp (*B*)	*B*	Std. err.	Exp (*B*)	*B*	Std. err.	Exp (*B*)
Econ status of country of birth: mature	Not included			Not included			−2.35***	0.23	0.10
Econ status of country of emp: mature	0.87***	0.077	2.39	0.70***	0.10	2.02	2.90***	0.25	18.10
Country of birth: excl Eng	Not included			Not included			−1.02***	0.22	0.36
Country of birth: Eng also	Not included			Not included			−3.16***	0.25	0.04
Country of emp: excl Eng	−0.72***	0.10	0.49	−0.16	0.10	0.85	2.50***	0.24	12.16
Country of emp: Eng also	0.11	0.10	1.12	−0.16	0.15	0.86	5.22***	0.24	184.27
Advanced degree: yes	0.62***	0.07	1.86	0.57***	0.09	1.77	0.67***	0.14	1.96
Institutional type: res univ	0.32***	0.07	1.38	0.22*	0.09	1.24	0.59***	0.16	1.80
Academic rank: senior position	0.35***	0.07	1.42	0.12	0.09	1.13	0.01	0.12	1.01
Discipline of teaching:									
Educ and hum	−0.15	0.10	0.87	−0.04	0.12	0.97	0.16	0.16	1.17
Socl sci, bus, and law	−0.14	0.10	0.87	−0.20	0.12	0.82	0.09	0.16	1.10
Science	−0.08	0.09	0.93	0.07	0.11	1.07	0.10	0.16	1.11
Engin, manufact, const, and arch	−0.23***	0.11	0.80	−0.55***	0.15	0.58	0.13	0.19	1.14
Primary res: "basic/theoretical"	0.14*	0.07	1.16	0.38***	0.09	1.46	0.17	0.11	1.19
Primary res: combined	−0.05	0.08	0.95	0.18	0.10	1.19	−0.24	0.13	0.79
Preferences in teach or res:									
Primarily in teaching	−0.44**	0.16	0.65	−0.51**	0.19	0.60	−0.82**	0.26	0.44
In both but leaning toward teaching	−0.36***	0.10	0.70	−0.64***	0.12	0.53	−0.77***	0.15	0.46
In both but leaning toward research	−0.06	0.09	0.94	−0.24*	0.10	0.79	−0.25*	0.13	0.78

(continued)

Table 5.4 (continued)

	Type of "late" mobility								
	Circulation for work: short term			Circulation for work: long term			Migration for work		
	B	Std. err.	Exp (*B*)	*B*	Std. err.	Exp (*B*)	*B*	Std. err.	Exp (*B*)
Gender: male	0.02	0.07	1.02	0.34***	0.08	1.40	0.22*	0.10	1.25
Age	0.02*	0.01	1.02	0.04**	0.01	1.04	0.01	0.02	1.01
Age cohort:									
Born up to 1950	0.07	0.30	1.07	0.06	0.36	1.07	0.06	0.48	1.06
Born 1951–1960	0.12	0.20	1.17	0.12	0.25	1.13	0.05	0.33	1.05
Born 1961–1970	0.39**	0.13	1.48	0.33*	0.16	1.39	0.19	0.19	1.21
Father's educ: college	0.26***	0.06	1.30	0.46***	0.07	1.58	0.45***	0.10	1.57
Constant	–3.95***	0.34		–4.98***	0.41		–5.31***	0.58	

Source: CAP data September 2011
Note: ***$p<.001$, **$p<.01$, *$p<.05$

Academics' preferences toward teaching and research, and the type of research they are engaged in, have an impact as well. Personal interests primarily lying in research and characterizing one's own research as basic or theoretical are positively linked with professional mobility. Further, age has an impact, as getting older increases the probability of mobility for professional purposes. Interestingly enough, while controlling for age, a cohort effect still emerges. All other things being equal, belonging to the cohort of those who were born between 1961 and 1970 increases the probability of spending either short or long periods abroad for professional reasons. This suggests that job circulation is a type of mobility, especially involving people who were in their 40s at the time of the survey. Finally, having a father with tertiary education also has a positive impact on job circulation.

Three differences in the determinants of short- and long-term professional mobility are worth mentioning. The most important refers to gender. While long-term circulation is a gendered phenomenon as it is less open to academic women, this is not the case with short-term circulation. All other things being equal, being a woman, rather than a man, does not make a difference in spending short periods abroad. A second difference refers to academic rank. Holding a senior position increases the probability of spending short periods abroad, while it does not have a significant impact on long-term job circulation. Likely, short-term professional mobility, the second most frequent type of international academic mobility, is positively related to academic hierarchy.

Finally, while working in English-only-speaking countries, i.e., the UK, the USA, and Australia, decreases the probability of spending short periods abroad, in all other cases, the status of the English language in the country of academics' employment has no significant impact on job circulation.

As far as job migration is concerned, Hong Kong, Canada, Australia, and Norway are the most frequent destinations of professional migration occurring late in academics' lives. Structural factors also provide some explanation for job migration. Factors and direction of migration fluxes are similar: people move from emerging and less developed to mature economies and from non-English-speaking countries to English-speaking countries. As far as individual factors are concerned, it is worth noting that the educational attainment of fathers has the same positive impact upon late migration than it has on early migration. On the contrary, the impact of gender is different. While early migration for study is not affected by gender, late job migration is less open to women than to men. Further, as one might expect looking at a type of mobility occurring late in academics' life course, age has no impact on migrating for professional purposes. Also, controlling for age, one finds no cohort effect.

Besides academic rank, which does not have an impact on late migration, other factors related to academic work and career have an impact on late migration similar to the one they have on late circulation: having earned an advanced degree abroad, working in universities, and being primarily interested in research increase the chances of migrating. Finally, as it is for early study migration, controlling for all other factors, discipline does not have an impact on professional migration, while combining theoretical and practical orientations in research appears to hinder it.[9]

[9] It is worth noting that if we exclude disciplines from the model, the effect of research emphasis on late mobility is similar to the one resulting for early job circulation, that is, that being especially involved in basic research has a positive impact on mobility.

Table 5.5 summarizes the results of the five multinomial logistic regressions showing the net effect of several predictors, that is, the independent effect of each predictor controlling for all others, on the five types of academic mobility identified.

Looking at the table summarizing the results of this analysis, three main conclusions can be drawn. First, international academic mobility is an *unequal* phenomenon. Migration fluxes have moved, and continue to move, people from emerging and less developed to mature countries and from non-English-speaking countries to English-speaking countries. Professional circulation involves academics from mature countries more than others and academics from non-English-speaking countries more than those working in English-speaking countries. Further, gaining an advanced degree has a positive impact upon international mobility further on in academics' careers. Also, albeit with significant exceptions, international academic mobility is a gendered phenomenon. Finally, family, social, cultural, and economic capital, approximately measured by fathers' higher level of education, increase the chances of being internationally mobile.

Second, the data suggest that some changes in the patterns of international mobility are, possibly, ongoing. Early circulation for study is not limited to European or historical British colonies but involves other countries, especially in Asia and Latin America. The younger generation of scholars show different behavior compared to their older counterparts. All things being equal, the chances of being internationally mobile, either circulating or migrating for study, are lower among academics that were studying and were trained around the beginning of the 1990s than for those who spent the formative stage of their lives in previous historical periods.

Third, professional international mobility appears to be strictly related to research rather than to teaching and, especially, to basic or theoretical research rather than to applied or practically oriented research. International academic mobility and the existence and functioning of scientific international communities centered on basic research seem to be strongly linked.

5.4 The Impact of International Mobility on the Academic Profession

In this section, the relationship between mobility of scholars and the internationalization of the academic profession is analyzed in three main areas, teaching, research, and dissemination, with the assumption that experiences abroad, and different kinds of experience abroad related to international mobility, may have an impact upon academic activities and, hence, on the internationalization of the academic profession.

As indicators of the internationalization of teaching, research, and dissemination, this study utilizes the following variables: (a) teaching courses abroad, (b) collaboration with international colleagues in research efforts, and (c) publications in a foreign country. On one hand, experiences abroad entailing international mobility throughout academics' entire life course are taken into consideration, while, on the other, academic activities performed at the time of the survey, or close to it, are

Table 5.5 Net effects of selected variables on five types of international academic mobility

	Early mobility		Late mobility		
	Circulation for study	Migration for study	Circulation for work: short term	Circulation for work: long term	Migration for work
Econ status of country of birth: mature	Not included	–	Not included	Not included	–
Econ status of country of emp: mature	+	+	+	+	+
Country of birth: excl Eng	Not included	–	Not included	Not included	–
Country of birth: Eng also	Not included	–	Not included	Not included	–
Country of emp: excl Eng	–	+	–	n.s.	+
Country of emp: Eng also	+	+	n.s.	n.s.	+
Institutional type: res univ	Not included	Not included	+	+	+
Academic rank: senior position	Not included	Not included	+	n.s.	n.s.
Highest degree: doctoral	Not included	Not included	+	+	+
Discipline highest degree:					
Educ and hum	+	n.s.	n.s.	n.s.	n.s.
Socl sci, bus, and law	+	n.s.	n.s.	–	n.s.
Science	+	n.s.	n.s.	n.s.	n.s.
Engin, manufact, const, and arch	+	n.s.	–	–	n.s.
Primary res: "basic/ theoretical"	Not included	Not included	+	+	n.s.
Primary res: combined	Not included	Not included	n.s.	+	–
Preferences in teach or res:					
Primarily in teaching	Not included	Not included	–	–	–
In both but leaning toward teaching	Not included	Not included	–	–	–
In both but leaning toward research	Not included	Not included	n.s.	–	–
Gender: male	+	n.s.	n.s.	+	+
Age cohort:					
Born up to 1950	+	+	n.s.	n.s.	n.s.
Born 1951–1960	+	+	n.s.	n.s.	n.s.
Born 1961–1970	+	+	+	+	n.s.
Father's educ: college	+	+	+	+	+
Age (years)	Not included	Not included	0.023	0.035	n.s.
Constant	–2.665	–4.830	–3.954	–4.975	–5.361

Source: CAP data September 2011

Notes: + = regressor increases the probability of being involved in a specific type of mobility instead of being nonmobile or being involved in other types of mobility; – = regressor decreases the probability of being involved in a specific type of mobility instead of being nonmobile or being involved in other types of mobility; not included = variable was not included in the model; *n.s.* = not significant = regressor is not statistically significant; discipline = discipline of highest degree in circulation for study, and discipline of teaching in the other types of mobility

considered. Thus, the relationship between mobility and activities is conceived in terms of the impact of previous experience on current activities.

In order to assess the impact of experience abroad upon international academic activities, three multivariate models are specified, one for each of the mentioned indicators. In the first model, the dependent variable is dichotomous, academics who have recently taught abroad and those who did not. In the second model, the dependent variable is dichotomous as well, academics who collaborate with international colleagues in research and those who do not. In the third model, the dependent variable distinguishes between academics who publish 50 % or more of their publications abroad, academics who publish less than 50 % of their publications abroad, and academics who do not publish in a foreign country. All the models have the experience abroad related to international mobility as the independent variable. Nonmobile academics are used as the reference category, while the other categories refer to the five types of mobility experience abroad presented in Table 5.1. As the relationship between international mobility and international academic activities likely varies according to both structural and institutional features within which academics are embedded, as well as their individual characteristics, seven control variables are identified. Country of current employment is considered as a proxy of the structural features of the national economy, the labor market, and the higher education system. Further, within the context of this work, the variable *Country* was utilized with the United States serving as the reference category. Discipline of current teaching refers to academics' belonging to broad disciplinary groups or scientific communities. The type of higher education institution where academics are currently serving, their academic rank, their employment situation – whether full time or part time – and their seniority, defined as years of full- and/or part-time employment in higher education institutions, account for the main characteristics of their working condition. Finally, gender refers to an individual trait.

Table 5.6 shows the results of two binomial logistic regressions. First, the impact on teaching abroad of different types of international mobility and related experiences, as opposed to nonmobility, is investigated, net of the effects of the selected control variables. Second, a similar analysis is carried out on the impact of mobility on international research collaboration.

Teaching abroad is an international activity involving a small proportion of academics. Only 9 % of them have taught abroad just before the survey was carried out. Controlling for all other variables, being mobile has a clear and strong impact on the probability of teaching abroad. Further, this impact varies according to type of mobility and experience abroad. The group of academics who are most likely to teach abroad includes *late migrants for work*, that is, people who have experienced long-term mobility rather late in their lives, moving to the country of current employment, while being already qualified to work in higher education.

On the contrary, academics that are least likely to teach abroad, although displaying a strong link to this international activity, as compared to nonmobile academics, are *early migrants for study*, that is, people who have experienced long-term mobility rather early in their lives, entering the country of current employment as students. Academics circulating back and forth from their country of birth and current

Table 5.6 Predictors of faculty participation in international academic activities: teaching and research

	Teaching abroad			Research collaboration		
	B	Std. err.	Exp (*B*)	*B*	Std. err.	Exp (*B*)
Yrs employed in higher education	0.01***	0.00	1.01	–0.01***	0.00	0.99
Circulating for study: short term	1.06***	0.08	2.89	0.96***	0.06	2.62
Circulating for work: short term	0.84***	0.08	2.31	1.07***	0.06	2.91
Migration for study: long term	0.78***	0.12	2.18	0.71***	0.09	2.04
Migration for work: long term	1.23***	0.10	3.43	1.44***	0.09	4.21
Circulating for work: long term	1.05***	0.10	2.86	1.19***	0.08	3.29
Country:						
Argentina	0.54**	0.17	1.72	0.81***	0.13	2.26
Australia	0.41***	0.16	1.51	1.13***	0.12	3.08
Brazil	–1.10***	0.21	0.33	–0.25*	0.13	0.78
Canada	0.06	0.15	1.06	0.82***	0.11	2.26
China	–0.56***	0.15	0.57	–1.27***	0.11	0.28
Finland	0.79***	0.15	2.21	2.02***	0.13	7.52
Germany	0.56***	0.14	1.75	0.67***	0.11	1.95
Hong Kong	–0.43**	0.17	0.65	0.56***	0.13	1.74
Italy	0.30*	0.13	1.35	0.76***	0.10	2.13
Japan	–1.05***	0.19	0.35	–0.59***	0.12	0.56
Korea, Republic of	–0.51**	0.18	0.60	–0.22**	0.12	0.81
Malaysia	–0.81***	0.21	0.45	–0.41***	0.13	0.67
Mexico	–0.42**	0.16	0.66	0.16	0.11	1.18
Netherlands	0.67***	0.16	1.94	1.53***	0.14	4.60
Norway	0.73***	0.14	2.07	0.93***	0.12	2.52
Portugal	–0.08	0.19	0.92	1.45***	0.13	4.25
South Africa	–0.67**	0.25	0.51	0.26	0.14	1.30
UK	0.19	0.15	1.21	1.05***	0.11	2.84
Discipline teaching:						
Educ and hum	–0.00	0.09	1.00	–0.41***	0.07	0.67
Socl sci, bus, and law	0.06	0.09	1.07	–0.33***	0.07	0.72
Science	–0.47***	0.09	0.63	0.29***	0.07	1.33
Engin, manufact, const, and arch	–0.19	0.10	0.83	–0.11	0.07	0.90
Institutional type: res univ	0.04	0.08	1.04	0.77***	0.06	2.16
Academic rank: senior position	0.65***	0.07	1.91	0.52***	0.05	1.68
Emp status: full time	0.12	0.10	1.12	0.28***	0.07	1.32
Gender: male	0.17**	0.06	1.19	0.27***	0.04	1.30
Constant	–3.37***	0.18		–2.22***	0.13	

Source: CAP data September 2011
Note: ***$p<.001$, **$p<.01$, *$p<.05$

employment, although for different purposes, at different stages in their life, and for periods of different length, fall in between these polar groups. Net of other effects, academics working in seven countries (Finland, Norway, the Netherlands, Germany, Argentina, Australia, and Italy) are more likely to teach abroad than their colleagues working in the USA, while academics working in the other eight represented countries (Mexico, Hong Kong, South Korea, China, South Africa, Malaysia, Japan, and Brazil) are less likely to do so. Further, academics working in three countries, the UK, Canada, and Portugal, do not differ significantly from those working in the USA. Finally, holding a senior position, instead of a junior one, being male instead of female, and having spent more years working in higher education, increase the probability of teaching abroad, while belonging to the broad disciplinary group including life sciences, physical sciences, mathematics, computer sciences, and agriculture, instead of belonging to the medical disciplines, has a negative impact on teaching abroad.

International research collaboration involves many more academics than teaching abroad. Indeed, four academics out of ten (41 %) collaborate with international colleagues in their research efforts (see Chap. 7). International mobility also has a strong impact on international research collaboration. Again, compared to nonmobile academics, *late migrants for work* are the most likely to collaborate with international colleagues, and *early migrants for study* are the least likely to do so, while *circulating* academics stand in between. Net of other effects, taking again the USA as a point of reference, working in 11 countries (Finland, the Netherlands, Portugal, Australia, the UK, Norway, Canada, Argentina, Italy, Germany, and Hong Kong) significantly increases the probability of collaborating with international colleagues, while working in the other four represented countries (Brazil, Malaysia, Japan, and China) decreases it, and working in three countries (South Africa, Mexico, and South Korea) does not make any significant difference. Compared to the medical sciences, belonging to the broad field of science has a positive impact on international research collaboration, while belonging to the two other broad groups of social sciences, business and law and education and the humanities, has a negative impact. No significant difference results for those belonging to the field of engineering, manufacturing, construction, and architecture. Finally, working at universities, instead of other higher education institutions; holding a senior position, instead of a junior; working full time, instead of part time; and being male, instead of female, increase the probability of collaborating with international colleagues, while having worked a greater number of years in the higher education sector decreases it.

While international research collaboration is quite widespread within the academy, international dissemination of research results in the form of publications is even more pronounced. Indeed, more than half of the CAP survey respondents have published abroad. Thirty-four percent have published at least half of their publications, during the 3 years before the survey was carried out, in a foreign country, 19 % have published less than half of their works abroad, while 47 % have not at all published in a foreign country at all.

Table 5.7 shows the results of a multinomial logistic regression investigating the impact of international mobility on publishing in foreign countries. Comparing

Table 5.7 Predictors of faculty participation in international academic activities: dissemination (logistic regressions' estimates)

	Publication abroad: 50 % or more			Publication abroad: less than 50 % (0 % excluded)		
	B	Std. err.	Exp (*B*)	*B*	Std. err.	Exp (*B*)
Yrs employed in higher education	−0.01**	0.00	0.99	−0.01*	0.00	0.99
Circulating for study: short term	0.98***	0.07	2.65	0.76***	0.07	2.14
Circulating for work: short term	0.93***	0.07	2.52	0.60***	0.08	1.83
Migration for study: long term	0.80***	0.11	2.23	0.61***	0.11	1.83
Migration for work: long term	1.55***	0.11	4.71	0.72***	0.13	2.06
Circulating for work: long term	1.18***	0.09	3.24	0.64***	0.10	1.89
Country:						
Argentina	2.20***	0.18	9.03	1.06***	0.15	2.88
Australia	2.09***	0.17	8.07	0.68***	0.14	1.98
Brazil	1.12***	0.18	3.07	0.52***	0.14	1.68
Canada	1.77***	0.17	5.88	0.52***	0.13	1.68
China	0.15*	0.17	1.16	−0.11	0.12	0.90
Finland	3.36***	0.18	28.75	1.27***	0.17	3.55
Germany	2.42***	0.17	11.26	1.17***	0.14	3.23
Hong Kong	3.75***	0.19	42.61	0.47*	0.21	1.61
Italy	2.46***	0.15	11.68	0.69***	0.12	1.99
Japan	1.14***	0.17	3.11	0.09	0.14	1.09
Korea, Republic of	1.87***	0.18	6.51	0.57***	0.14	1.77
Malaysia	1.10***	0.18	3.00	0.29	0.16	1.34
Mexico	2.16***	0.17	8.66	0.68***	0.14	1.97
Netherlands	n.a.			n.a.		
Norway	3.25***	0.18	25.74	0.82***	0.17	2.27
Portugal	3.39***	0.19	29.78	1.4***	0.17	4.22
South Africa	0.93***	0.25	2.54	0.25	0.19	1.28
UK	1.75***	0.17	5.78	0.94***	0.13	2.55
Discipline teaching:						
Educ and hum	−1.19***	0.08	0.30	0.22**	0.09	1.25
Socl sci, bus, and law	−1.26***	0.08	0.28	0.08	0.08	1.09
Science	0.56***	0.08	1.76	0.25**	0.09	1.28
Engin, manufact, const, and arch	0.02	0.09	1.02	0.35***	0.10	1.42
Institutional type: res univ	0.82***	0.08	2.27	0.60***	0.08	1.82
Academic rank: senior position	0.14**	0.06	1.15	0.39***	0.06	1.47
Emp status: full time	0.45***	0.10	1.56	0.25***	0.10	1.28
Gender: male	0.24***	0.05	1.27	0.22***	0.05	1.25
Constant	−3.59***	0.19		−2.79***	0.17	

Source: CAP data September 2011
Note: n.a. = data not available, question was not asked
Note: ***$p < .001$, **$p < .01$, *$p < .05$

academics more engaged in publishing abroad with those who do not publish in a foreign country, the positive impact of international mobility on this aspect of academic activities' internationalization is again clearly evident. As previously hypothesized, *late migrants for work* are the most likely to publish most of their work abroad, while *early migrants for study* are the least likely to do so, with *circulating* academics filling the space in between. Controlling for all other factors, academics working in all CAP survey participating countries[10] are more likely to publish abroad than their colleagues working in the USA. Likely, American faculties do not really need to publish abroad as they belong to a huge domestic scientific community and can rely on the dominant position that their country has in the international publishing industry, while academics working in other country, albeit for different reasons, need, or want, to publish abroad. Net of other effects, belonging to the broad field of science increases the probability of publishing abroad compared to the medical field, while belonging to the broad field of social sciences, business and law, and education and humanities decreases it, with no significant difference resulting for those belonging to the technical fields. Finally, as it is for international research collaboration, working in universities, holding a senior position, working full time, and being male have a positive impact on publishing abroad, while having worked for a longer period in higher education has a negative impact.

Comparing the relationships between international mobility and the three aspects of international academic activity that have been taken into consideration, it is possible to draw some tentative conclusions.

First of all, international mobility appears to be strongly related to international teaching, research, and dissemination. Insofar as international mobility has been related to different types of experiences abroad throughout academics' career and lifecycle while academic activities were performed at the time when the survey was carried out, it is possible to look at this association in terms of the impact of mobility on academic activities.

Second, different types of mobility and experience abroad have different impacts on the three selected activities. Indeed, some types have a stronger impact on international academic activities while others, although considerable, have a weaker impact.

Third, and interestingly enough, the type of mobility having the strongest effect on all of the mentioned activities is the same, while the type having the weakest effect on them is also the same. *Late migrants for work* are most likely to teach abroad, collaborate with international colleagues, and publish most of their works abroad, while *early migrants for study* are least likely to do so. Thus, *migrant* academics, that is, people who were born in a country which is different from the one in which they currently work and who entered the country at different stages of their lives, diverge in their proclivity for international activities. Academics who were educated "abroad" and entered the country of current employment being,

[10] Except for the Netherlands where the question on the percentage of publications published in a foreign country was not asked and China for which data analysis does not yield results significantly different from the USA.

academically, fully qualified appear to be more internationally active, while their migrant fellows, who entered the country as students, although much more internationally active than nonmobile academics, are less active not only than *late migrants* but also than *circulating* academics.

Fourth, controlling for all other factors, some working conditions and individual characteristics seem to play a similar role in relation to international academic activities. Compared to their terms of reference, holding a senior position and being male increases the probability of teaching abroad, collaborating with international colleagues, and widely publishing abroad.

Fifth, besides similarities, some differences are also apparent. A first meaningful difference distinguishes between teaching, on the one side, and research and dissemination, on the other. Net of other effects and compared to their reference category, working at universities and having a full-time appointment have a positive impact on international research collaboration and dissemination, while they do not have any significant impact on teaching abroad. Similarly, seniority in higher education has a positive impact on teaching abroad but a negative one on international research collaboration and dissemination.

Sixth, the analysis performed also casts some light on the impact of disciplines upon international activities. As far as teaching abroad is concerned, clear evidence shows that, net of other effects and compared to the medical sciences, belonging to the field of science, that is, life sciences, physical sciences, mathematics, computer sciences, and agriculture, has a negative impact on this international activity. It seems that academics within the "hard" sciences have fewer reasons, or fewer incentives, to be internationally mobile for teaching. On the contrary, as far as international research collaboration and publication abroad are concerned, data analysis shows that these "hard" scientists appear to be more engaged in these activities than soft scientists.

Finally, looking at CAP data, something can be said also on the geography of academic internationalization. Setting aside the issue of publication abroad, which deserves a deeper analysis, accounting for the characteristics of the publishing industry worldwide, the different spread of new media, and the use of English as "lingua franca," it is worth noting that when compared to the USA, and controlling for all other factors, working in seven countries, namely, Finland, Norway, the Netherlands, Germany, Argentina, Australia, and Italy, increases both the probability of teaching abroad and of collaborating with international colleagues.

5.5 Conclusion

Data collected through the CAP survey allow us to apply the life course approach to the study of the international mobility of faculty. This improves our understanding of the complexities of scholarly mobility and fits quite well into a growing stream of research on human spatial mobility at the global level.

Our data analysis yields quantitative evidence to support the idea that international academic mobility is a relevant and highly differentiated phenomenon, shaped by a complex set of factors and bearing different impacts upon the internationalization of academic activities, splitting the academic profession not only between mobile and nonmobile academics but also between different types of mobile academics.

Indeed, international mobility has become a part of academic life today as academics having experienced some kind of international mobility throughout their life amount to 42 % of the whole sample. The two most frequent types of mobility, involving a quarter of the CAP sample, entail circulation between countries and rather short periods abroad either for study or for professional purposes. International migration makes up about a tenth of the sample.

Distinguishing experiences abroad occurring early or late in life, identifying a circular pattern of mobility back and forth between the same country as distinct from a linear pattern of mobility linking a country of origin and a country of destination, and acknowledging the existence of temporary experiences abroad of different lengths have proved to be a beneficial way to deal with international academic mobility and its complexities. The analysis of the determinants of international academic mobility has shown, at the same time, that there are a few factors influencing all types of mobility, and that there are meaningful similarities and differences in the factors explaining early vs. late mobility, as well as circulation vs. migration.

Indeed, all types of mobility depend on two factors acting in the same direction. International academic mobility is favored by the economic status characterizing a country, as mature economies act as "engines of mobility" for both circular and linear movements. Other cultural, social, and, possibly, economic resources favoring (any type of) mobility are provided by families where fathers have attained tertiary education.

Comparing the determinants of the two types of mobility occurring early in life, namely, circulation and migration for study, two factors with different effects and two factors with similar effects are worth mentioning.

First is that the role played by English in the countries where it is the only main or official language is different: it hinders circulation for study, but it helps attracting migrants for study. Secondly, gender plays a different role as well. There are unequal opportunities to study abroad for academics-to-be to the detriment of presumably young women, while gender does not have any impact on early migration. Conversely, in the countries where English is one of the official languages among others, it favors both circulation and migration for study. Finally, both circulation and migration for study seem to be historically embedded phenomena as academics of older generations appear to be more mobile, for purposes of study and training, than academics of the younger generation.

Comparing the three types of mobility occurring late in life, namely, short-term and long-term job circulation as well as job migration, it may be pointed out that three factors have similar effects while three factors have different effects. These types of international mobility are favored by earning an advanced degree and by holding a position at a university. Furthermore, personal preferences primarily lying toward research increase the probability of being internationally mobile. Also,

within the countries where it is the main or the official language, English has a differentiated impact: it hinders short-term mobility, favors immigration, and does not have any impact upon long-term job circulation. Holding a senior position within the academic favors short-term mobility while it does not have any impact on the two other types of late mobility. Finally, experiences abroad lasting for long periods, whether going back home or not, discriminate against academic women while this does not happen with short-term experiences.

While occurring in two distinct stages of the life course, the three types of international mobility, which entails a movement back and forth between the native and current employment countries, show a common trait: the younger generation of scholars appears to be less involved in international mobility than older generations. On the contrary, discipline plays a different role: while studying medicine hinders early circulation for study, late circulation is negatively related to teaching engineering.

Finally, although occurring at two different stages of the life course as well, the two types of mobility entailing a movement from a country of origin to a country of destination appear to be largely shaped by the same forces resulting from structural disparities at the global level.

Looking at the other side of the coin, we have analyzed the impact of experiences abroad occurring along academics' life on their current international activities. Scholars' international mobility is positively associated with international teaching, research collaboration, and dissemination. However, different types of mobility and experience abroad have different impacts on international academic activities. The most internationally active academics are *late migrants for work* while the least internationally active academics, besides nonmobile academics, are *early migrants for study*. It is likely that moving to another country, when having deeper intellectual and personal roots in the country of origin and having successfully started one's career there, increases academics' ability to be very internationally active, while moving at an early stage of life does not offer the same potential. In fact, it seems that the timing of migration affects the ability to be internationally active. Thus, the types of international academic mobility identified here are not only shaped by several relevant factors but, in turn, affect the resulting academics' international activities.

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